

## Emerald Hagy

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**From:** Olivia Cohn <olivia@solsticeak.com>  
**Sent:** Friday, April 8, 2016 2:33 PM  
**To:** 'Jackie Wilde'  
**Cc:** 'Carla SlatonBarker'  
**Subject:** 4/20 Seward Airport Improvements Public Open House Meeting  
**Attachments:** Seward Airport Project Public Meeting 4\_20\_2016.pdf

Hello Jackie:

Thank you so much for agreeing to distribute the meeting announcement for the April 20<sup>th</sup> Seward Airport Improvements Project public open house meeting. The announcement text is below, and a PDF of the announcement is attached. Thanks, also, for agreeing to hang the flyer in your office and other locations in the community. If you wouldn't mind letting us know where the announcement is distributed for our records, that would be wonderful.

I have copied my colleague, Carla SlatonBarker, on this email. Next week, I will be traveling in the Lower 48, and Carla is a great point of contact on this project in case you can't reach me.

Thank you for all of your advice.  
Olivia

Olivia Cohn  
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## Seward Airport Improvements Project Project # Z548570000

### Public Open House Meeting

The Alaska Department of Transportation and Public Facilities (DOT&PF), with the Federal Aviation Administration (FAA), has undertaken a project to improve the Seward Airport. The purpose of the **Seward Airport Improvements Project** is to reduce the damage the airport is experiencing from recurrent flooding and to correct airport deficiencies based on the airport's forecasted function and FAA design standards.

#### Public Open House Meeting

**Date:** Wednesday, April 20, 2016  
**Hours:** 5:00 pm to 7:30 pm (stop by any time)  
**Location:** K.M. Rae Marine Education Building  
**Address:** 125 Third Avenue, Seward, Alaska

Please stop by any time during the open-house hours to:

- Learn about the project's top challenges: Resurrection River hydrology, aviation demand, and funding.

- Learn about existing and forecast airport activity, project alternatives, and each alternative's advantages and disadvantages.
- Provide comments on the alternatives.
- Learn about the project's timeline and next steps.

Written comment may be given at the Open House or submitted via the website ([www.dot.state.ak.us/creg/sewardairport/](http://www.dot.state.ak.us/creg/sewardairport/)), via email to [solsticeak@solsticeak.com](mailto:solsticeak@solsticeak.com), or via mail to Robin Reich, Public Involvement Coordinator, Solstice Alaska Consulting, 2607 Fairbanks Street, Suite B, Anchorage, AK 99503 **by May 13, 2016**. For more information or to join the mailing list, visit [www.dot.state.ak.us/creg/sewardairport/](http://www.dot.state.ak.us/creg/sewardairport/).



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## Seward Airport Improvements Project (Project #Z548570000)



© Alaska Aerial Technologies, LLC

A project to reduce the damage the airport is experiencing from recurrent flooding and to correct airport deficiencies based on the airport's forecasted function and Federal Aviation Administration design standards.

**Visit the Project Website:**  
[www.dot.state.ak.us/creg/sewardairport](http://www.dot.state.ak.us/creg/sewardairport)

**Attend the upcoming Public Meeting:**  
see details, other side

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**STATE OF ALASKA  
DEPARTMENT OF  
TRANSPORTATION  
AND PUBLIC FACILITIES**

c/o Solstice Alaska Consulting, Inc.  
2607 Fairbanks Street, Suite B  
Anchorage, Alaska 99503

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## Seward Airport Improvements Project Project #Z548570000

The Alaska Department of Transportation and Public Facilities (DOT&PF), in association with the Federal Aviation Administration (FAA), is proposing to improve the airport in Seward, Alaska. The purpose of the **Seward Airport Improvements Project** is to reduce the damage the airport is experiencing from recurrent flooding and to correct airport deficiencies based on the airport's forecasted function and FAA design standards.

Using input provided during the last public meeting, the project team has developed project alternatives to solve identified issues and needs. The project team invites you to attend a **public meeting** (see right) to:

- Learn about the project's top challenges: Resurrection River hydrology, aviation demand, and funding.
- Learn about existing and forecast airport activity, project alternatives, and each alternative's advantages and disadvantages.
- Provide comments on the alternatives.
- Learn about the project's timeline and next steps.

## Public Meeting

*We hope you can attend!*

**WHAT: OPEN HOUSE PUBLIC MEETING**  
**April 20, 2016, 5:00 pm to 7:30 pm**

It's an Open House, so **STOP BY any time** between 5:00 pm and 7:30 pm

**WHERE: K.M. Rae Marine Education Building**  
**125 Third Avenue, Seward**

## Public Comment

The DOT&PF is looking for public comment. Visit the project website, attend the public meeting, or send written comment by **May 13, 2016** to:

**Robin Reich, Public Involvement Coordinator**  
**Solstice Alaska Consulting, Inc.**  
2607 Fairbanks Street, Suite B  
Anchorage, Alaska 99503  
[solsticeak@solsticeak.com](mailto:solsticeak@solsticeak.com)

**Visit the Project Website at:**  
**[www.dot.state.ak.us/creg/sewardairport](http://www.dot.state.ak.us/creg/sewardairport)**



## Meeting Agenda and Overview

### Meeting Purpose

- Provide an overview of the Seward Airport Improvements Project (needs and challenges that the project will address, work that has occurred to date, upcoming steps).
- Present the results of key studies: Hydrology Report and Aviation Activity and Facility Requirements Report.
- Present alternatives developed to solve identified issues and needs.
- Present the advantages and disadvantages associated with each alternative.
- Gather input from community members.



### Meeting Format

- **Open House Hours:** 5:00 pm to 7:30 pm
  - Please sign in and then visit the information stations (see detail below) in this lobby.

### Open House Stations

- **Station #1: Welcome and Sign in**
- **Station #2: Understanding the Challenges**
  - Learn about the top three challenges that form the backdrop for the Seward Airport Improvements Project:
    - Resurrection River Hydrology
    - Airport Demand
    - Funding
- **Station #3: Understanding the Possible Solutions**
  - Learn about the range of alternatives considered to date, including three viable alternatives, and advantages and disadvantages of each.
  - Share your thoughts on alternatives.
  - Learn about the project's next steps.
- **Station #4: Comment Station**
  - Your written comment is an important part of the process. You'll find comment forms here.

*Thank you for your time and participation!*

# Seward Airport Improvements Project

Public Meeting #2 • Open House • April 20, 2016

Thank you for your attendance today. Please sign in (legible print is appreciated)!

Voluntary Information Requested by the Civil Rights Office of the Alaska Department of Transportation and Public Facilities \*

Gender (Circle) Race (Circle)

Name	Mailing Address	Email Address	Gender (Circle)	Race (Circle)
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Christy Terry	PO Box 588	Swd.	Male/Female	White/Alaska Native/Native American/Black/Hispanic/Asian/Pacific Islander/Other
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Sue M. Clure	Box 3686 Seward		Male/Female	White/Alaska Native/Native American/Black/Hispanic/Asian/Pacific Islander/Other
Michael D. Irving	PO Box 255 Seward	girdwoodcrowds@yahoo	Male/Female	White/Alaska Native/Native American/Black/Hispanic/Asian/Pacific Islander/Other
Denny Hamrick	Pott 7 Seward		Male/Female	White/Alaska Native/Native American/Black/Hispanic/Asian/Pacific Islander/Other
Emily Johnson	P.O. Box 1187		Male/Female	White/Alaska Native/Native American/Black/Hispanic/Asian/Pacific Islander/Other
Richard Hocking	PO Box 391	Richard Hocking @ ak.net	Male/Female	White/Alaska Native/Native American/Black/Hispanic/Asian/Pacific Islander/Other

\* The purpose of requesting this information is to ensure fair and equal representation by the public in all projects and programs administered by the Alaska Department of Transportation and Public Facilities.

# Seward Airport Improvements Project

Public Meeting #2 • Open House • April 20, 2016

Thank you for your attendance today. Please sign in (legible print is appreciated)!



General Contractor - Energy Systems - LED Lighting

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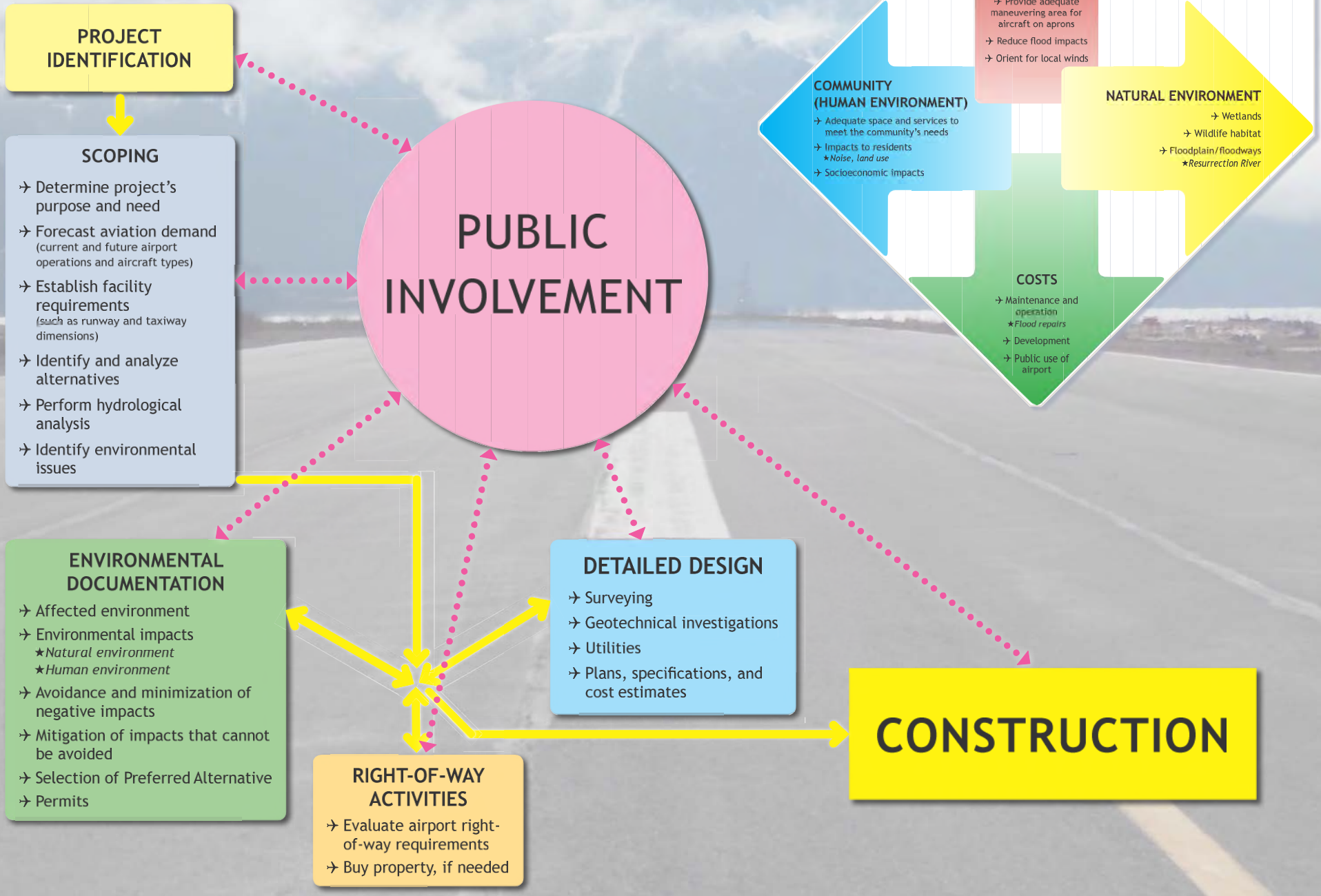
Gender (Circle) Race (Circle)

Name	Mailing Address	Email Address	Gender (Circle)	Race (Circle)
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# THE PROJECT PROCESS

Keeping Everything in Balance





# Schedule & Process



\*The schedule is dependent upon a number of variables and will likely change

**Scoping**



**Environmental**

At least 1 year



**Right of Way Acquisition**

Up to 2 years

**Airport Design**

Preliminary

Local  
35%

Plans in Hand  
65%

Review PS&E  
95%

Final PS&E  
100%

**Construction**

2018 or later  
depending on duration of  
prior phases

**Public Involvement**

# Challenge: HYDROLOGY

River flooding has caused:

- Extensive erosion that compromises the runway’s pavement structure. As floodwaters recede, fines (the binding material or “glue”) in the base materials are washed out, leaving voids between the large rocks under the pavement.
- Reduction of pavement strength, resulting in weight restrictions being placed on the main runway.

## Why is River Hydrology an Engineering Challenge?



Solutions to river flooding must be cost-effective, long-lasting, and compliant with the requirements to secure environmental permits – a tough set of requirements considering:

### River “Flood Zone”

- As you can see from the photos above, the Resurrection River isn’t just near the airport—the main runway is located within the river’s floodway. No engineering solution can permanently change the fact that the runway and the river compete for the same real estate.

### River Type – On the Move and Hard to Control

- The Resurrection River is a braided river, meaning that it constantly moves from channel to channel within the floodplain—as the photos above show. Where any braided river will move over time is always a guess, but this is particularly true for the Resurrection River, which carries a lot of natural sediment (gradually clogging existing channels as it settles out) and meltwater (carving new channels during peak seasonal flows). Attempts to control braided rivers provide only short-term benefits, or else require constant maintenance and demand continual funding.

The Resurrection River has caused recurring damage to Seward Airport. In 2013 alone, the river overtopped the runway 10 times.



## Ways to Address the Challenging Hydrology

Raise, Armor, and Reconstruct Runway 13-31	The project will explore ways to better protect Runway 13-31 (the existing main runway) from flooding by raising the elevation, adding armor protection, and then reconstructing the runway.	See Alternative 1.1 at Station 3
Close Runway 13-31 and Improve Runway 16-34 Instead	The project will explore ways to improve Runway 16-34 (the existing crosswind runway) in terms of length, width, elevation, and flood protection/armoring. This idea explores closing the main runway to allow floodwater better access to the existing floodplain.	See Alternative 2.2 and Alternative 3.0 at Station 3
Reroute and/or Dredge the Resurrection River	Rerouting the river via dredging or other in-stream options is not viable. These types of solutions require continual maintenance, funding, and permitting. Neither a dedicated funding source nor staff to manage the effort are available from DOT&PF.	Not an option

## Seward Airport Today

- ➔ Runway 13-31 (main runway) 4,249 feet x 100 feet
- ➔ Runway 16-34 (crosswind runway) 2,289 feet x 75 feet



# Challenge: AVIATION DEMAND

## Ways to Address the Aviation Demand Challenges

### Required Runway Dimensional Standards

(highlighted column notes dimensions to meet aviation demand at Seward Airport)

Feature	Current Based Aircraft Group	Current Demand & Medevac (King Air B200) <i>Recommended for Near-Term Development</i>	Growth Scenario & Emergency Preparedness (Beech 1900) <i>Consider for Long-Term Development</i>	Dimensions of Existing Main Runway (13-31)
Aircraft Approach Category	A	B	B	B
Aircraft Design Group	I	II	II	II
Runway Length	3,300 feet	3,300 feet	4,000/4,700 feet	4,249 feet
Runway Width	60 feet	75 feet	75 feet	100 feet
Visibility Minimums	1 mile	1 mile	1 mile	1 mile
Crosswind Component	10.5 knots	13 knots	16 knots	13 knots
Runway Safety Area	120 ft x 3,780 ft	150 ft x 3,900 ft	150 ft x 5,300 ft	150 ft x 4,749 ft
Object Free Area	400 ft x 3,780 ft	500 ft x 3,900 ft	500 ft x 5,300 ft	500 ft x 4,749 ft
Runway Protection Zone	1,000 ft x 500 ft x 700 ft	1,000 ft x 500 ft x 700 ft	1,700 ft x 500 ft x 1,010 ft	1,000 ft x 500 ft x 700 ft
Part 77 Primary Surface	500 ft x 3,700 ft	500 ft x 3,700 ft	500 ft x 5,100 ft	500 ft x 4,649 ft
Part 77 Approach Slope	20:1 (visual)	20:1 (visual)	20:1 (visual)	20:1 (visual)

The project will focus on solutions to meet **near-term needs** of the current based aircraft PLUS medevac aircraft (King Air B200).

- ➔ A minimum runway length of 3,300 feet will serve the existing based aircraft and medevac operations. (See the highlighted “Current Demand & Medevac” column in the table at right for the other minimum dimensions.)

The project will continue to consider a longer, 4,000-foot runway as a future growth scenario to accommodate the potential demand for commuter aircraft such as the Beech 1900 or the Dash-8.

- ➔ See the “Growth Scenario & Emergency Preparedness” column in the table at right for other minimum dimensions.

Station #3 shows these dimensional standards as Alternatives.

Alternative 2.2 is the alternative recommended for near-term development. It meets FAA criteria for improvements to meet expected aviation demand.

*FAA will support development of the airport to meet Aircraft Approach Category B and Aircraft Design Group II (B-II), which is 3,300 feet long by 75 feet wide, with visual approach capabilities. This standard is consistent with the 2008 Airport Master Plan and approved Airport Layout Plan.*

# Challenge: AVIATION DEMAND

## Why is Aviation Demand an Engineering Challenge?

Sometimes what we *want* to design / fund differs from what we *can* design / fund. Improvement funding is determined by aviation demand. Specific challenges related to aviation demand in Seward include:

The number of operations (landings + takeoffs) at Seward Airport is low when compared to other airports statewide.

→ The Seward Airport forecast estimates the number of operations will grow as shown below.

Operations	Base Year: 2013	+5 Years		+10 Years		+15 Years	
Local GA	2,000	2,127	2,208	2,260	2,438	2,402	2,693
Itinerant GA	4,000	4,252	4,417	4,520	4,877	4,805	5,387
Medevac	200	213	220	228	243	243	268
Air Taxi/Charter	4,500	4,713	4,969	5,085	5,485	5,406	6,056
<b>TOTALS</b>	<b>10,700</b>	<b>11,375</b>	<b>11,814</b>	<b>12,093</b>	<b>13,043</b>	<b>12,856</b>	<b>14,404</b>

Reference: Seward Airport Improvements, Revised DRAF - Aviation Activity & Facility Requirements, July 13, 2015.

→ The number of operations is also low when compared to similar airports.

Airport	Annual Operations (2013)
Seward Airport (SWD)	10,700
Kenai Airport (ENA)	38,950
Homer Airport (HOM)	48,085
Dillingham Airport (DLG)	50,823

Aircraft using the airport now and in the future determine improvements.

→ FAA can't fund "build it and they will come" improvements. Engineers must design improvements to serve the existing and forecast aircraft fleet mix based on the design aircraft. Below is the historical fleet mix.

Operator	Aircraft	Airport Approach Category	Airport Design Group	Use
LifeMed	King Air B200	B	II	Medevac
LifeFlight	King Air B200	B	II	Medevac
Guardian	King Air B200	B	II	Medevac
Scenic Mountain Air	Cessna 172	A	I	Flightseeing / air taxi
Seward Air	Super Cub PA-18	A	I	Personal
Private	Cessna 172 Super Cub PA-18	A	I	Personal
Private	Cessna 170	A	I	Personal
Grant Aviation	King Air B200	B	II	Air taxi / charter
Homer Air	Cessna C206/207/209/210 Stationair	A	I	Air taxi / charter
Smokey Bay Air	Cessna C206/207/209/210 Stationair	A	I	Air taxi / charter
Iliamna Air Taxi	Pilatus PC-12	A	II	Air taxi / charter
Island Air Service	Cherokee 6	A	I	Air taxi / charter
Alaska Central Express	Beech 1900	B	II	Air taxi / charter
ERA Aviation	Beech 1900	B	II	Air taxi / charter
Frontier Flying Service	Beech 1900	B	II	Air taxi / charter
Warbelows	Cessna 172	A	I	Air taxi / charter
Wright Air Service	Cessna 208 Caravan	A	II	Air taxi / charter
Other: Operators who requested permission to land in 2013	Lear 35 (11 requests) Gulfstream 5 (16 requests) DC 6	C C B	I III III	
Other: U.S. Coast Guard search and rescue activities and exercises	C-130	C	IV	

Reference: Seward Airport Improvements, Revised DRAF - Aviation Activity & Facility Requirements, July 13, 2015. Data from 2007-2013.

A facility as large as the existing airport isn't needed to accommodate the expected future aviation activity.

That means funding improvements that rebuild the airport to the existing size may not be possible or practical.

## Additional Challenges

FAA design guidance requires the selection of a design aircraft, based on operations, to determine the size of facility that can be funded.

→ **The design aircraft is the most demanding aircraft** (or family of aircraft) that REGULARLY uses the airport (now or in the future). The size of this aircraft sets the airport's length, width, and other dimensions.

→ "Regular use" is defined as 500 operations (landings + takeoffs) per year.

→ The most demanding aircraft (largest wingspan and longest runway length needed) currently using Seward Airport is the **King Air B200**, which is used for medical evacuations. While the annual operations of the medevac airport alone don't meet the FAA threshold of 500, the B200 is a part of the "family" of B-II aircraft serving Seward, which taken together do meet the threshold.

→ Larger aircraft such as the C-130 and small charter jets do not fly into or out of Seward Airport often enough to meet the FAA's threshold of **regular** use.

→ FAA does not fund public airports to support military operations or aircraft.

## "Need to Know" Concepts

**Aircraft Approach Category** is a letter code (A to E) that classifies aircraft based on the speed at which the aircraft approaches a runway for landing. Category A aircraft approach at a slower speed than Category E aircraft; the higher the approach speed, the longer the runway needed.

**Aircraft Design Group** is a numerical code (I to VI) that groups aircraft by wingspan size. Group I has the smallest wingspan range, while Group VI aircraft has the widest wingspan range. The wider the wingspan range, the wider the runway needed.

# Challenge: FUNDING

## Challenge Number One

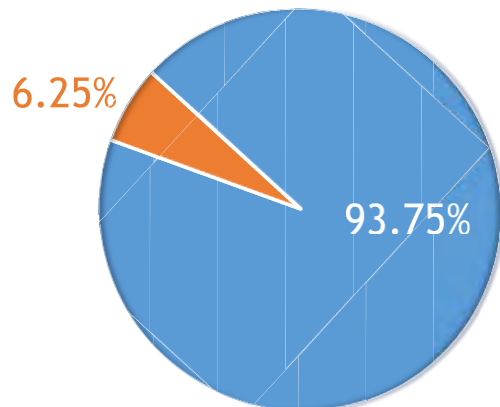
The FAA Airport Improvement Program (AIP) funding is based on a **competitive** scoring system. To receive funding, a project must score well. For the Seward Airport this is a challenge because of:

- The Competition!—Alaska has 249 state-owned airports and 20 municipally owned airports, all seeking funding. Many of these airports are the only means of year-round transportation of people, clothing, food, and fuel for their respective communities.
- Alternative Access—Airports with alternative access such as roads, railroads, and marine vessels do not score as high.
- No other funding source is readily available to DOT&PF. State funding through other sources is not likely in the near term due to Alaska's current fiscal crisis.
- Combining funding sources, although not impossible, proves to be difficult due to timing and commitments of other agencies.

## Sources of Funding

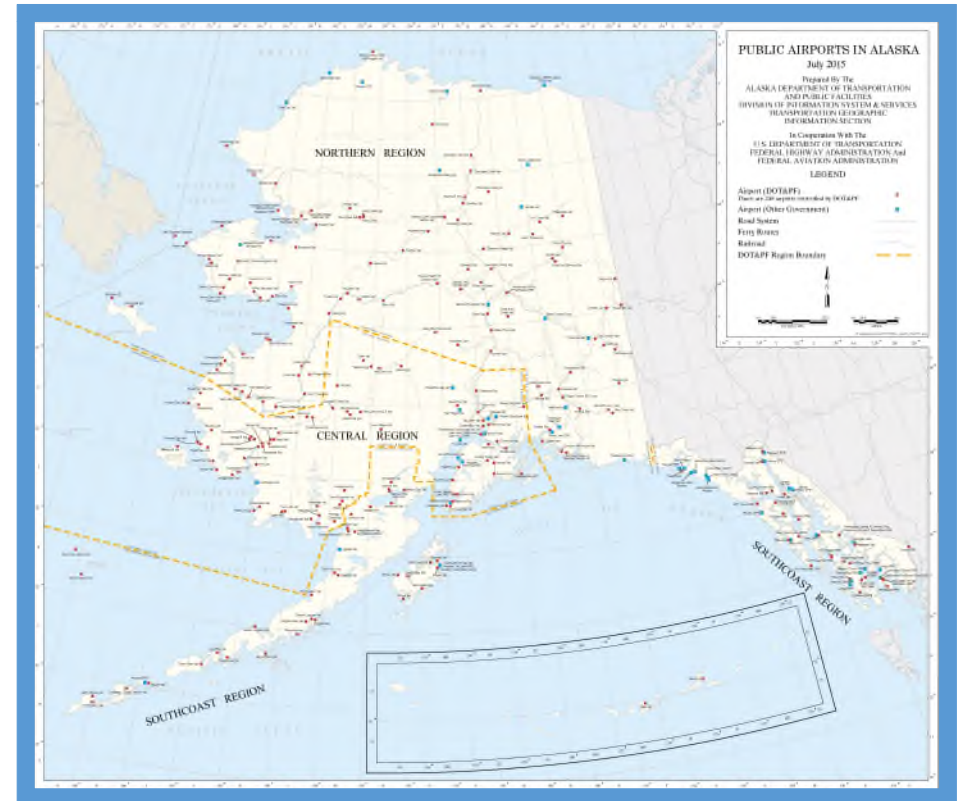
**Primary:** FAA Airport Improvement Program

**Secondary:** State of Alaska funds



“Since 2007, economic pressures—including high fuel prices, the financial crisis, and the ensuing recession of 2007-2009—contributed to airline restructuring...general aviation activity, which includes all forms of aviation except commercial and military, has also declined over the last decade. Because many sources of airport funding, including federal support and locally generated revenue, are tied to aviation activity, for many airports these trends mean less funding available for infrastructure development.”

Statement of Gerald L. Dillingham, Ph.D., Director, Physical Infrastructure Issues  
*Highlights of GAO-14-658T, a testimony before the Subcommittee on Aviation, Committee on Transportation & Infrastructure, House of Representatives*



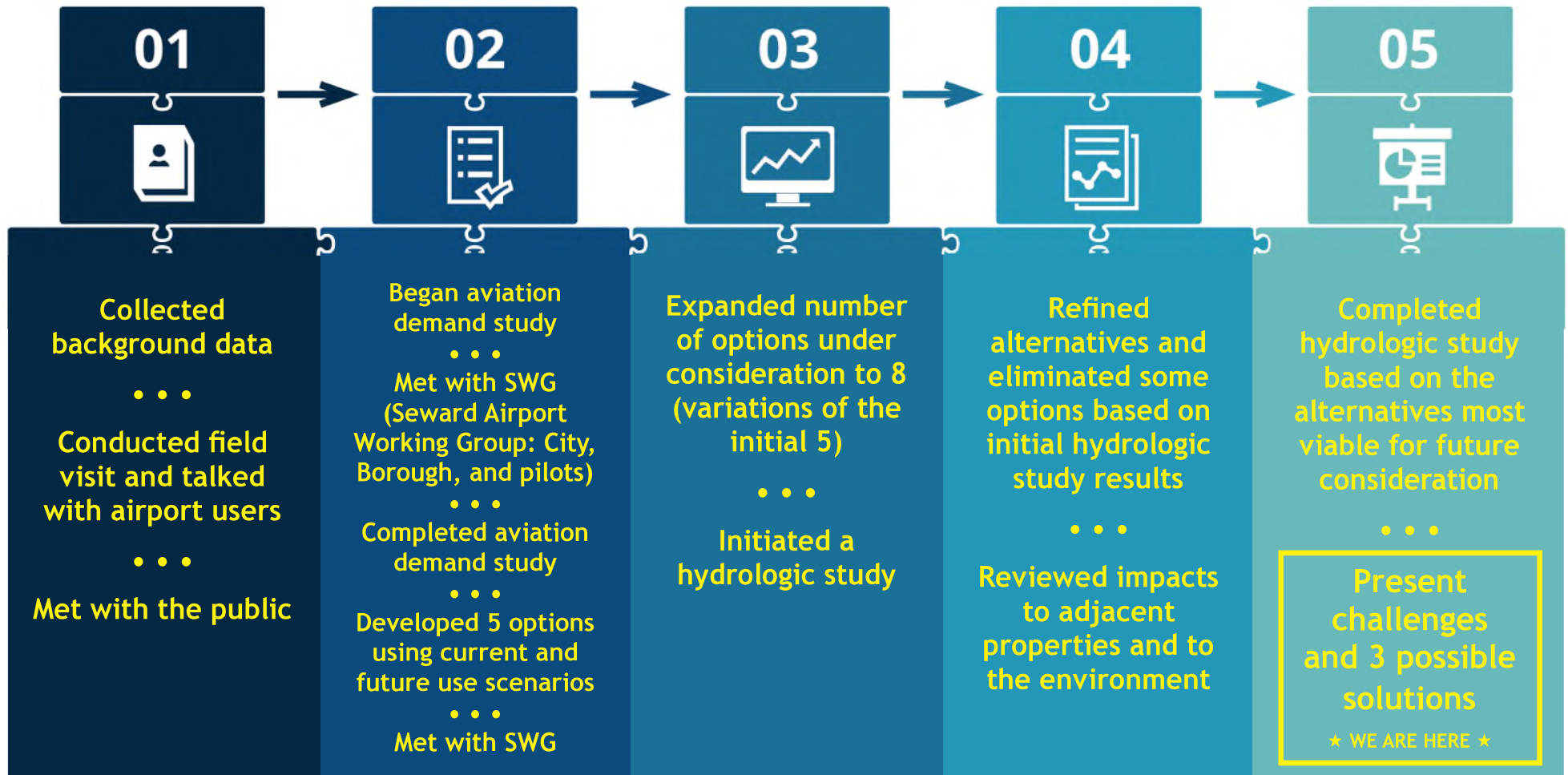
## ...And More Challenges...

- The AIP program has about \$213 million to spend each year, and this is typically spread over 10 to 15 projects per year.
- The current estimate for the Seward Airport Improvements Project is about \$20 million (about 10% of the AIP annual budget).
- Federal/state dollars continue to shrink, while the cost of construction increases.
- Due to budget cuts, future funding is not secure.

# Understanding Possible Solutions

## Initial Alternatives and Refinement Process

What we've done so far:



Today we want to:

Show you the results of this work—our three final alternatives.

Gain additional input on the advantages and disadvantages of these three alternatives.



# ALTERNATIVE 1.1

## Reconstruct Existing Main Runway (13-31) (4,249 feet x 75 feet)

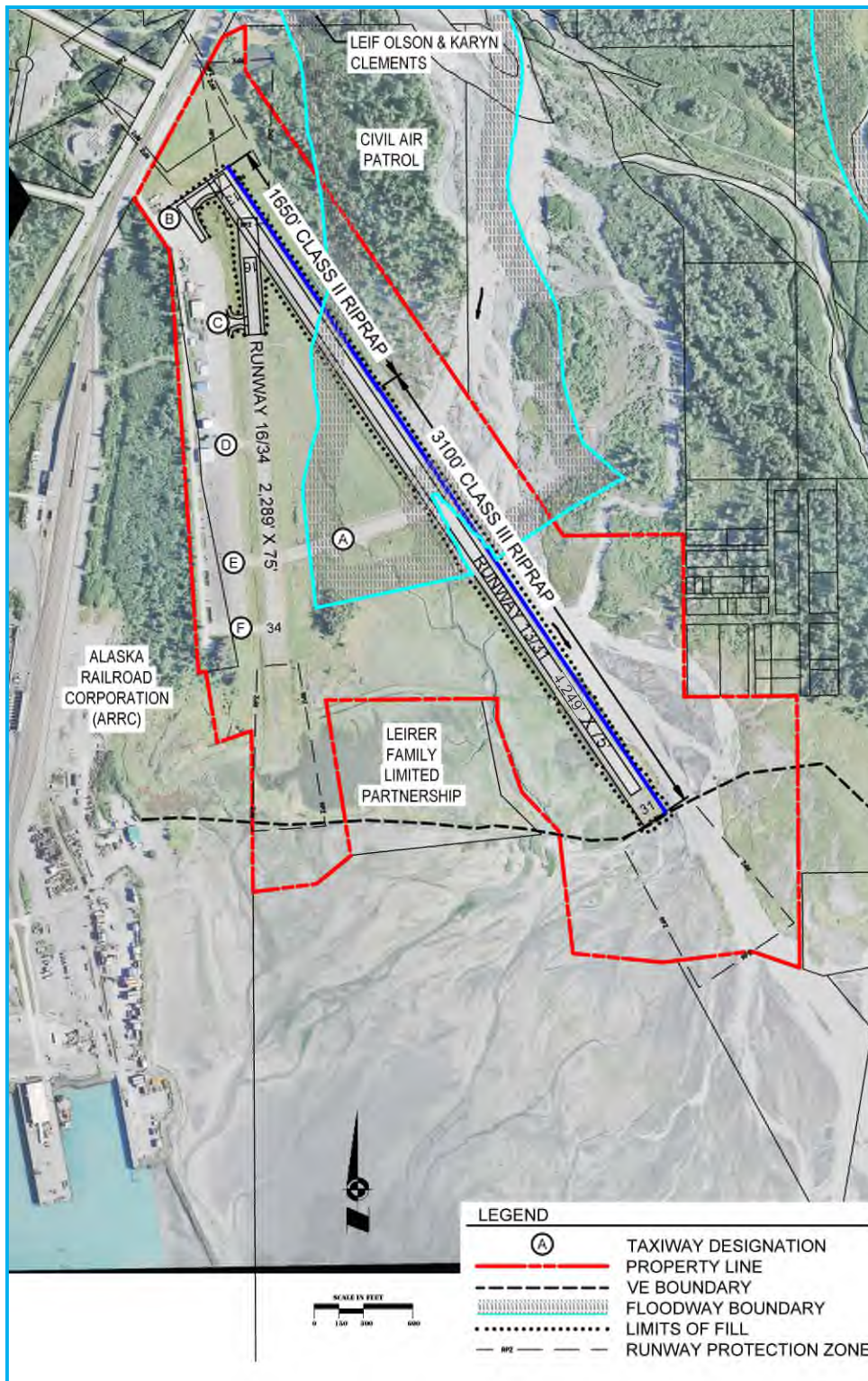
- Reconstruct and raise Runway 13-31 above the 100-year flood level. Install riprap to protect the embankment.
- Adjust elevations of Runway 16-34 and Taxiways B and C to match new runway elevation. Eliminate Taxiways A, D, and E to comply with new FAA guidance.

### Key Advantage

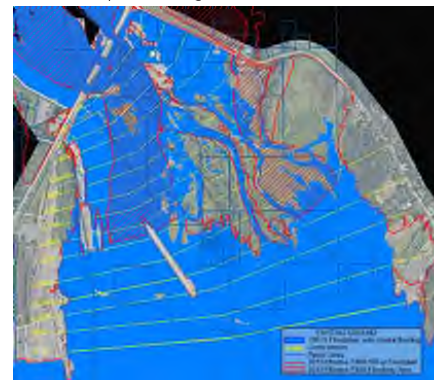
- + Runway will still accommodate historical jet traffic, although it will be slightly shorter to provide the full required Runway Safety Area.

### Key Disadvantages

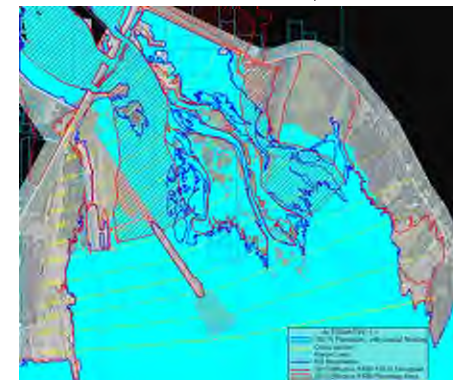
- Creates the greatest flood impacts.
  - Requires armoring and raising the runway by 4 feet on average.
  - The higher runway will redirect more flood water further to the other side of the river, impacting more properties than the other alternatives, thereby lengthening the property acquisition phase.
  - Impacts the Resurrection River floodway, requiring a revision of the FIRM (flood) map. May not be achievable due to the additional impacts to river properties. Requires a public process. The FIRM revision is expected to lengthen the permitting process by about 2 years.
- Most difficult option to permit and construct due to the work required in the river.
- Offset from the apron remains substandard for large aircraft.



100-Year Floodplain - Existing Conditions



100-Year Floodplain - Alternative 1.1



# ALTERNATIVE 2.2

## Shift Existing Crosswind Runway (16-34) East & Add 1,011 Feet (3,300 feet x 75 feet)

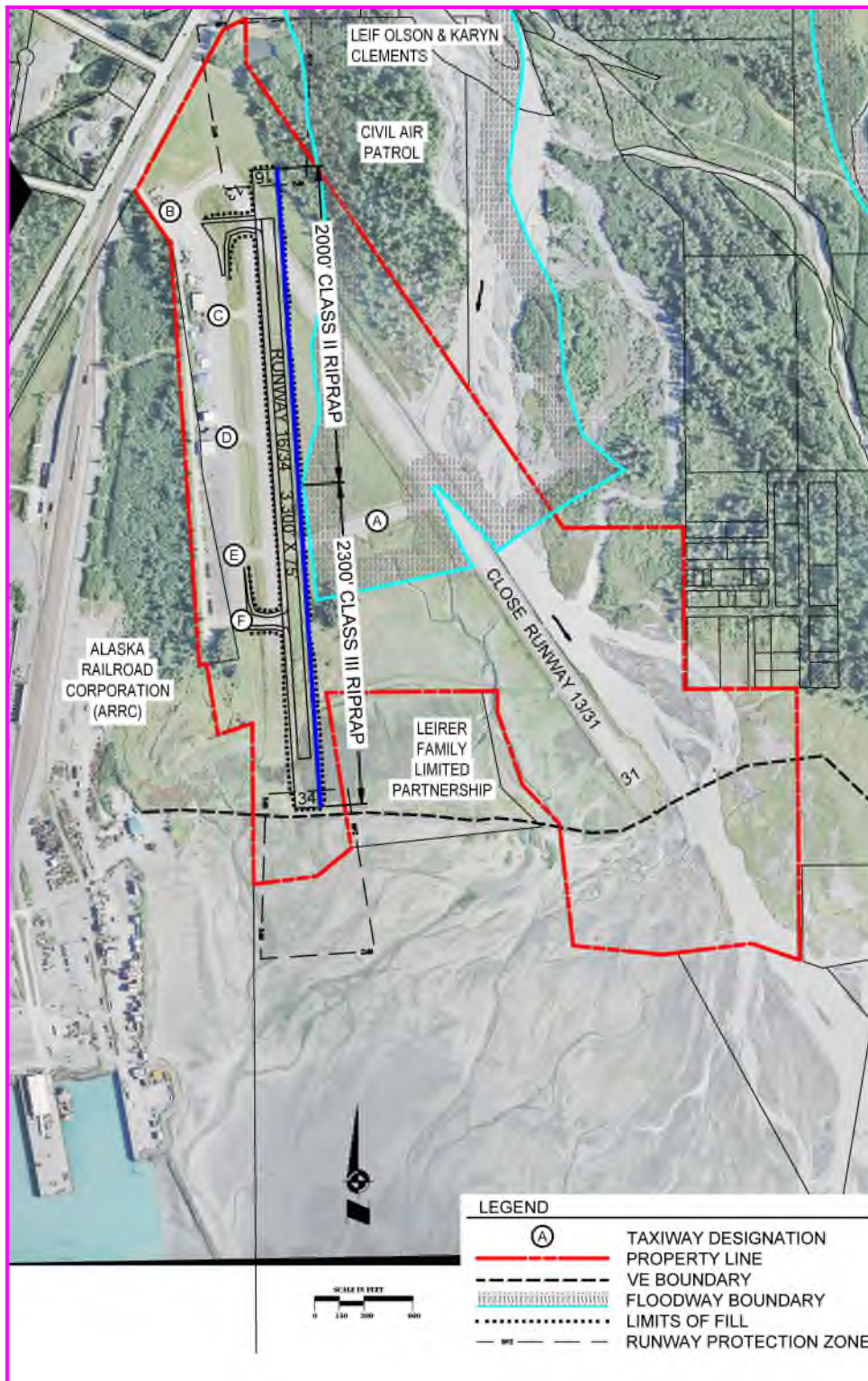
- Close Runway 13-31 and allow floodwater to overtop it.
- Reconstruct and raise Runway 16-34 above the 100-year flood level. Install riprap to protect the embankment.
- Relocate Taxiway B and adjust Taxiway F to match new runway elevation. Eliminate Taxiways A, C, D, and E to comply with new FAA guidance.

### Key Advantages

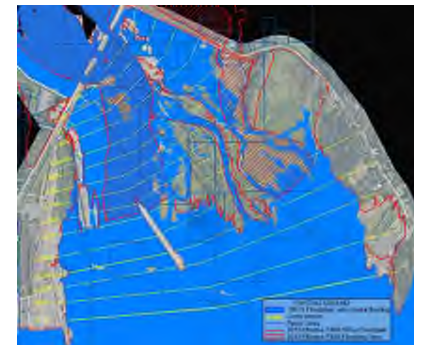
- + Sufficient for current and predicted aircraft demand. Accommodates the design aircraft.
- + Less susceptible to flood damage than Alternative 1.1, since improvements are located further away from the river threat.
- + Lengthens the runway that is best aligned with the predominant wind direction.
- + Increases the runway offset from the apron to allow larger aircraft to use the apron.
- + Has the least environmental and flood impacts of all alternatives. Impacts the floodplain but not the floodway.
- + Raises the 100-year flood level by less than 1 foot, resulting in minor additional flood impacts to river properties. Fewer properties to be acquired than Alternative 1.1, and consequently, a shorter property acquisition process.
- + Could be phased to extend to a longer runway as future demand warrants.
- + Easiest option to construct.

### Key Disadvantages

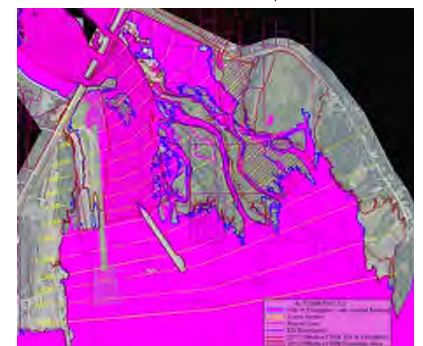
- One runway (13-31) would be eliminated.
- The new, improved Runway 16-34 would be 949 feet shorter than the abandoned runway.



100-Year Floodplain - Existing Conditions

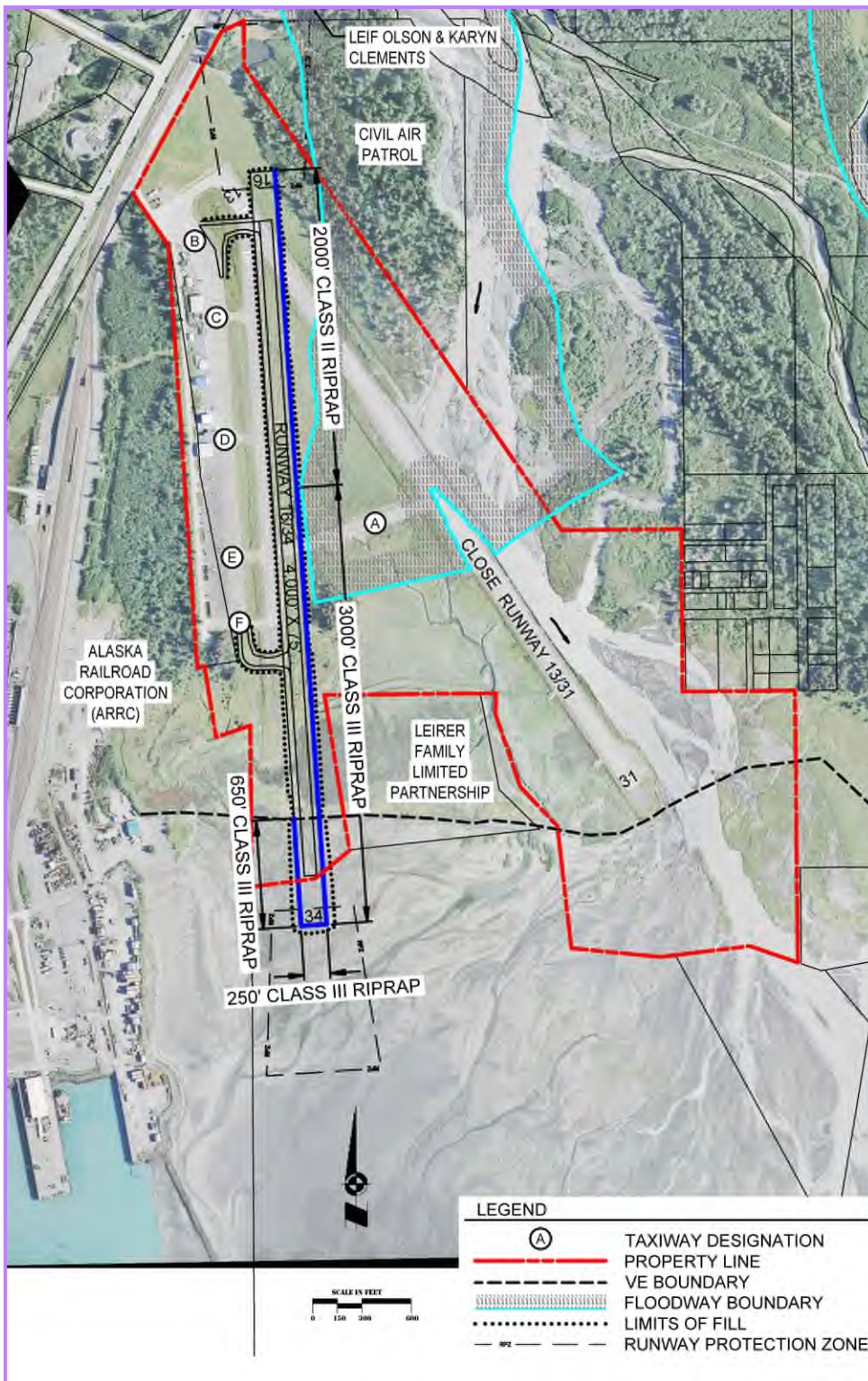


100-Year Floodplain - Alternative 2.2



# ALTERNATIVE 3.0

## Shift Existing Crosswind Runway 16-34 East & Extend by 1,711 Feet (4,000 feet x 75 feet)



- ➔ Close Runway 13-31 and allow floodwater to overtop it
- ➔ Reconstruct and raise Runway 16-34 above the 100-year flood level. Install riprap to protect the embankment.
- ➔ Relocate Taxiway B and adjust Taxiway F to match new runway elevation. Eliminate Taxiways A, C, D, and E to comply with new FAA guidance.

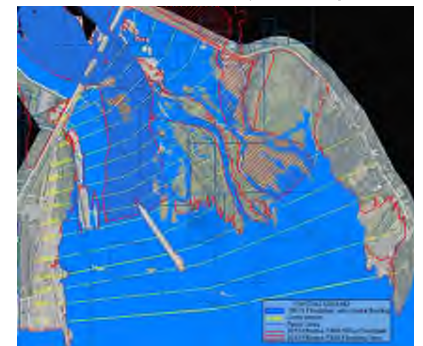
### Key Advantages

- + Less susceptible to flood damage than Alternative 1.1, since improvements are located further away from the river threat.
- + Is longer than Alternative 2.2, which allows for use by commuter aircraft such as the Dash-8.
- + Lengthens the runway that is best aligned with the predominant wind direction.
- + Increases the runway offset from the apron to allow larger aircraft to use the apron.
- + Raises the 100-year flood level by less than 1 foot, resulting in minor additional flood impacts to river properties. Fewer properties to be acquired than Alternative 1.1, and consequently, a shorter property acquisition process.

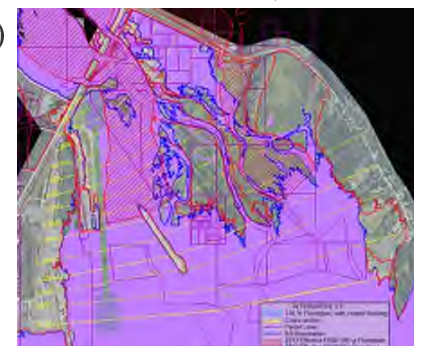
### Key Disadvantages

- Requires an alternative funding source. The additional 700 feet of runway length do not qualify for federal funding.
- Impacts the Velocity Zone (tidelands) on the FIRM (flood) map, requiring a revision to the FIRM map. Necessitates additional engineering to provide protection against the Resurrection Bay flood impacts.
- May take longer to obtain permits than for Alternative 2.2 due to tideland impacts, but shorter time than Alternative 1.1.

100-Year Floodplain - Existing Conditions

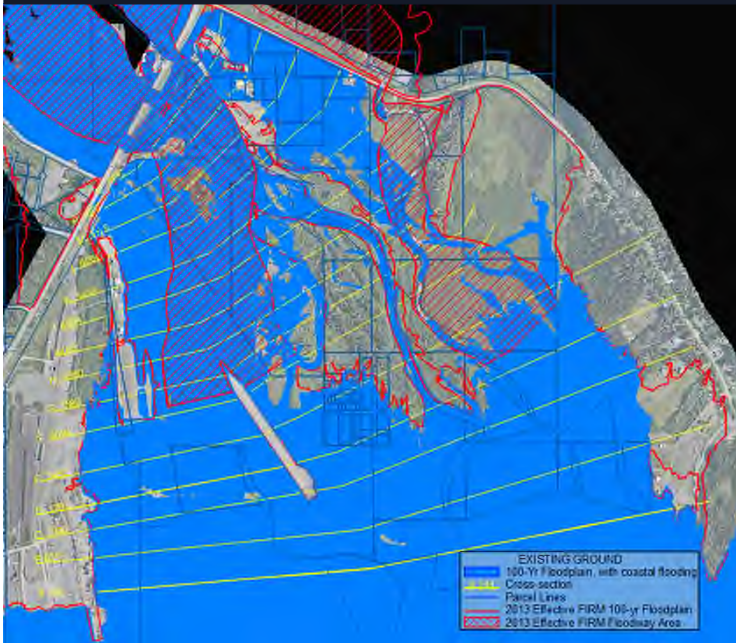


100-Year Floodplain - Alternative 3.0

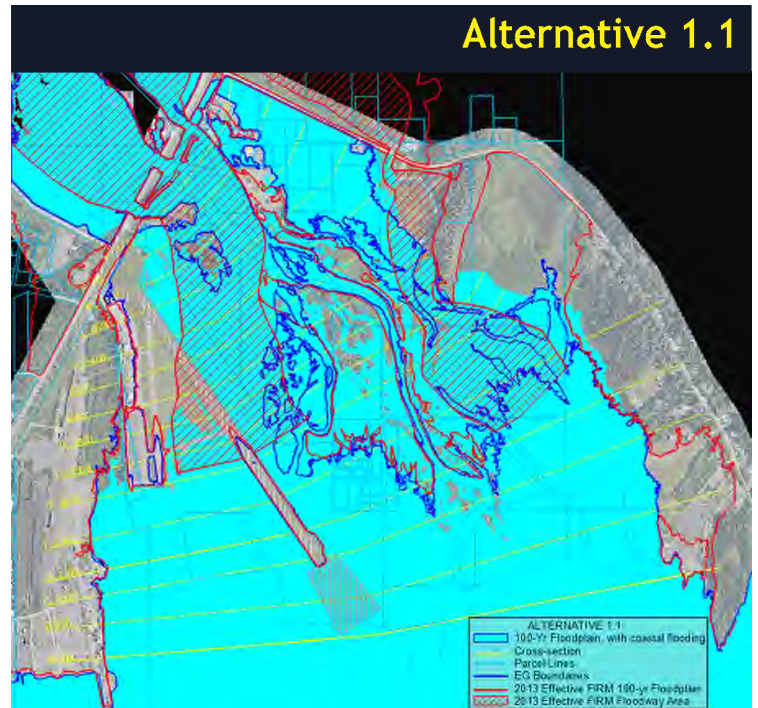


# Projected Floodplain Impacts: Changes in the 100-Year Flood

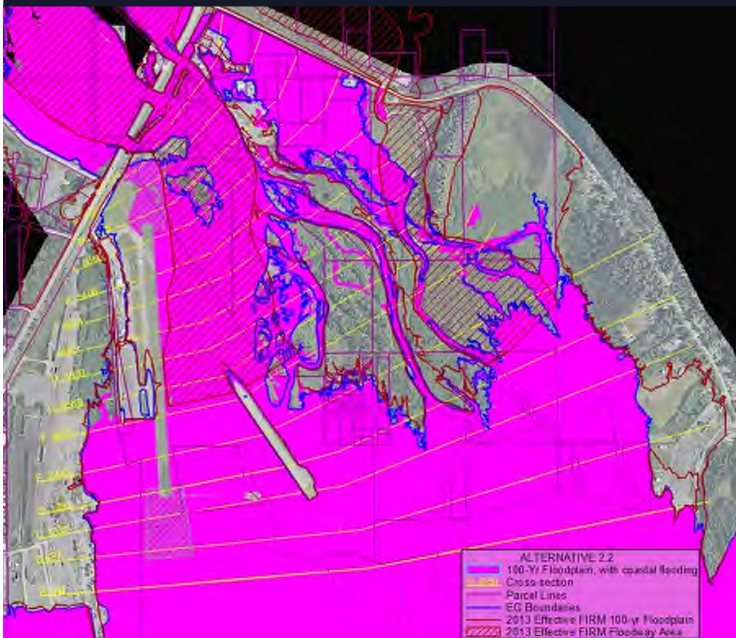
## Existing Ground



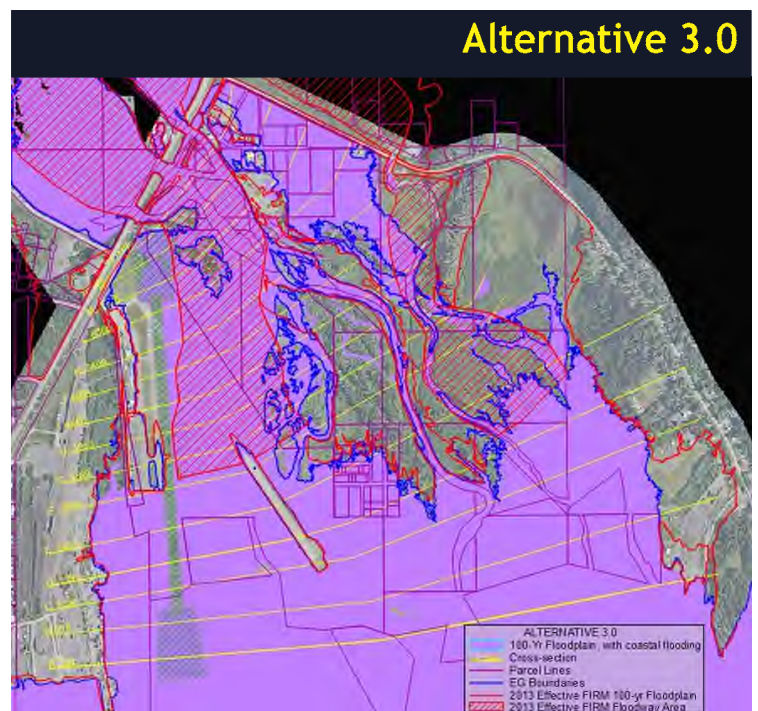
## Alternative 1.1



## Alternative 2.2



## Alternative 3.0



# Understanding Possible Solutions

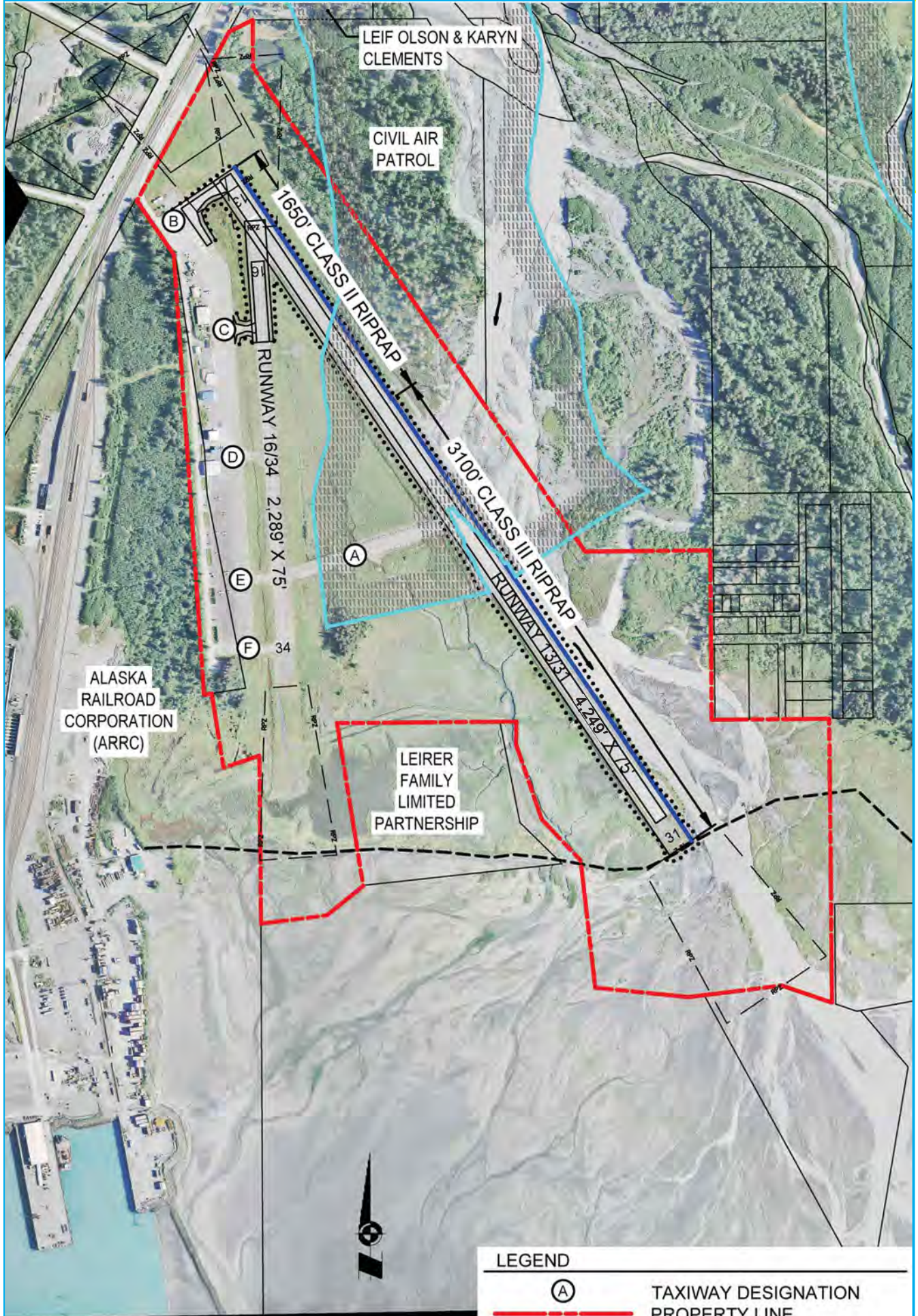
## ATTENDEE ACTIVITY

Which aspects of the project are most important to you?

Please place your **YELLOW** sticker in the box next to the criterion you feel is the most important and your **BLUE** sticker by the one you feel is next most important.

### Alternative Evaluation Criteria

<p><b>COST</b></p> <ul style="list-style-type: none"> <li>• Construction/earthwork cost</li> <li>• Maintenance and operations (M&amp;O)</li> <li>• Right of way—preliminary costs only</li> <li>• Eligibility for FAA funding</li> </ul>	
<p><b>ABILITY TO SERVE THE COMMUNITY'S NEEDS</b></p> <ul style="list-style-type: none"> <li>• Medevac</li> <li>• Meets General Aviation (GA) needs</li> <li>• Search and rescue</li> <li>• Economic development</li> </ul>	
<p><b>SAFETY, ENGINEERING, AND USER CONSIDERATIONS</b> <i>(not covered by Cost)</i></p> <ul style="list-style-type: none"> <li>• Wind coverage</li> <li>• Airspace/Runway Protection Zone (RPZ)/ approach obstructions</li> <li>• User function/runway reliability/level of service (LOS)</li> <li>• Long-term stability/risks</li> <li>• Construction considerations</li> </ul>	
<p><b>ENVIRONMENTAL CONSIDERATIONS</b></p> <ul style="list-style-type: none"> <li>• Floodplain/floodway impacts</li> <li>• Fish habitat impacts</li> <li>• Wetlands impacts</li> <li>• Endangered Species Act (ESA)/bald eagle habitat</li> <li>• Human (socioeconomic) impacts—right-of-way impacts, compatible land use, etc.</li> </ul>	



LEIF OLSON & KARYN CLEMENTS

CIVIL AIR PATROL

RUNWAY 16/34 2,289' X 75'

34

LEIRER FAMILY LIMITED PARTNERSHIP

ALASKA RAILROAD CORPORATION (ARRC)

1650' CLASS II RIPRAP

3100' CLASS III RIPRAP

RUNWAY 13/31 4,249' X 15'

LEGEND

(A)

TAXIWAY DESIGNATION

— — — — —

PROPERTY LINE

- - - - -

VE BOUNDARY

|||||

FLOODWAY BOUNDARY

.....

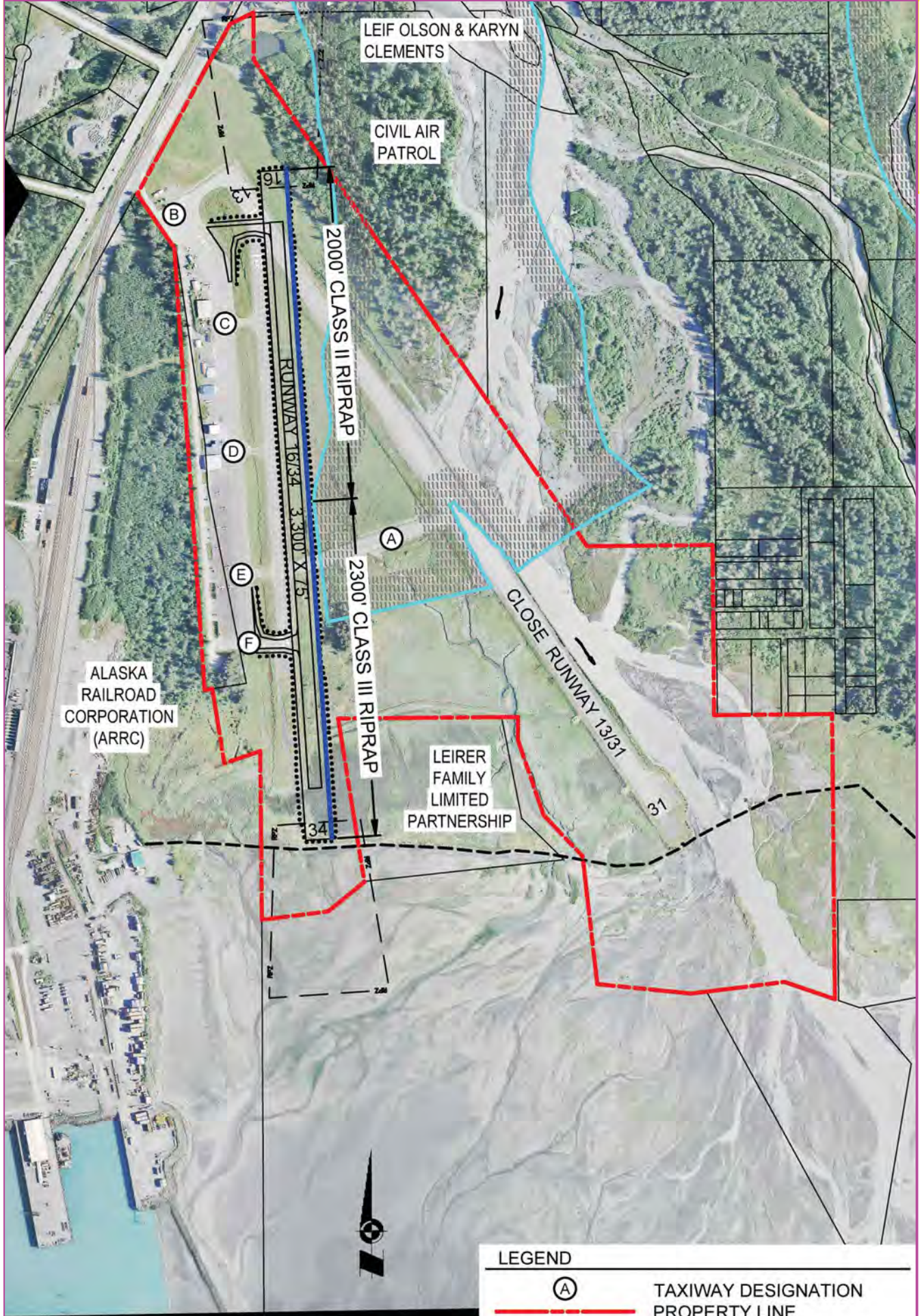
LIMITS OF FILL

— RPZ — — — — —

RUNWAY PROTECTION ZONE

Alternative 1.1

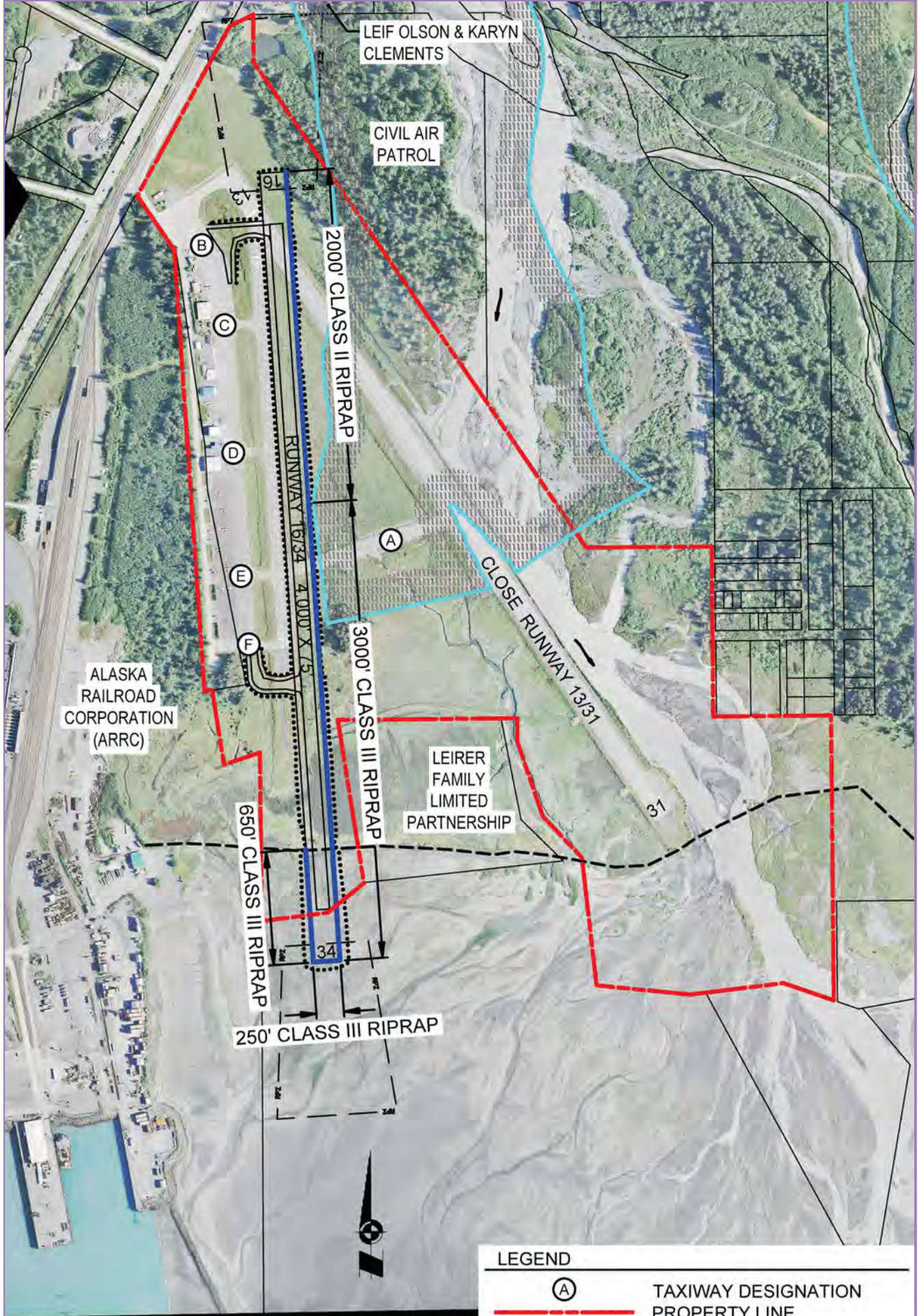




**Alternative 2.2**



LEGEND	
(A)	TAXIWAY DESIGNATION
— (Red dashed line)	PROPERTY LINE
— (Black dashed line)	VE BOUNDARY
— (Blue wavy line)	FLOODWAY BOUNDARY
— (Dotted line)	LIMITS OF FILL
— (Black dashed line)	RUNWAY PROTECTION ZONE



LEIF OLSON & KARYN CLEMENTS

CIVIL AIR PATROL

2000' CLASS II RIPRAP

3000' CLASS III RIPRAP

650' CLASS III RIPRAP

250' CLASS III RIPRAP

9L

(B)

(C)

(D)

(E)

(F)

(A)

CLOSE RUNWAY 13/31

ALASKA RAILROAD CORPORATION (ARRC)

LEIRER FAMILY LIMITED PARTNERSHIP

31

34

34

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34

**Alternative 3.0**



LEGEND	
(A)	TAXIWAY DESIGNATION
—	PROPERTY LINE
- - -	VE BOUNDARY
— · — · — ·	FLOODWAY BOUNDARY
· · · · ·	LIMITS OF FILL
- - - RPZ - - -	RUNWAY PROTECTION ZONE