

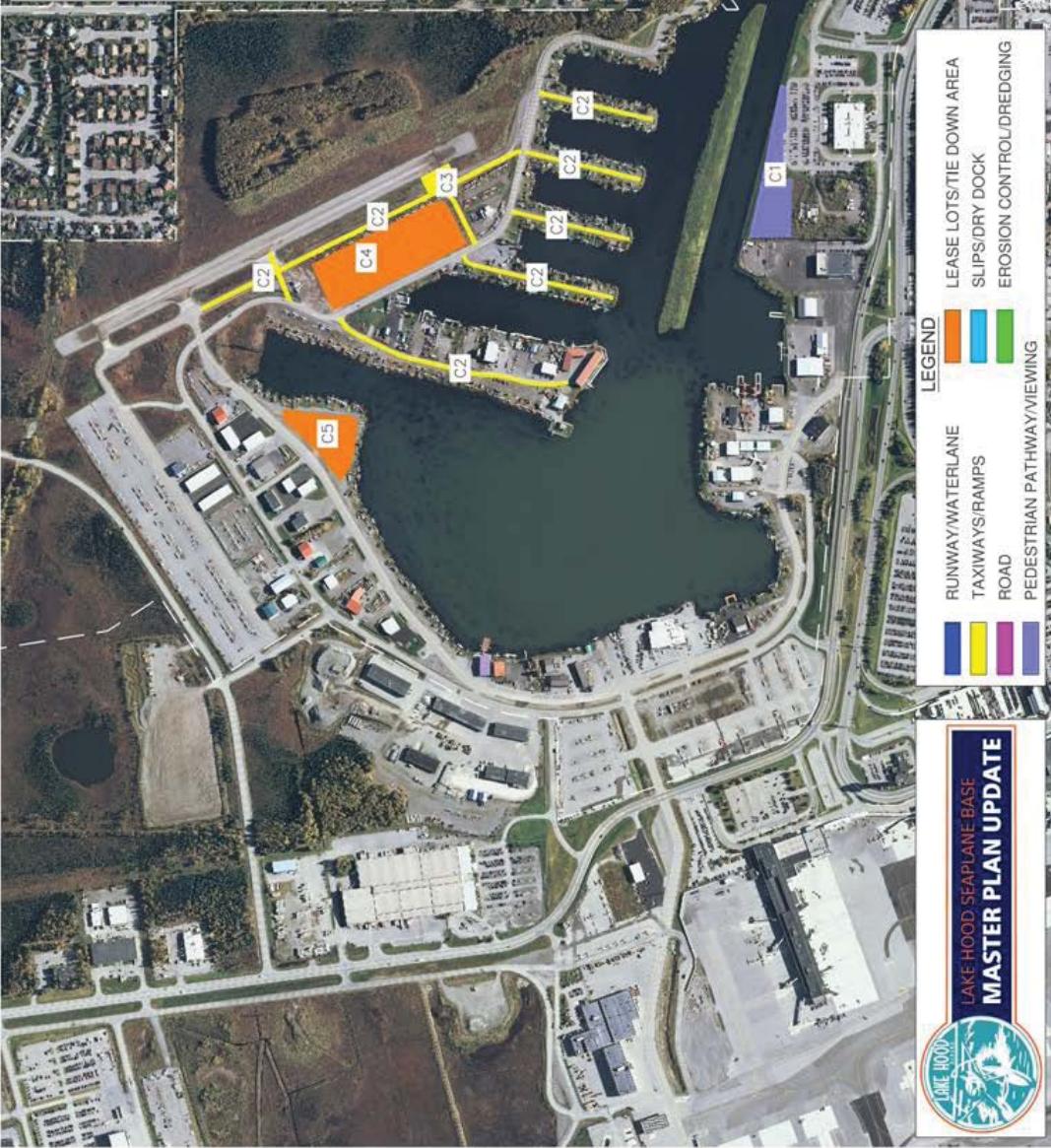
# C – Improve Existing Facilities

## ALTERNATIVE C

### IMPROVE EXISTING FACILITIES

- C1 BUILDING
- C2 EXPAND CONCRETE RUN-UP AREAS
- C3 PAVE PARALLEL TAXIWAY FOR RUNWAY 14/32 & FINGERS
- C4 PAVE, DRAINAGE IMPROVEMENTS, LIGHTING & ELECTRICAL SERVICE FOR RUNWAY 14/32 TIE DOWNS
- C5 PAVE & DRAINAGE AT DELTA TIE DOWNS
- C6 LIGHTING, ELECTRIC SERVICE & FENCING AT TRANSIENT SLIPS
- C7 PAINT COMPASS ROSE (LOCATION TO BE DETERMINED)
- C8 FENCING, CAMERAS & LIGHTING SECURITY/SAFETY UPDATES (AREA WIDE, LOCATION TO BE DETERMINED)

NOTE: RECOMMENDED ALTERNATIVE IS LIKELY TO CONTAIN FEATURES FROM ALL OF THE ALTERNATIVES.



LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

# D – Expand Facilities

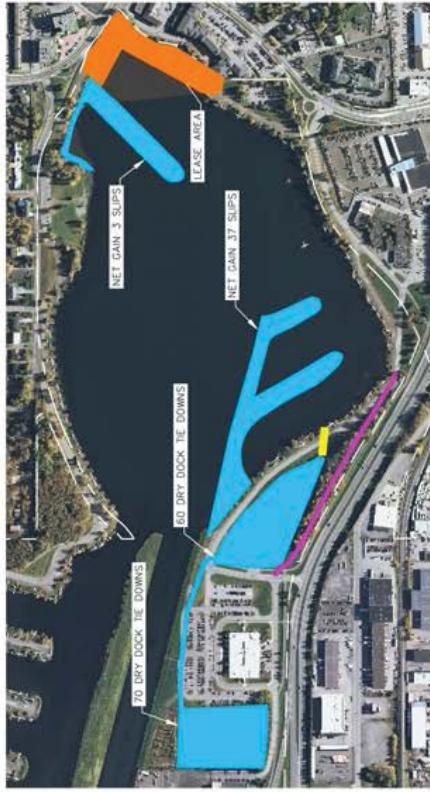


LAKE HOO SEAPLANE BASE MASTER PLAN UPDATE

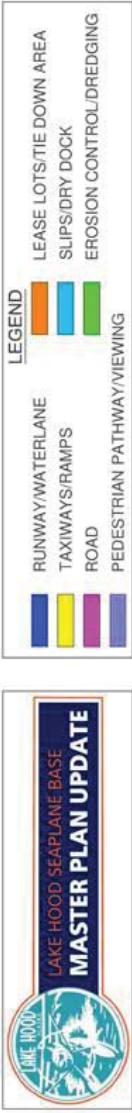
# D6 A-D Floatplane Parking/Lease Expansion Examples



D-6 A



D-6 B



LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE



D-6 A



D-6 C



# Next Steps

- Alternatives Survey – web survey at [www.lhdmasterplan.com](http://www.lhdmasterplan.com) - survey closes December 7
- Comment period on Alternatives closes December 7
- Outreach to Airmen's Association and LHD Pilots Association – December
- Advisory Committee Meeting - Recommended Alternative – Feb/March, 2016
- **Public Meeting – Recommended Alternative – April, 2016**



LAKE HODD  
SEAPLANE BASE  
**MASTER  
PLAN  
UPDATE**

# Open House – Project Evaluation

- Project Ranking
  - 10 Dots Per Person
  - Place Dots on 10 Highest Priority Projects
- Results published on project web site and considered in recommended alternative



# Questions/Comments?



LAKE HODD  
SEAPLANE BASE  
**MASTER  
PLAN  
UPDATE**

Public comments may also be submitted to  
[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)  
or  
Rachel Steer at 907-562-2000

# Thank you for participating!

## Contact Information:

Tom Middendorf, Project Manager

Leah Henderson, Assistant Project Manager

Rachel Steer, Public Involvement

[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)

907-562-2000

[www.lhdmasterplan.com](http://www.lhdmasterplan.com)



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*PUBLIC OPEN HOUSE 3*

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## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Lake Hood Seaplane Base Public Open House #3

#### Meeting Notes

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**Date:** 4/28/16

**Time:** 6:00pm-8:00pm

**Location:** The Lakefront Anchorage, 4800 Spenard Road, Anchorage, AK

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#### Staff Attendees:

Tim Coons (ANC)	Tom Middendorf (DOWL)
John Johansen (ANC)	Leah Henderson (DOWL)
Teri Lindseth (ANC)	Renee Murphy (DOWL)
Katie Gage (ANC)	Chris Cole (DOWL)
Cheryl McDowell (ANC)	Charles Guinchard (DOWL)
Mike Lee (ANC)	
John Parrott (ANC)	

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#### Public Open House #1 Summary:

On Thursday, April 28, 2016, the Lake Hood Seaplane Base Master Plan Update hosted its final public open house. The purpose of this meeting was to present and receive comments and questions on the Draft Development Plan and Phasing Plan. From 6:00-6:30pm, a public open house featured posters showing the project schedule, alternatives evaluation results, Draft Development Plan, Phasing Plan, and capital improvement funding information. The meeting was also available via live streaming from the project web site. Tom Middendorf of DOWL gave a presentation at 6:30pm, followed by public questions and comments facilitated by Leah Henderson.

#### *Advertising*

- E-newsletters/meeting reminders – distributed 4/13/16
- GovDelivery - published 3/25/16
- State of Alaska Online Public Notice - published 3/25/16
- Federation of Community Councils notice—distributed 4/15/16



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### *Attendance*

23 people signed in to the event. The sign-in sheet resulted in 3 new email addresses being added to the distribution list. 8 individuals viewed the live stream of the presentation via the project website.

### *Meeting Materials*

- Handouts (comment sheets)
- PowerPoint Presentation
- Station Posters
  - Agenda
  - Schedule
  - Draft Development Plan
  - Draft Development Plan – CIP Projects
  - Draft Development Plan – Other Projects
  - Master Plan Capital Funding Projections
  - Recommended Plan – CIP Project Phasing
  - Survey Results

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### **Meeting Presentation:**

Tom Middendorf gave a presentation on the following topics:

1. Introductions
2. What is a Master Plan?
3. Why do a Master Plan?
4. Master Plan Schedule/Status Update
5. Overview of Alternatives
6. Alternatives Project Evaluation
7. Draft Development Plan
8. Master Plan Capital Funding Projections
9. Recommended Plan – CIP Project Phasing
10. Next Steps
11. Public Comments and Questions



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Questions/Comments:

*The Questions and Comments session lasted for 30 minutes. Questions and comments below are a synopsis of the meeting's Q&A session following the presentation. When appropriate, Master Plan Update team responses have been supplemented to supply complete responses.*

**Question from the public:** Is weed control a capital cost or handled by airport maintenance out of the operating budget?

*Answer from the Master Plan Team: Weed control is an operating expense. Last summer elodea was discovered and the Alaska Department of Natural Resources used chemical treatment to eradicate elodea, on behalf of the airport. This will continue in 2016.*

**Question from the public:** How much has Lake Hood spent on capital projects in the last 20 years?

*Answer from the Master Plan Team: About 15 years ago, Lake Hood became eligible for and started spending \$1 million per year in FAA entitlement funding. In the last 10 years Lake Hood has also received and spent an average of about \$600,000 per year in FAA discretionary funding. Airport matching funding of about 6.25% of the FAA grant amount has come from airport user fees.*

**Comment from the public:** I don't understand why the airport continues to propose Project J, the trail east of Runway 14-32. I respectfully ask that you remove this project from the plan because it's not needed and people would like to walk around the lake closer to the airplanes.

**Comment/question from the public:** The projects in this plan mostly accommodate wheeled aircraft. There are already lots of wheeled aircraft tie down spaces. We need to concentrate our funding on facilities for floatplanes. Regarding Project 4, those slips were constructed in the 50's and the state has not maintained those slips. The ramp projects are for the amphibian airplanes, not for floatplanes. Who on the Advisory Committee represented the Municipality of Anchorage? I don't see anyone from the Governor's Aviation Advisory Board representing the Municipality. I don't see them here and I would like to know what they have to say about these recommendations. The mayor did not appoint anyone to be on the Advisory Committee.

*Answer from the Master Plan Team: Josh Durand represents Municipal Parks Department and Thede Tobish represents Municipal Planning. Steve Strait is the Aviation Advisory Board representative.*

**Question from the public:** Did you say there was going to be a path right next to the realigned Lakeshore Drive?

*Answer from the Master Plan Team: Yes, it's hard to see on the drawing, but there is a separate path outside of the taxiway object free area and separate from the road.*



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

**Question from the public:** Lake Hood is a part of the statewide airport network; are there other airports in Alaska that could compete with LHD for FAA funding?

*Answer from the Master Plan Team: Yes, Lake Hood would compete with other Alaska airports for FAA Discretionary Funding.*

**Comment from the public:** I'm not sure about transient tie downs on the left side of the park, but the transient tie downs on the right side of the park are a mess. Branches overhang the area, it is swampy and it needs 10 truckloads of gravel, weed whacking and brushing, and anchors to tie down floatplanes. I need to have boots on to help someone out over there and I'm not even getting in the water.

*Answer from the Master Plan Team: Thank you for that comment. You mentioned tree concerns at a previous open house meeting. Part of our project was to complete an aeronautical survey, which is basically a technical word for heights of trees and buildings and all the things that might be obstacles for flying airplanes. We've collected data on obstacles that are not shown on the draft Development Plan, but it will be part of the final Airport Layout Plan. It will show trees and other obstacles that need to be addressed.*

**Question/comment from the public:** Regardless of whether Project J happens, would there still be a pedestrian path around the lake? I think Project J is a good option for the future of Anchorage and the airport, because it is safer than trails that cross multiple busy streets, like in many parts of Anchorage.

*Answer from the Master Plan Team: Yes, the existing path around the airport would remain if Project J is not built.*

**Comment from the public:** A previous airport environmental assessment rejected the idea of having aircraft parking to the east of Lake Hood Strip and that is why Echo parking was developed where it is. These prior decisions should not be forgotten. Development east of Hood Strip would be a huge impact to the Turnagain neighborhood. Turnagain voted again to reaffirm strong opposition to the development of the pathway or aviation development in the area east of Hood Strip. This development was not included in the West Anchorage District Plan. We ask to have this development removed from the master plan. We agree with the improvement of Spenard Beach Park.

**Question from the public:** Do the list of CIP projects include environmental assessments and impacts of how they are going to affect 'us', the neighborhood, the increase in noise and the reduction in property values of the neighborhood? Is there money in the CIP to complete environmental assessments for projects like acquisition of the parcels in front of the hotel that the airport wants to buy?

*Answer from the Master Plan Team: We did include funding for environmental reviews and permits that would be required by the FAA and others. The amount of environmental review depends on the type of projects. Projects that are fixing existing facilities, such as resurfacing pavement, would have less review*



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

*than building new or expanded facilities or development in wetlands. The FAA would need to determine the level of environmental review needed for property acquisition.*

**Question from the public:** Is the Project J trail going all the way up to Northern Lights?

*Answer from the Master Plan Team: Our graphic does not show the trail going up to Northern Lights. I think some of the city's trail/bike plans show a trail going up to Northern Lights through the airport or an adjacent residential street. I've gotten some other comments suggesting that our plan should extend the proposed trail to Northern Lights.*

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LAKE HOOD SEAPLANE BASE  
**MASTER PLAN UPDATE**

Public Open House #3

April 28, 2016    6:00-8:00 PM

# Meeting Agenda

Open House: 6:00 – 6:30

Master Plan Presentation: 6:30 – 7:15

1. What is a Master Plan?
2. Master Plan Status/Schedule Update
3. Master Plan Alternatives Evaluation
4. Recommended Plan – Capital Projects and Other Projects
5. Master Plan Capital Funding Projections
6. Recommended Plan CIP Phasing
7. Next Steps

Public Comments/Questions: 7:15 – 8:00



# What is a Master Plan?

According to the Federal Aviation Administration (FAA), an airport master plan is...

A *comprehensive study of an airport that usually describes the short-, medium-, and long-term development plans to meet future aviation demand.*

A master plan's purpose is not to solve the airport's management, operations, or maintenance issues.

## Products of a Master Plan

- 20-Year Phased Development Plan with a Capital Improvement Program
  - Airport Layout Plan
  - Airport Master Plan Report



# Why do a Master Plan?



## Rationale, Benefits and Outcomes of a Master Plan

- Development priorities/schedules
- Development in a safe manner
- Proper facility siting - avoids later facility relocation
- Fiscally responsible
- FAA recommends regular updates
- Required for FAA funding
- Guides airport improvements and leasing decisions
- Preserves/enhances LHD's role supporting economic activity, aviation lifestyle, and rural access

# Master Plan Schedule/Status Update



# LAKE HOOD SEAPLANE BASE **MASTER PLAN UPDATE**

LAKE HOOD SEAPLANE BA

MASTER PLAN UPDATE SCHEDULE

\*Schedule subject to change, check website for updates.

# Overview of Alternatives

- A. No Capital Improvements
- B. Major Maintenance & FAA Standards
- C. Improve Existing Facilities
- D. Expand Facilities

***Recommended Alternative includes features from all of the alternatives***



# Alternatives Project Evaluation

Projects evaluated by:

- September and March Advisory Committee meetings
- November open house
- December survey
- FAA and airport staff
- Briefings to other groups

Recommended Plan includes 27 of the 40 projects from the Alternatives. Some projects not recommended because:

- Need addressed in other recommended projects
- Not cost effective
- Need unclear



# Recommended Plan



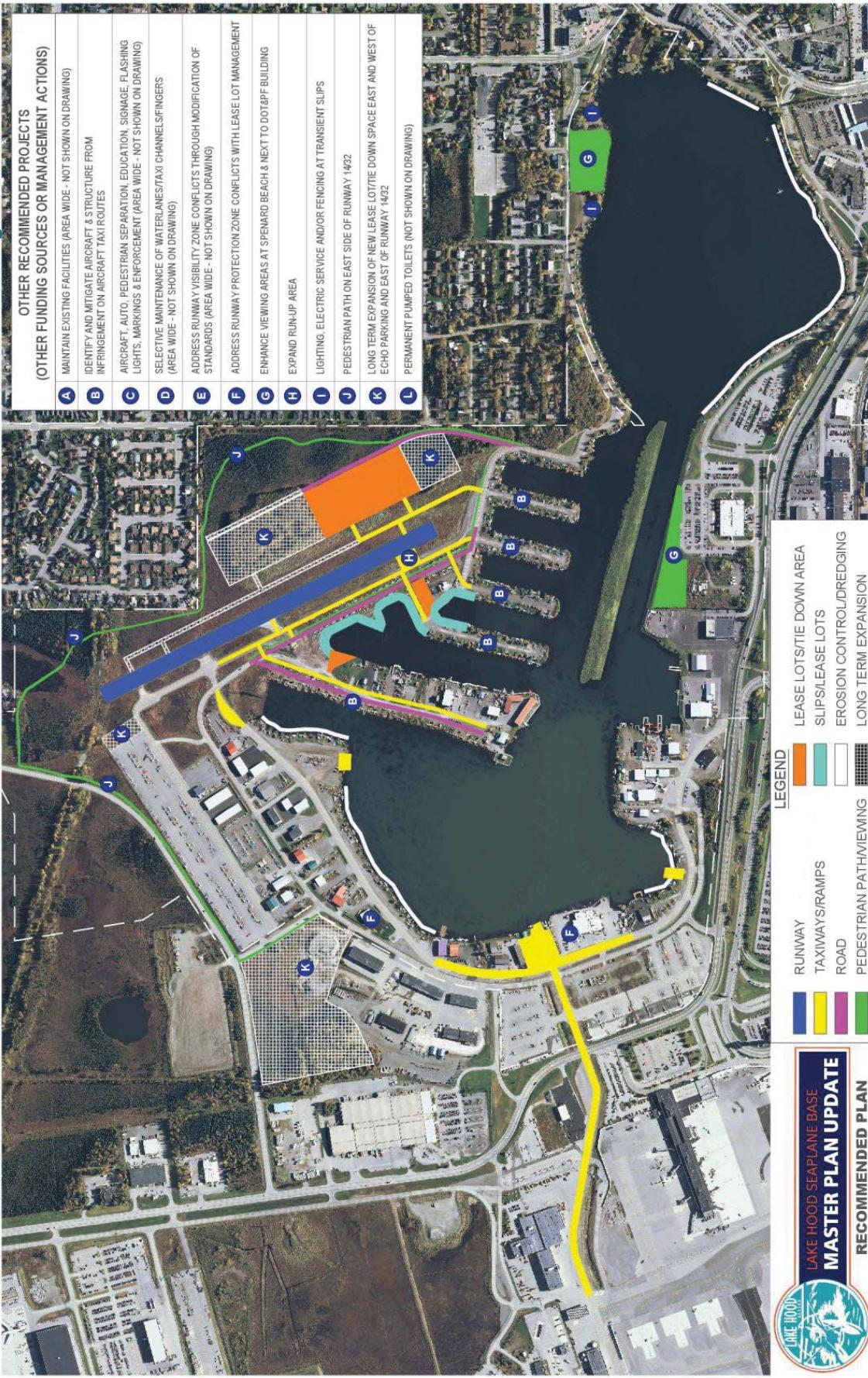
LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

# Recommended Plan – CIP Projects



LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

# Recommended Plan – Other Projects



LAKE HOD SEAPLANE BASE MASTER PLAN UPDATE

# Master Plan Capital Funding Projections

- Master Plan CIP to be based on a realistic, but optimistic funding forecast
- Considers historical FAA Airport Improvement Program (AIP) funding amounts

Funding Sources	Amounts
Current LHD Annual AIP Passenger Entitlements	\$1,000,000
Recent LHD Annual Average AIP Discretionary Funding & Potential AIP Increases	\$ 875,000
International Airport Revenue Fund AIP Match	<u>\$ 125,000</u>
Average Annual CIP Funding Projection	\$2,000,000

- $20 \text{ Year Funding Projection} = \$2M \times 20 \text{ Years} = \$40 \text{ Million}$
- Some projects could occur beyond 20 years if funding amounts are not achieved



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SEAPLANE BASE  
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UPDATE**

# Recommended Plan – CIP Project Phasing

Recommended Capital Improvement Program Project Phasing	1-5 Years	6-10 Years	11-20 Years	20+ Years	Funding Source
					Airport Match
<b>Resurface/reconstruct portions of Lakeshore Taxiway &amp; west Lake Hood floatplane ramp</b> Addresses existing surface condition problems.	\$4,000,000				\$3,750,000 \$250,000
<b>Resurface/reconstruct Taxiway V</b> Addresses existing surface condition problems for this important connection between LHD and ANC.	\$2,300,000	\$6,500,000			\$8,250,000 \$550,000
<b>Fencing, cameras &amp; lighting security/safety upgrades (area wide)</b> Detailed plan needed. High priority of users and FAA.	\$1,000,000	\$1,000,000			\$1,875,000 \$125,000
<b>Continue erosion control/slip dredging projects</b> High priority of users. In prior Master Plan.	\$500,000	\$2,850,000	\$2,850,000		\$5,812,500 \$387,500
<b>Repair/replace existing floatplane ramp</b> Addresses user concerns about ramp condition.	\$700,000				\$656,250 \$43,750
<b>Continue land acquisition in east Lake Spenard</b> Phased acquisition when owners want to sell. In prior Master Plan.	\$800,000	\$800,000	\$900,000		\$2,343,750 \$156,250
<b>Construct parallel road &amp; taxilane on commercial finger</b> Separates aircraft and automobiles. In prior Master Plan.	\$1,100,000				\$1,031,250 \$68,750
<b>Rehab runway surface, improve drainage &amp; replace lighting</b> Major rehabilitation needed every 15 - 20 years.			\$3,200,000		\$3,000,000 \$200,000
<b>Add floatplane ramp in Lake Hood</b> In prior Master Plan.			\$500,000		\$4,687,50 \$31,250
<b>Tie down &amp; Lakeshore Drive relocation &amp; lease lot/slip expansion</b> East Runway 14/32 tie downs, taxiway, road & electrical Tie down relocation is needed before Taxiway H is realigned and Lakeshore Drive is relocated.			\$9,000,000		\$8,437,500 \$562,500
<b>Lakeshore Drive &amp; path relocation and taxiway connectors</b> Separates aircraft, automobiles, and pedestrians.		\$1,700,000			\$1,593,750 \$106,250
<b>Slip/lease area development</b> High priority of users.				\$4,700,000	\$4,406,250 \$293,750
<b>Reconstruct &amp; realign Taxiway H (parallel taxiway)</b> Addresses FAA standards and surface condition. Priority of FAA.					\$1,406,250 \$93,750
<b>Realign Taxiway H3</b> Addresses FAA standards. Construct with Taxiway H.					\$187,500 \$125,00
<b>Fencing &amp; gates for taxiway access to Runway 14/32</b> High priority of FAA to prevent incursions. Build after connectors are built.					\$650,000 \$650,000
<b>TOTAL</b>	\$10,400,000	\$11,150,000	\$19,850,000	\$5,700,000	\$47,100,000 \$44,156,250 \$2,943,750

# Next Steps

LAKE HOOD  
SEAPLANE BASE  
**MASTER  
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UPDATE**

- Recommended Plan Public Comments Requested by - May 27
- Final Advisory Committee Meeting # 5 – May, 2016
- Draft Report and Airport Layout Plan – Summer
- Public Review of Draft – September
- Final Master Plan - Fall



# Public Comments and Questions

- Comments on the Recommended Plan?
- Comments on the Capital Improvements Phasing Plan?
- Have we missed anything important?

Public comments may also be submitted to  
[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)

or

Tom Middendorf at 907-562-2000



# Thank you for participating!

## Contact Information:

Tom Middendorf, Project Manager

Rachel Steer, Public Involvement

[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)

907-562-2000

[www.lhdmasterplan.com](http://www.lhdmasterplan.com)



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## **Advisory Committee Meetings**

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*ADVISORY COMMITTEE MEETING 1*

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## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Lake Hood Seaplane Base Public Open House #1

#### Meeting Notes

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**Date:** 01/29/15

**Time:** 5:30pm-7:30pm

**Location:** Millennium Hotel, 4800 Spenard Road, Anchorage, AK

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#### Staff Attendees:

Tim Coons (ANC)	Tom Middendorf (DOWL)
John Johansen (ANC)	Leah Henderson (DOWL)
Teri Lindseth (ANC)	Rachel Steer (DOWL)
Katie Gage (ANC)	Meg Jones (DOWL)
John Parrott (ANC)	Lesley Lepley (DOWL)
Mike Lee (ANC)	Brian Hanson (DOWL)
Terri Tibbe (ANC)	Wayne Fowler (DOWL)
Josh Briggs (ANC)	

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#### Public Open House #1 Summary:

On Thursday, January 29, 2015, the Lake Hood Seaplane Base Master Plan Update hosted its first in a series of public open houses. The purpose of this meeting was to introduce the Master Plan Update project team, describe the master plan purpose, process, and public involvement opportunities, and collect input on master plan issues. From 5:30-6:00pm, a public open house featured posters showing the Master Plan Update schedule, agenda, historical photos, inventory, issues, and master plan goals. Tom Middendorf and Leah Henderson of DOWL gave a presentation at 6:00pm, followed by public input on issues, questions, and comments facilitated by Rachel Steer.

#### *Advertising*

- E-newsletters/meeting reminders – distributed 01/16/15 and 01/28/15
- GovDelivery—published 01/16/15
- State of Alaska Online Public Notice--published 01/16/15
- Facebook advertising campaign from 01/19/15-01/29/15
- Meeting announcements on the ANC Facebook and Twitter feeds
- Federation of Community Councils notice—distributed 01/21/15



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### *Attendance*

69 people signed in to the event. The sign-in sheet resulted in 21 new email addresses being added to the distribution list.

### *Media Coverage*

KTVA Channel 11 interviewed John Parrott and covered the event, resulting in a media story that aired the evening of 01/29/15 and the morning of 1/30/15.

### *Meeting Materials*

- Handouts (agenda, comment sheets, schedule, postcard mailer, issues worksheet, economic benefits of Lake Hood brochure)
- PowerPoint Presentation
- Station posters
  - Agenda
  - Schedule
  - Historical photos
  - Inventory
  - Master Plan Draft Goals
  - Development Graphic
  - Issues

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### **Meeting Presentation:**

Tom Middendorf and Leah Henderson gave a presentation on the following topics:

1. Introductions
2. What is a Master Plan?
3. Why do a Master Plan?
4. Recent Improvements
5. Master Plan Schedule
6. Public Involvement Program
7. Master Plan Draft Goals
8. Inventory
9. Forecast
10. Preliminary Pilot Survey Results



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Questions/Comments:

*The Questions and Comments session lasted for 30 minutes, during which the Master Plan Update team answered approximately 12 questions. Questions and answers below are a synopsis of the meeting's Q&A session following the presentation. When appropriate, Master Plan Update team responses have been supplemented to supply complete responses.*

**Question from the public:** Will the PowerPoint slides for this meeting be posted on the website?

*Answer from the Master Plan Team: Yes, we will add them to the website.*

**Question from the public:** Can the issue sheet handouts be accessed and submitted from the website?

*Answer from the Master Plan Team: Yes, we will add them to the website.*

**Question from the public:** What has been and not been completed from the last master plan?

*Answer from the Master Plan Team: Tom discussed the projects completed and not completed from the last master plan. The A & B parking project will be under construction in 2015, construction to begin this spring. Bank stabilization project is not yet complete; two out of five phases are complete.*

**Question from the public:** Who is responsible for responding to crashes at the gravel strip?

*Answer from the Master Plan Team: Anchorage International Airport Fire and Rescue handle emergencies at the gravel strip and Lakes Hood and Spenard.*

**Question from the public:** How did you derive the goals of this Master Plan? Did you look at the 2006 Lake Hood Master Plan goals as a starting point?

*Answer from the Master Plan Team: Yes, the planning team looked at the 2006 Master Plan goals, the Anchorage Master Plan goals, as well as other goals from airport master plans around the country.*

**Comment from the public:** We have not created one new float plane slip since the fingers were created. We should look at this as a seaplane base first and foremost. Building more hangars defeats the purpose of a seaplane base; we need to choose whether Lake Hood will be a seaplane base or wheeled plane facility.

**Question from the public:** What is the status of the water quality around the lake?

*Answer from the Master Plan Team: Water quality based on the Alaska Department of Environmental Conservation measures is significantly better than in the recent past. Virtually all deicing fluid that used to drain into the lake now drains away from the lake.*

**Comment from the public:** Adding another access ramp will take away floatplane slips.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

**Question from the public:** Has a floatplane pullout service ever been provided?

*Answer from the Master Plan Team: Private businesses can get an airport lease or permit to provide this service.*

**Comment from the public:** Consider the cost difference between running the weed eater and killing with chemicals.

**Comment from the public:** I disagree with adding more slips. There are a lot of older pilots and not as many new pilots starting to fly.

**Comment from the public:** I would like more slips; a lack of slips is preventing younger pilots from getting into aviation.

**Comment from the public:** Title 17 requires 3 takeoffs and landings in order to keep floatplane slip. How is Lake Hood going to comply with this to fulfill the provision.

*Answer from the Master Plan Team: We do not have the regulations at this meeting. This is a regulatory/administrative issue, and not a master plan issue.*

**Comment from the public:** Weeds did not happen in lake until ANC started putting all the chemicals in lake.

*Answer from the Master Plan Team: Weeds have proliferated after the airport improved water quality by redirecting deicing chemicals away from the lake.*

**Question from the public:** Are there any plans to deal with drone or Unmanned Aerial Vehicle (UAV) usage around the airport and restrictions?

*Answer from the Master Plan Team: That is an FAA airspace issue; the airport has no authority over airspace.*

**Question from the public:** Does the airport foresee drones or UAVs being allowed to operate from the airport?

*Answer from the Master Plan Team: Drone use is unlikely at ANC or LHD because of the high frequency of operations by fast moving aircraft; however, if there were legal drone or UAV operations and procedures approved by FAA then the airport would comply with those procedures. (Since this meeting the FAA has issued draft rules for drone operations.)*

**Comment from the public:** Hangars are too close to the lake.

**Comment from the public:** Commenter would like to see a floating dock in Lake Spenard.



## LAKE HODD SEAPLANE BASE MASTER PLAN UPDATE

### Summary of LHD Comments Prior to Presentation:

- Poor drainage at tenant's lot near Hood Strip.
- Aircraft access to fuel dock is difficult due to approach.
- Transient parking is often full.
- Limit time allowed to park in transient parking.
- The Environmental goal doesn't consider noise or other human impacts.
- No new slips have been developed recently.
- Alpha parking area should be reserved for private development of hangars and other commercial business.
- Floating slips, accessed by water taxi could be a way to expand slips in Lake Spenard.
- Water taxilane is too congested to place slips on Gull Island.
- Need better facilities for transient users – tie downs, shower, and campground – like Fairbanks International Airport.
- For future meetings, distribute meeting materials to the public in advance so they can be prepared.
- Is FAA's management of opposite direction operations an issue at LHD? At Merrill Field, the tower will sometimes mandate operations into the setting sun, blinding the pilot, in order to avoid opposite direction operations.
- In the past, tall trees near the Millennium Hotel have been a hazard. The airport has been topping trees to reduce the hazard.
- Bank erosion is a problem at the east end of Lake Spenard near the Millennium due to waves from aircraft taxiing and takeoffs. One permittee lost 2.5 feet of bank depth over a couple years.
- A publicly provided dolly to move dry docked floatplanes was previously provided and would be appreciated by pilots.
- The average age of pilots is increasing. How will this affect future demand?
- Better transient pilot services-would like to see a camping area with restrooms.
- Need more slips around the lake.
- Need more security for aircraft around the float slips on the southeast side of the strip (in Lake Spenard).
- Floatplane slip waitlist still needs work; takes forever to get a spot.
- The Master Plan team seems to have documented the primary LHD issues.
- Need improved signage for non-aviation users at the "gateway" entry points to guide people toward appropriate locations for viewing, recreation, etc.
- The Weed Harvester pulls weeds free from the bottom but does not gather all of them, causing weeds to float on the lake surface and in turn get caught in the rudders. It is better for the aircraft if the weeds are left alone alive attached to the lake bottom where they can taxi through them easier.
- The airport should use chemicals to control the weeds. This has been done on other lakes in the winter by drilling multiple holes in the ice then applying the chemical. The theory is the chemicals



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

will be absorbed into the lake bottom by the time the lake is ice free so that the chemicals will not be transported to other lakes by aircraft.

- Add strobe lights that can be triggered by the pilots located along Lake Shore Drive by the fingers. The strobes would help warn vehicles that an aircraft will be entering the road/taxilane.
- 

### Issues:

*Summary of LHD issues verbalized by the attendees after the meeting.*

- Retain high value wetlands at Lake Hood. They feed into Hood Creek. They provide aesthetic, flood control, water quality, and safety benefits.
  - We need more floatplane slips. Demand exceeds supply.
  - More land is needed for leases and hangar development.
  - Concerns about aircraft/vehicle/pedestrian conflicts. Some involve children on bikes and pedestrians with headphones who are not aware of aircraft hazards.
  - Concern about aircraft security. Cameras that have been installed help. Cameras help address theft and security and are a terrorism deterrent.
  - An anemometer is needed at Lake Spenard so pilots can determine which is the safest lake for takeoffs and landings. Winds can be very different at Lakes Hood and Spenard.
  - Illuminate waterlanes. It is hard to tell where they are. Tower gives instructions to get out of the waterlane but pilot can't tell where it is.
  - Noise concerns in Spenard, which is in the approach. Air taxis generally operate properly, but other pilots can fly loud, low and fast over Spenard.
  - Concerns about weeds getting tangled in floats.
  - Concerns about things stolen from aircraft.
  - Concerns about noise in community from gravel strip operations. Pilots should reduce prop pitch and limit touch and goes.
- 

### Issues Worksheets:

*Summary of Issues Worksheets*

The public was given a worksheet with a list of issues at Lake Hood, and was asked to review and identify their top 5 issues. Additional issues and comments are listed at the bottom of the worksheet.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Issues Worksheet

	Issue	Please select your top 5 issues.	Comments
<b>Runways/Taxiways</b>			
1	Vehicle/Pedestrian/Aircraft Interactions	xxxx	Pedestrian access from Spenard side to AK Aviation Museum and Rusts without doubling back around fence/More fencing and gates to keep pedestrians off taxiways & vehicles/Stronger signage-fewer openings in guardrails(esp. around blind corners on Lakeshore Taxiway).
2	Compass Rose	x	
3	Length of Lake Hood Strip		
4	Commercial Finger Access	x	
5	Additional Paved Engine Run-up Areas		
6	Improved Approaches		
7	Protect Visual Flight Rules (VFR) Arrival and Departure Routes	xxx	
<b>Aircraft Parking/Hangars/Lease Lots</b>			
8	Type of Tiedowns - Pull Through vs Push Back	x	
9	Electricity at Tiedowns		
10	Storage at Tiedowns		
11	Additional Tiedowns		
12	Additional Slips	xxxx	More float slips needed/AK Aviation Museum has 5 float slips available to the public for rent always, never withheld/More Slips-more demand than supply makes for a frustrating long wait for a float slip assignment. Build decks rather than slips so more aircraft can be parked in less space.
13	Transient Parking	xxx	AK Aviation Museum has frequent need for overflow transient auto parking during social events.
14	Wheeled Access for Float Slips		



## LAKE HODD SEAPLANE BASE MASTER PLAN UPDATE

	Issue	Please select your top 5 issues.	Comments
15	Separate Helicopter Parking		
16	Auto Parking Near Lake Hood Strip Tiedowns	xx	Get rid of junk vehicles; charge for long-term storage of vehicles. Regal needs some land, lease them some land where they park now.
17	Fuel Dock Access	x	
18	Additional Hangars and Lease lots	xxxx	Lack of lease land for development/The AK Aviation Museum is in its present site for the long haul/Open up more land for lease-hangars(t-hangars for efficiency); away from the lake edge, to allow for maximum float plane utilization.
19	Cost of Lease Lot Development	xx	Development costs very high due to current shape of land & lack of land/Cost of development is high and could be supplemented in lease, meaning have costs offset by state & wrapped in lease.
20	Location of LHD Manager's Office		
21	Floatplane Launches	xx	
22	Float Storage		
<b>Pavement/Gravel</b>			
23	Paving Gravel Surfaces	x	Taxiways & tiedown areas to be paved. Lakehood strip to remain gravel.
24	Resurface Gravel Areas		
<b>Environmental</b>			
25	Water Level/Quality	xxxx	Clean up the water. Staining on floats has gotten very bad/Against more slips, already a lot of noise in the summer.
26	Windbreaks		
27	Lake Bank Stabilization		
28	Weeds	xx	Bad news-easily spread around from float rudders, better and cheaper to get it at the source (Lake Hood).
29	Surface Drainage		
30	Land Use Compatibility	x	
31	Noise	xxx	The noise on approach from east is greatest-planes fly too fast and too low.
32	Oil Recycling		
<b>Safety/Security</b>			
33	Security	xxxx	More gates, fences and police patrols to deter theft. Video cameras to deter thieves/Security cameras at parking areas; drive thru patrols.
34	Security Lighting	x	
35	Wildlife Control		
36	Pedestrian Signs	xx	Get creative, be clever.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

	Issue	Please select your top 5 issues.	Comments
<b>Tourism/Recreation</b>			
37	Transient Pilot Facilities	x	
38	Transient Pilot Camping		
39	Recreation Use of LHD	x	
40	Spenard Beach Park	xxxx	Remove the public access to land that fronts the lake-give public a viewing dock that gives them a view of air traffic and make more tie-downs on park lake front/ We need to maintain public engagement at Lake Hood, it is a big part of Spenard-public recreation done there- 100 years/ The park should be maintained and enhanced w/swimming. The pedestrian route is a good improvement, the signage should be better.
41	Pedestrian Route	xx	
42	Restroom Accessibility	x	
43	Construction of a Visitor Center	x	
44	Winter Aircraft Wash Facility		
45	Maintain Public Access	xxx	The lakes are a public asset.
<b>List any additional issues:</b>			
1	More competition/additional options for Avgas and Jet Fuel.		
2	Development of LHD land as a destination-NYE fireworks, non taxiway ice usage.		
3	Lack of enforcement of any of the rules		It would help shorten the waitlist, make LHD look like a professionally run airport, and it would get rid of the non-aviation businesses.
4	Force slip owners to use or lose space or make about to "lease out" slip for those on waiting list.		
5	Aging pilots, aging airplanes means less demand in the future. Less folks to fly nowadays.		
6	Very happy with the grooming this winter!		
7	Keeping moose and waterfowl out of the aerodrome is very important .		



The slide is titled "Meeting Agenda" in large blue text. To the left of the title is a vertical dark blue sidebar containing the Lake Hood Seaplane Base Master Plan Update logo and the text "LAKE HOOD SEAPLANE BASE" and "MASTER PLAN UPDATE". The main content area lists ten items for the meeting agenda:

1. Introductions
2. What is a Master Plan?
3. Master Plan Process/Schedule
4. Public Involvement
5. Role of Advisory Committee
6. Survey
7. Master Plan Goals
8. Master Plan Issues
9. Next Steps
10. Public Comments



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## Introductions

### DOWL HKM Key Team Members/Roles

- Tom Middendorf - Project Manager
- Leah Henderson - Assistant Project Manager/Planner
- Rachel Steer - Public Involvement Coordinator
- Meg Jones - Planner
- Jim Greil - Planner
- Dwight Stuller - Planner

### Subcontractors/Roles

- RS&H - Mike Becker, Gary Logston, Evan Pfahler  
Forecasts/Planning Support
- Southeast Strategies - Linda Snow  
Forecasts/Planning Support

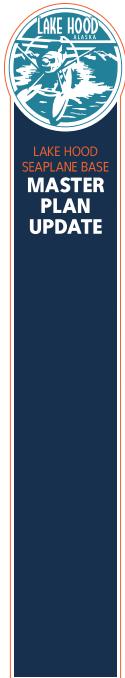


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## Advisory Committee Members

### Organization

- Aircraft Owners and Pilots Association (AOPA)
- Seaplane Pilots Association
- Alaska Airmen's Association
- Lake Hood Pilots Association
- LHD private pilot (wheeled aircraft)
- LHD private pilot (float aircraft)
- LHD businesses
- Signatory airlines – Airline Technical Representative
- Turnagain Community Council
- Spenard Community Council
- Neighboring business
- FAA ATCT
- U.S. Department of the Interior
- MOA Parks and Recreation
- MOA Planning
- State of Alaska Aviation Advisory Board MOA Representative



## What is a Master Plan?

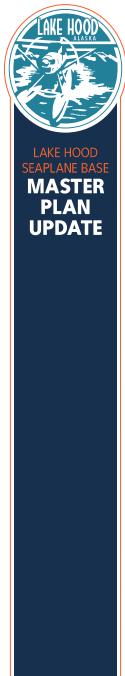
According to the Federal Aviation Administration (FAA), an airport master plan is...

*A comprehensive study of an airport that usually describes the short-, medium-, and long-term development plans to meet future aviation demand.*

A master plan's purpose is not to solve the airport's management, operations, or maintenance issues.

### Products of a Master Plan

- 20-Year Phased Development Plan with a Capital Improvement Program
- Airport Layout Plan
- Airport Master Plan Report

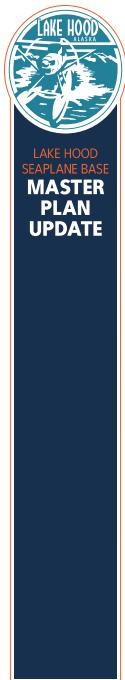


## Why do a Master Plan?

### Rationale, Benefits and Outcomes of a Master Plan

- Development priorities/schedules
- Development in a safe manner
- Proper facility siting prevents later facility relocation
- Fiscally responsible
- FAA recommends regular updates - usually every 5-7 years
- Required for FAA funding
- Guides airport improvements and leasing decisions

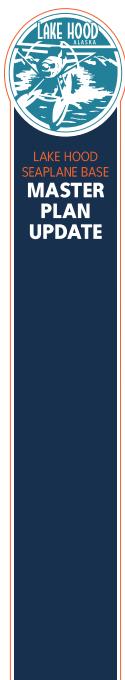




## Public Involvement Program

### Primary Public Involvement Tools

- Advertisements – Online Public Notices
- Bus Tour
- Comments (Collection and Reporting)
- Email
- E-Newsletters
- Fact Sheets & Project Flyers
- Frequently Asked Questions (FAQ)
- Informal Meetings
- Mailing List and Mailers
- MP Advisory Committee
- Picnic
- Public Meetings/Open Houses
- Presentations
- Surveys
- Website



## Roles/Rules of Committee

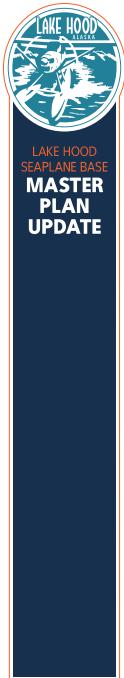
### Role

- Advise on future Lake Hood development plans

### Rules

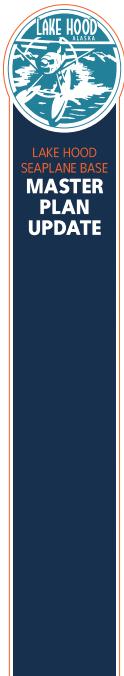
- Listen: Seek to understand new ideas and others' views
- Stay on topic: Keep comments distinct and on topic
- Be respectful and polite: Attack issues, not people
- Be positive: Be problem solvers
- Meet five times over the next 18 months
- Meetings will be no more than two hours long

Future Meeting Day/Time



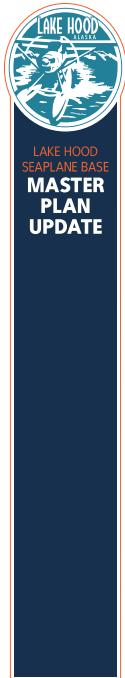
## Survey

- Pilot Survey available on LHD Master Plan website ([www.lhdmasterplan.com](http://www.lhdmasterplan.com)) or at [www.surveymonkey.com/s/LakeHood](http://www.surveymonkey.com/s/LakeHood)
- Survey to define the most important issues and concerns
- Filled out on the web via Survey Monkey or by paper
- Surveys to be completed by January 31st



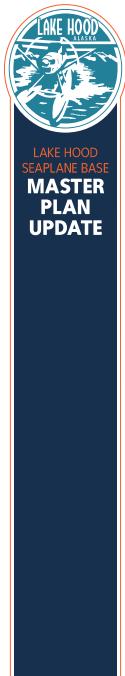
## Goals

- **Safety:** Maintain a safe and secure operating environment.
- **Efficiency:** Maintain or enhance the efficiency and effectiveness of the Airport's operations.
- **Environmental Stewardship:** Operate and develop the airport in a way that minimizes negative environmental impact.
- **Fiscal Sustainability:** Enhance the longer-term fiscal sustainability of the Airport.
- **Land Management:** Facilitate long-term Airport development through strategic land management planning.
- **Communication:** Engage stakeholders through open communication.



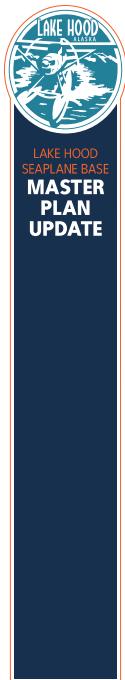
## Objectives Categories

- **Safety:** Maintain a safe and secure operating environment.
  - Airfield Standards
  - Aircraft, Vehicle, and Pedestrians
- **Efficiency:** Maintain or enhance the efficiency and effectiveness of the Airport's operations.
  - Demand
  - Parking



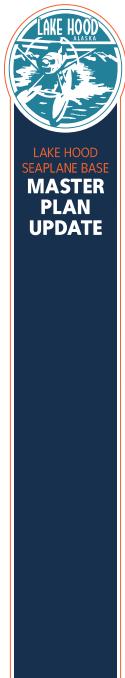
## Objectives Categories Continued

- **Environmental Stewardship:** Operate and develop the airport in a way that minimizes negative environmental impact.
  - Noise
  - Wetlands
- **Fiscal Sustainability:** Enhance the longer-term fiscal sustainability of the Airport.
  - Economic Asset



## Objectives Categories (cont)

- **Land Management:** Facilitate long-term Airport development through strategic land management planning
  - Compatibility
  - Best Use
  
- **Communication:** Engage stakeholders through open communication.
  - Comments
  - Education



## Issues

### Issue Categories

#### Master Plan Issues

- Aviation Activity
- Runways/Taxiways
- Aircraft Parking/Hangars/Lease Lots
- Pavement/Gravel
- Environmental
- Safety/Security
- Tourism/Recreation

#### Non-Master Plan Issues

- Tiedown Administration
- Snow Removal Practices



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## Issues Worksheet

Complete the issue worksheet with your small group.



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## Issues Discussion

- Issue Discussion
- Additional Issues



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## Next Steps

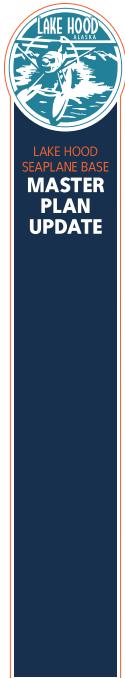
- Continue Investigation Phase
- Pilot Survey
- Complete Inventory and Forecast
- Start Facility Requirements
- Public Open House in early 2015
- Next Advisory Committee Meeting Spring 2015



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## Public Comments

Public comments may also be submitted to  
[lhdmasterplan@dowlhk.com](mailto:lhdmasterplan@dowlhk.com)  
or  
Rachel Steer at 907-562-2000



## Thank you for attending!

### Contact Information:

Tom Middendorf, Project Manager

Leah Henderson, Assistant Project Manager

Rachel Steer, Public Involvement Coordinator

[lhdmasterplan@dowlhkm.com](mailto:lhdmasterplan@dowlhkm.com)

907-562-2000

[www.lhdmasterplan.com](http://www.lhdmasterplan.com)

*ADVISORY COMMITTEE MEETING 2*

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## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Lake Hood Master Plan Advisory Committee Meeting #2 Meeting Notes

**Date:** May 13<sup>th</sup>, 2015

**Time:** 11:00am-1:00pm

**Location:** ANC Badge Training Office

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#### Staff Attendees:

Tim Coons (LHD)	Tom Middendorf (DOWL)
Cheryl McDowell (LHD)	Leah Henderson (DOWL)
John Parrott (ANC/LHD)	Rachel Steer (DOWL)
John Johansen (ANC/LHD)	Meg Jones (DOWL)
Teri Lindseth (ANC/LHD)	Chris Cole (DOWL)
Mike Lee (ANC/LHD)	
Katie Gage (ANC/LHD)	
Josh Briggs (ANC/LHD)	
Terri Tibbe (ANC/LHD)	

#### Advisory Committee Attendees:

Jim Seeley, LHD Pilots Association  
Kirk McGee, Lake Hood Private Pilot  
Steve Fishback, Lake Hood Private Pilot, Wheeled Aircraft  
Stephen Ratcliff, Ratcliff Development  
Gordon Edmiston, ANC Air Traffic Control Tower  
Josh Durand MOA Parks and Recreation  
Thede Tobish, MOA, Senior Planner  
Steve Strait, Governor's Aviation Advisory Board Representative  
Mike Laughlin, Regal Air  
Joyce Zerkel, Alaska Aircraft Sales  
Brian Hove, Turnagain Community Council  
Clint Lentfer, Lake Hood Private Pilot

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#### Meeting Overview

The Lake Hood Seaplane Base Master Plan Update hosted its second Advisory Committee Meeting on Wednesday, May 13th, from 11:00am-1:00pm. The purpose of the meeting was to provide committee members results of the survey, forecast, and facility requirements and to receive Committee input on Facility Requirements. Tom Middendorf gave a presentation and Rachel Steer facilitated the meeting's discussion. At the end of the meeting, the Advisory Committee received public comments.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

The meeting presentation is available online at: [www.lhdmasterplan.com](http://www.lhdmasterplan.com)

### Advertising

- Email to Master Plan Update contact list of approximately 980 addresses, with a link to the survey results.
- Email invites to Advisory Committee with draft presentation and link to survey results.
- GovDelivery Notice.
- State of Alaska's Online Public Notice.
- Master Plan Update Website: [www.lhdmasterplan.com](http://www.lhdmasterplan.com).
- Announcements at the LHD Users Group and Seaplane Pilots meetings.

### Attendance

35 people signed in to the event. Of those, 9 were from the public (not Advisory Committee, staff or DOWL).

### Meeting Materials

- Handouts
  - Agenda
  - Master Plan Update Schedule
  - Aerial graphic of LHD
  - Hard copy of PowerPoint slide presentation
  - Hard copy of selective survey responses and a list of Facility Requirements discussion questions



## LAKE HOOD SEAPLANE BASE **MASTER PLAN UPDATE**

### **Meeting Summary**

#### **Meeting Presentation**

Tom Middendorf introduced DOWL staff and airport staff, and went through the PowerPoint presentation available online at: [www.lhdmasterplan.com](http://www.lhdmasterplan.com). Tom discussed the User Survey results, high level summary of the forecast, and the draft Facility Requirements findings. A list of conclusions from the 2006 Master Plan was presented, as well as the top master plan issues identified in the User Survey. These were the basis for discussion during the Facility Requirements exercise described below.

#### **Advisory Committee Discussion of Master Plan Facility Requirements**

The Committee broke into two groups and discussed a series of questions posed by the LHD MP team. The questions and Advisory Committee discussion are summarized in the following pages. This exercise provided the opportunity for individual committee member participation, encouraging varying views and ideas to be brought forward and discussed.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

Should these 2006 MP issues be reconsidered?	Advisory Committee Comments
1. Acquire land east side of Lake Spenard as properties become available.	<ul style="list-style-type: none"><li>• Acquire.</li><li>• Be careful about not spending too much. Acquire as funding becomes available.</li><li>• Acquiring allows airport to control uses and prevents incompatible uses.</li><li>• Acquisition is a reasonable part of a long term plan.</li><li>• Selling point for purchase could be adding a connecting trail to the hotels/rest of lake to main trail.</li></ul>
2. Continue shoreline erosion control program.	<ul style="list-style-type: none"><li>• Continue shoreline erosion control program over time as funding is available.</li><li>• Be careful about costs.</li><li>• A better/more cost effective type of erosion control should be considered, including talking to slip holders for ideas.</li><li>• Design seems more suitable for shoreline parking than dock parking.</li><li>• Bank erosion issues on southwest side of Lake Spenard near DOT building and near the Aviation Museum.</li><li>• Develop a long-term plan that sets the parameters of what a slip should look like (standardize).</li></ul>
3. Public use of Spenard Beach and Lions Club Park	<ul style="list-style-type: none"><li>• Keep option open for aviation use and public mixed use.</li><li>• Keep the status quo (as-is).</li><li>• Mixed use could be compatible, depending on the layout.</li><li>• Tower concern with pedestrians walking onto lake in winter; park acts as access point to movement area.</li></ul>
4. Development east of Runway 14-32	<ul style="list-style-type: none"><li>• Some sort of aviation development should occur east of Runway 14-32.</li><li>• Neighbors want continued involvement in those decisions.</li><li>• Community wants a balanced approach to growth while protecting noise and safety of dwellings.</li></ul>
5. Address Taxiway Object Free Areas and Taxiway Safety Areas	<ul style="list-style-type: none"><li>• In general there are not conflicts.</li><li>• Users understand how to operate in this area.</li><li>• Mostly small narrow wing aircraft use the fingers.</li><li>• Taxiing from the fingers directly across Lakeshore means planes do not need to drive down Lakeshore taxiway.</li><li>• Resolving this issue would be very disruptive and expensive.</li><li>• If there are simple practical improvements, consider them.</li><li>• If developing new taxi areas or fixing up existing areas, look at ways to meet FAA standards.</li></ul>



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

Give us your ideas and solutions for the following issues:		Advisory Committee Comments
Items for Discussion	Advisory Committee Questions	
1. More floatplane parking	What kind of parking should be investigated (slips, dry dock, dock, other)? Where?	<ul style="list-style-type: none"><li>• Mixed opinions about need to expand parking and how many spots.</li><li>• Solutions need to be economical.</li><li>• Don't build if you have to raise rates to pay for it.</li><li>• Would be nice to have a private sector run dry dock parking area with all services.</li><li>• Better management of existing slips would meet much of the demand by eliminating those who don't use their slips or are breaking rules.</li><li>• The 2015 demand of 175 additional slips seems too high.</li><li>• The waitlist may not be a true indicator of long term demand. Demand could decrease due to aging pilots, fewer aircraft, and other options like a seaplane base elsewhere.</li><li>• Areas to consider include:<ul style="list-style-type: none"><li>○ Extending fingers toward Runway 14-32</li><li>○ Expand/redesign Delta parking area for more slips</li><li>○ Dry dock parking or slips east or west of DOT (tower noted F&amp;W Cove is congested area to launch more aircraft)</li><li>○ Docks north side of Lake Spenard (but could be wind or crosswind landing issues)</li><li>○ Dry dock parking near the float ramp next to Lake Aire Complex</li><li>○ Docks in Lake Spenard, along south shoreline only (per ATC, north shoreline docks could create conflicts)</li></ul></li></ul>



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

2. Affordable hangars and lease lots	Where should hangar and lease lot space be developed?	<ul style="list-style-type: none"><li>• Cost of filling wetlands makes development of new lease lots unaffordable.</li><li>• Owners of newer, more expensive planes may be only people able to afford expensive hangars.</li><li>• Airport should encourage and incentivize hangar development for businesses providing aircraft maintenance; aircraft maintenance is needed at LHD.</li><li>• If airport invested in infrastructure, tenant could pay higher lease rate so airport recovers costs.</li><li>• The airport should not be hangar developers; this should be left to the private sector.</li><li>• Areas to consider for lease lots:<ul style="list-style-type: none"><li>○ West of DOT building</li><li>○ West and north of Echo parking</li><li>○ East of Runway 14-32</li><li>○ Possibly on Echo parking and relocate tie downs</li><li>○ Create lease lots at current snow storage area west of Echo parking</li></ul></li></ul>
3. Electricity at tie downs	After aprons A&B are reconstructed in 2015, only Runway 14-32 will not have electrical. Does that address the needs?	<ul style="list-style-type: none"><li>• After A, B, and Runway 14-32 no other apparent needs.</li><li>• Do all slips have access to power?</li><li>• Do transient parking spots have access to power?</li><li>• Tiedowns next to Runway 14-32 do not need power.</li></ul>
4. Security	What types of security improvements would be most cost-effective?	<ul style="list-style-type: none"><li>• Security is a complex issue to solve.</li><li>• Mixed opinions on benefits of more cameras.</li><li>• Only cost-effective solutions.</li><li>• Issue seems to increase and decrease over time - Airport and Airmen's Association could communicate when there are periods of higher vandalism.</li><li>• MOA recently reported 10 incidents reported to police.</li><li>• Consider adding fence in selective areas where there is space between slips and the</li></ul>



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

		access roads.
5. Aircraft/pedestrian access and conflicts	Is the area north of the fingers the primary concern? What solutions should be investigated?	<ul style="list-style-type: none"><li>• Larger more frequent signage.</li><li>• Stencil of aircraft on taxiway pavements.</li><li>• Does not seem to be a significant problem.</li><li>• Would like to continue to see pedestrians enjoying Lake Hood.</li><li>• Better delineation between where the pedestrians should and should not be.</li></ul>
6. Slip erosion control and maintenance	What locations are highest priority?	<ul style="list-style-type: none"><li>• Also addressed in prior question above.</li><li>• Keep costs in mind and do small projects over time as funding is available.</li><li>• Areas to consider for erosion control:<ul style="list-style-type: none"><li>○ Slips 105 to 115 on south shore of Spenard where road is close to slip.</li><li>○ Shoreline in front of museum and adjacent slips.</li></ul></li></ul>
7. Aprons/taxiways/roads paving and drainage	What locations are highest priority?	<ul style="list-style-type: none"><li>• Consider green approaches to drainage solutions.</li><li>• No more new paving needed, didn't see added value.</li><li>• Areas to consider for paving:<ul style="list-style-type: none"><li>○ Gravel portions of Runway 14-32 parallel taxiway</li><li>○ Runway 14-32 fuel area</li></ul></li></ul>
8. More tie downs	Are more tie downs needed since the waitlist will likely be eliminated after A&B reconstruction?	<ul style="list-style-type: none"><li>• No apparent demand for more airport managed tie downs for wheeled aircraft.</li><li>• No new tiedowns; better management of existing.</li></ul>
9. Slips with Runway 14-32 access	What locations are highest priority?	<ul style="list-style-type: none"><li>• Only where practical and cost-effective; 'it is what it is'.</li><li>• Areas to consider for slips with Runway 14-32 access:<ul style="list-style-type: none"><li>○ Expansion of fingers northward</li><li>○ On South shore of Spenard, convert portion of Aviation Avenue to taxiway and extend through federal property to Lakeshore Taxiway.</li></ul></li></ul>



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

		Build road next to International Airport Road.
10. Helicopters	Should space be provided at LHD for helicopter operations?	<ul style="list-style-type: none"><li>• Main concern with transient parking for helicopters.</li><li>• Keep helicopter parking away from community, away from Runway 14-32 and the fingers, and away from fixed wing aircraft movement areas.</li><li>• Tower suggested location at sand storage area next to Field Maintenance complex or west side of Echo parking.</li></ul>

### Other Issues/Comments by the Committee:

**Working group member question:** *Shouldn't costs be considered when evaluating whether it is feasible to construct more slips?*

**Planning team response:** *Yes, costs and likelihood of getting environmental permits will be among the considerations when evaluating the feasibility of slip expansion.*

**Working group member question:** *What if the airlines decide they do not want to pay for the cost of operating Lake Hood?*

**Planning team response:** *Lake Hood generates roughly \$800,000/year in revenues and roughly \$3 million/year in operating costs. The airlines recognize that Lake Hood operates at a deficit and they want the airport to carefully manage LHD costs and revenues so that airline subsidies are minimized.*

**Working group member question:** *Does Lake Hood receive FAA funding based on enplanements and operations?*

**Planning team response:** *Yes, the airport receives FAA funding based on enplanements for capital improvements only.*

### Public Comments

*\*\*Public comments below are a synopsis of what was stated and are not written verbatim. Response to comments will be provided in the comment response reports.*

- *It is difficult for the public to discuss the information given at the meeting. Would recommend if your fall meeting has alternatives, please provide ahead of time so Advisory Committee members have an opportunity to discuss with groups they represent before the meeting.*
- *The land east of Runway 14-32 is Class A wetlands. The trees provide a great buffer from activity on the strip. The bog is important in terms of water quality as well as hydrology issues. Consider*



## LAKE HOOD SEAPLANE BASE **MASTER PLAN UPDATE**

*neighborhood and environmental issues. Turnagain community is opposed to development impacting this area.*

- *During the last Master Plan, some residents that live along the airport boundary proposed airplane access to Lake Hood from their home, across the airport boundary.*
- *Turnagain Community Council would like to ensure public access to Spenard Beach Park and Lions Club Park. Turnagain Community Council is opposed to the development of a trail on the east side of Runway 14-32 due to the proximity of the homes nearby.*



**LAKE HOOD SEAPLANE BASE  
MASTER PLAN UPDATE**

*Advisory Committee Meeting #2*  
**May 13, 2015**

# Meeting Agenda

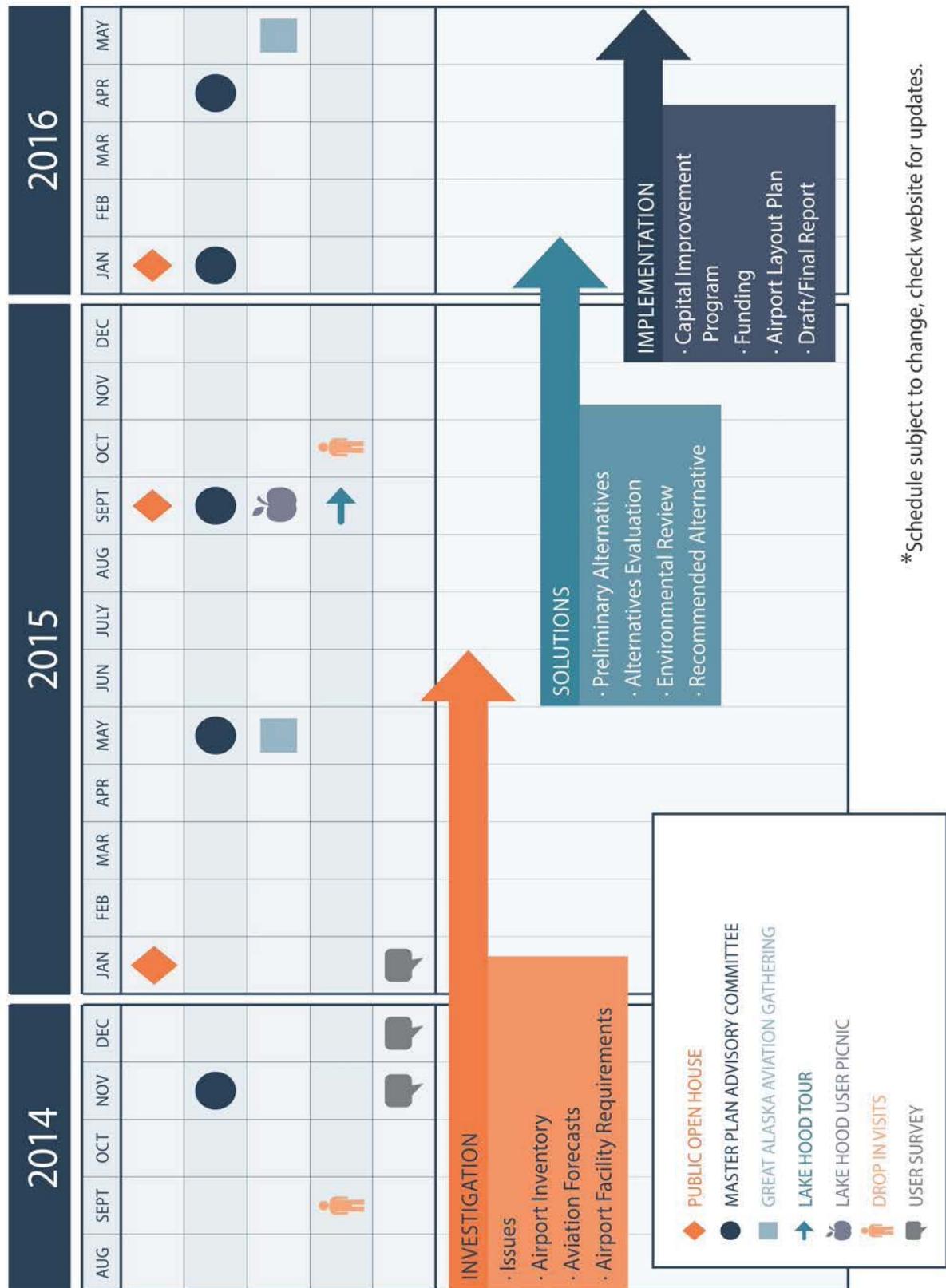
1. Introductions
2. Master Plan Status/Schedule Update (5 minutes)
3. User Survey (20 minutes)
4. Forecast (5 minutes)
5. Facility Requirements (20 minutes)
- 6. Facility Requirements Discussion (55 minutes)**
7. Next Steps (5 minutes)
- 8. Public Comments (10 minutes)**



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# LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE SCHEDULE



# Roles/Rules of Committee



## Role

- Advise on future Lake Hood development plans

## Rules

- Listen: Seek to understand new ideas and others' views
- Stay on topic: Keep comments distinct and on topic
- Be respectful and polite: Attack issues, not people
- Be positive: Be problem solvers
- Meet three additional times over the next 12 months
- Meetings will be no more than two hours long

# Survey – Who Responded

- 292 respondents - 3 months
- 85% aircraft/businesses at LHD
- 44 not from LHD
- 7 non-pilot
- Good mix of LHD users



# Survey - General

- **Why LHD?**
  - Residence proximity
  - Ease of access
  - Variety of operating surfaces
- **Aircraft types?**
  - Mostly small single engine aircraft on floats, wheels and skis
  - Many owned more than one aircraft
- **Amount of LHD activity?**
  - 50% should/can grow today; 60% should/can grow in the future
- **Interest in Leasing and Developing Land**
  - 31% interested, mostly for hangars
    - 57% for private use
    - 42% for business use

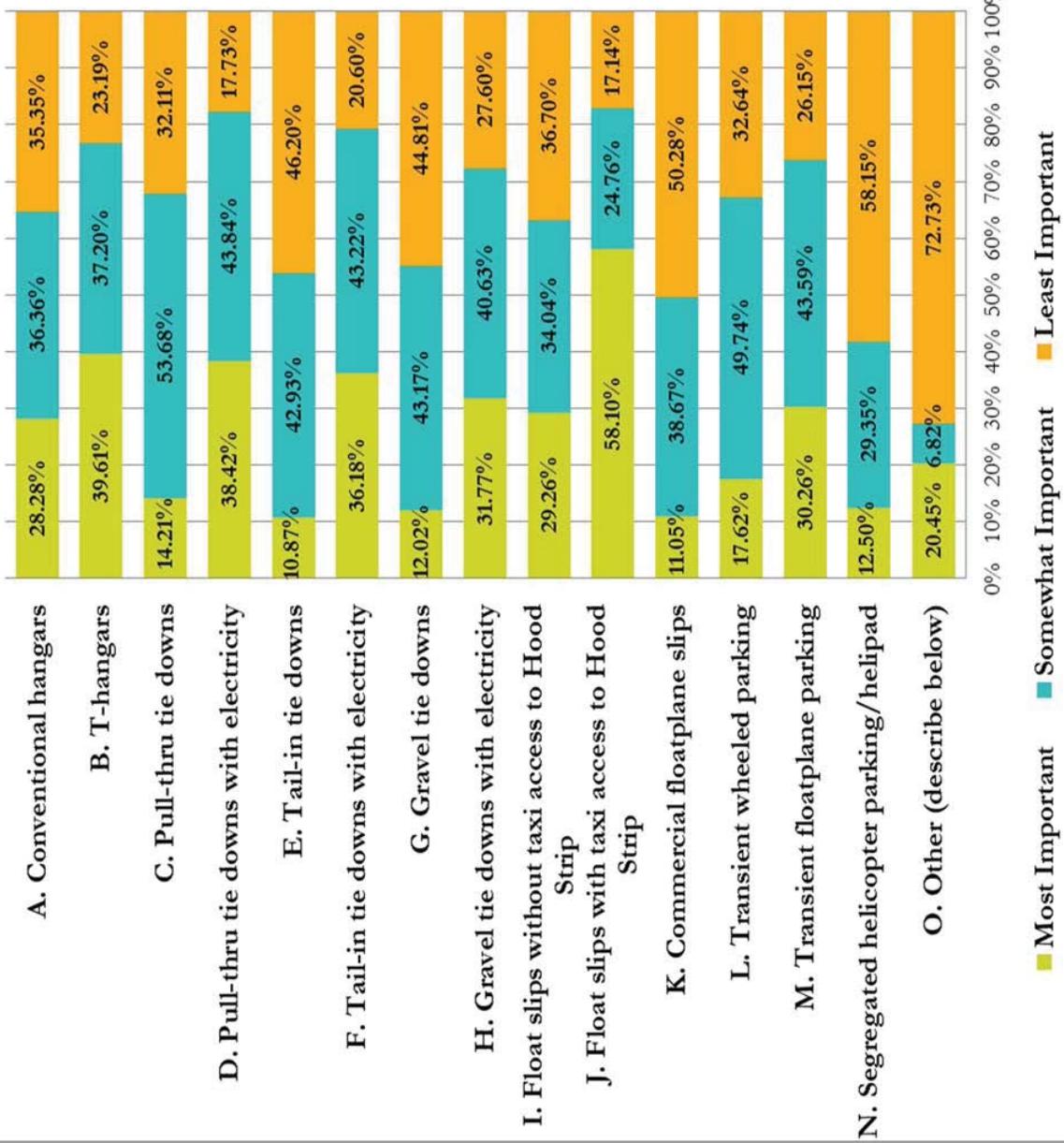


# Survey – Type of Aircraft Parking Needed



Figure 10: Aircraft Parking/Hangars: The LHD Master Plan will consider if additional aircraft parking is needed. Please rank where aircraft parking is needed most.

Answered: 239 Skipped: 53

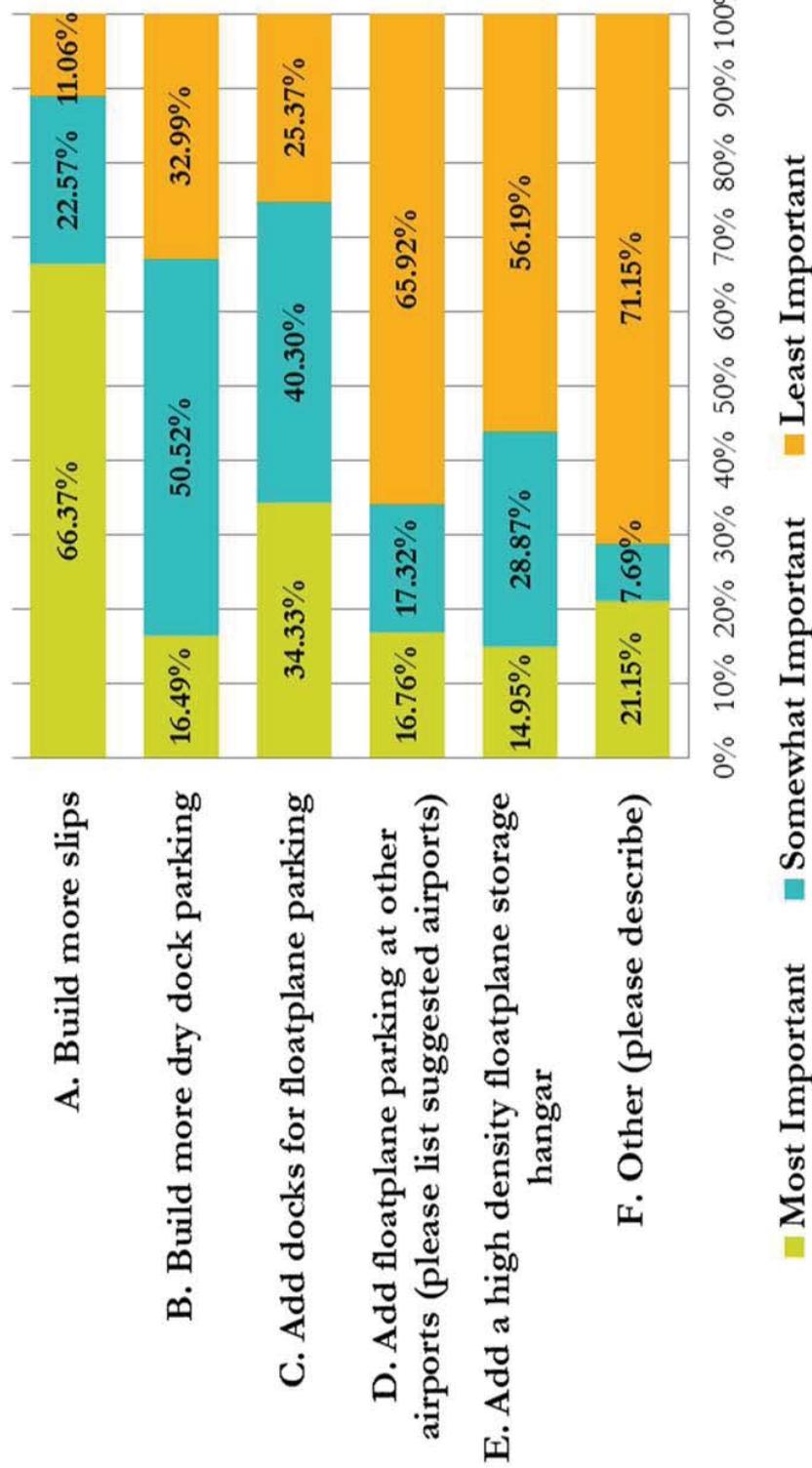


# Survey – Options to Increase Floatplane Parking



Figure 11: Floatplane Parking: The LHD Master Plan may consider options to increase floatplane parking. Please rank the following methods of increasing floatplane parking by importance.

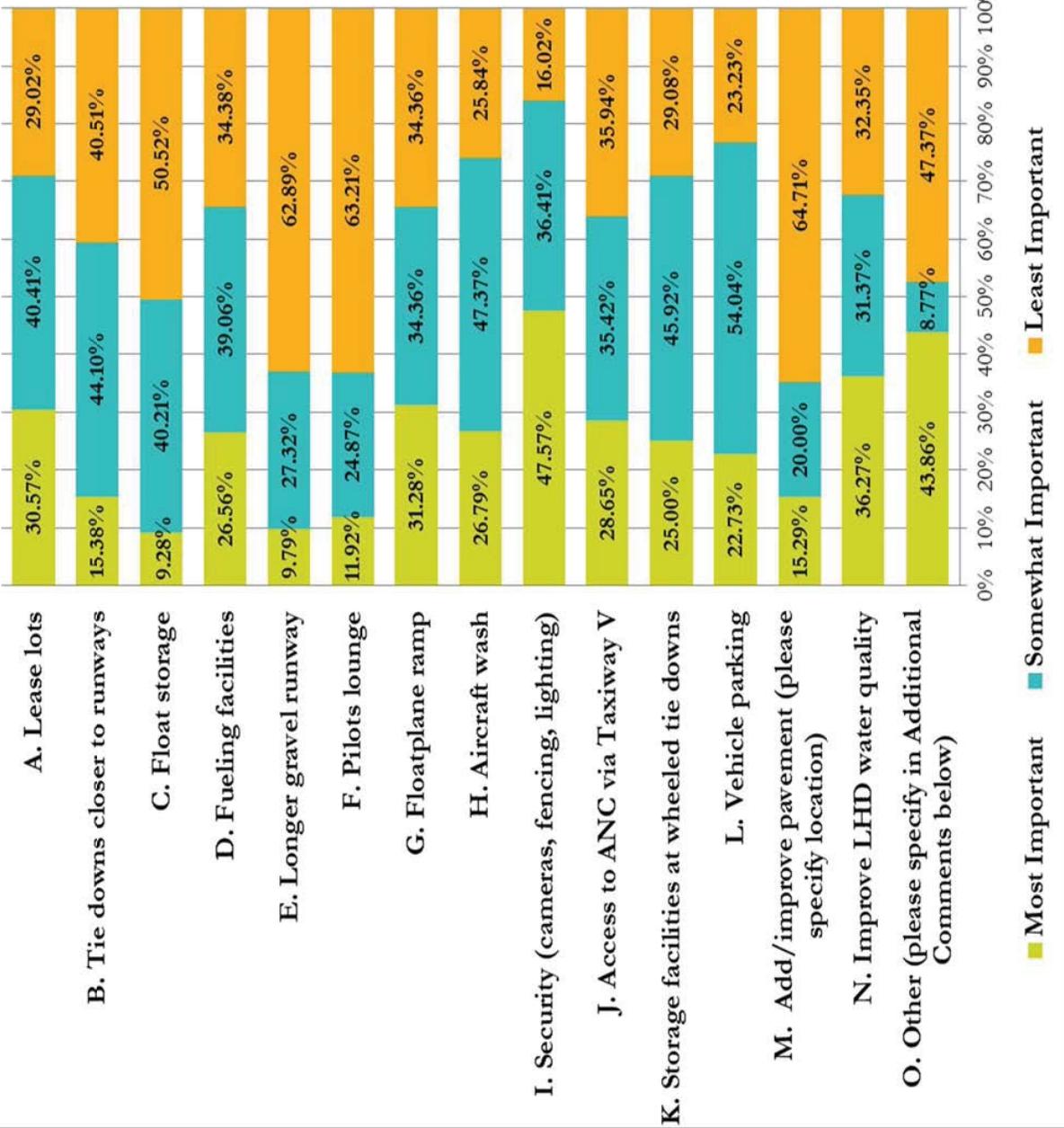
Answered: 232 Skipped: 60



# Survey – Facilities Needs

Figure 12: Airport Facilities: Please rank the need for the following LHD improvements.

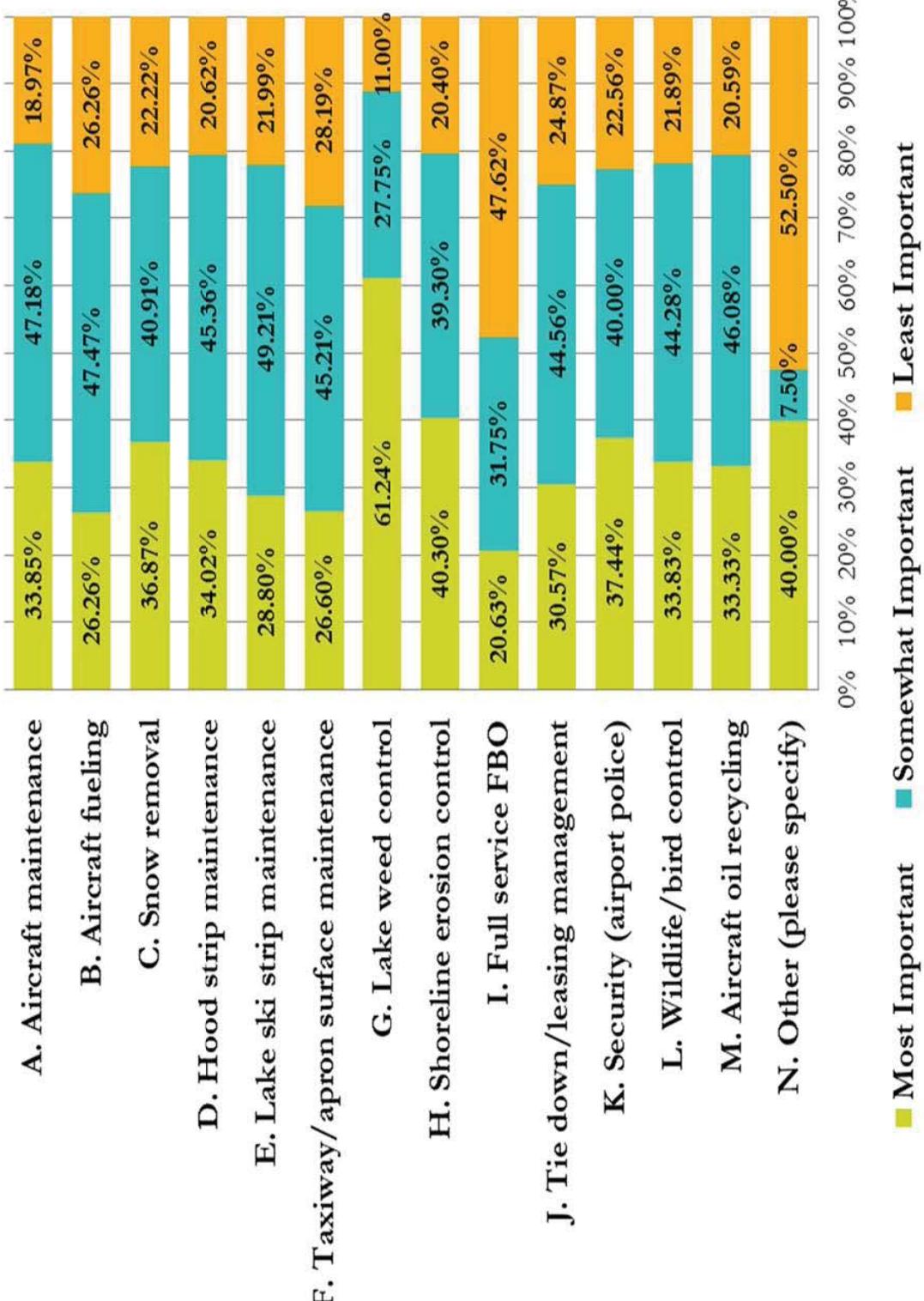
Answered: 240 Skipped: 52



# Survey – Services Needs

**Figure 13: Airport Services: Please rate the need to improve services at LHD.**

Answered: 234 Skipped: 58



# Survey – Aircraft/Vehicle/Pedestrian Conflicts

- 45% Very concerned
- 35% Somewhat concerned
- 20% Not concerned
- 27% Experienced conflicts
- **Most frequent concerns**
  - Pedestrians on taxiways
  - Dogs
  - Pedestrian trespassing
  - Vehicles on taxiways
  - Gates and/or fencing have helped or not helped
  - Improperly parked cars
- **Most frequent location**
  - Lakeshore Drive, north of fingers



# Survey – Aircraft/Vehicle/Pedestrian Conflicts

## Most frequent proposed solutions

- Enforcement and education
- Signage and marking
- Better separation



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# Survey – Top 5 Needs

1. More floatplane parking – **86**
2. Affordable hangars and lease lots – **45**
3. Weed control in the lakes\*<sup>1</sup> – **42**
4. Electric power to tie downs – **36**
5. Management of facility and leases, proper planning, oversight issues \* – **34**
6. Security – **29**
7. Aircraft/pedestrian access and conflicts – **24**
8. Slip erosion control and maintenance – **22**
9. Aprons/taxiways/roads paving and drainage – **19**
10. Water quality\*<sup>1</sup> – **18**

\*Non-Master Plan issue

<sup>1</sup> Ongoing environmental and operational need



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# Forecast Overview

- **Developed from recent AIAS forecast**
  - Verified data and assumptions
  - Extended to 2035
- **Population and income**
  - Slower growth over next 20 years
- **Operations**
  - Slow growth in recent years
- **Anchorage pilots**
  - Decreasing slowly
- **Average hours flown**
  - Increasing slightly



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# Draft Forecast



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Description	2015	2020	2025	2035	AAGR*
Aircraft Operations	72,659	75,988	79,470	83,111	1.4%

\* AAGR – Average Annual  
Growth Rate

# Draft Facility Requirements

## Facility Requirement Sources

- FAA design standards
- Survey
- Interviews
- Public and Advisory Committee meetings
- Other public comment
- Airport staff
- Forecasts



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# Draft Facility Requirements

## Runways/Waterlanes

- **Design Aircraft – Beaver**

- **Runway 14-32**

- 2,200' length adequate for 75% of small airplanes <10 seats; larger aircraft can use ANC
- Runway Protection Zone (RPZ) – road and slips on south end
- Drainage/surface condition
- Compass rose

- **Waterlanes**

- Weeds
- **Applicability of new FAA SPB AC design standards under discussion with FAA**
  - Waterlane length and width
  - Part 77 obstructions
  - Runway Protection Zones



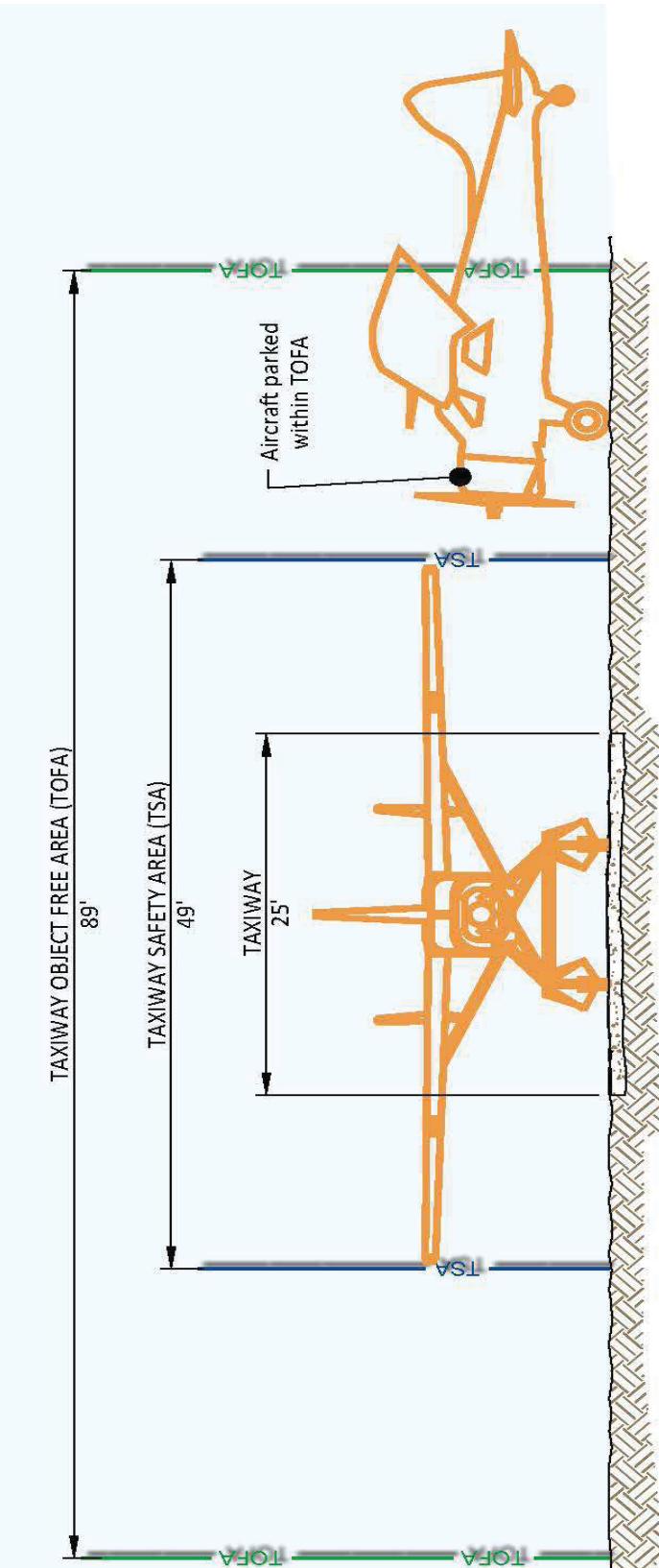
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# Draft Facility Requirements

## Taxiways/Roads/Pedestrians/Parking

- **Taxiways/Taxilanes**

- Taxiway/Taxilane surface width – meet standards
- Taxiway/Taxilane Safety Area and Object Free Area Issues
  - Pave taxiways and engine run-up areas
  - Feasibility of extending wheeled access to more slips



# Draft Facility Requirements

## Taxiways/Roads/Pedestrians/Parking

- **Pullout Ramps**
  - Improve/rebuild existing ramps
  - New south ramp in last master plan
- **Roads/Pedestrians**
  - Primary concerns between fingers and Runway 14-32
    - Narrow
    - Poor visibility
    - Mix of planes, people, and cars
    - High activity area
- **Vehicle Parking**
  - Location, need, and management of shared vehicle parking areas



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# Draft Facility Requirements

## Tie Downs, Slips, Lease Lots

- **Slip demand** – unmet demand evident from surveys, waitlist, and drydock parking
- **Tie down demand** – no overall apparent unmet demand
- **Lease lot demand**
  - Hard to quantify
  - Lots of interest
  - Lack of economically developable lots
- Continue slip shoreline erosion control
- Additional paved parking and electrical hookups
- Consider designated helicopter landing/parking area



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# Draft Facility Requirements

## Tie Downs, Slips, Lease Lots

### Float Slip Waitlist Status

Recent Waitlist
People on Floats Slip Waitlist <b>269</b>
Timeframe to Get Slip ~10 years
People Offered Slip/Year ~ 27
% / Number That Accept Slip Per Year <b>~ 65% / 18</b>



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# Draft Facility Requirements

## Tie Downs, Slips, Lease Lots

Aircraft Parking	Inventory of 2015 Parking
Based/Transient Slips	<b>352</b>
Based/Transient Tie Downs	467
Total Airport Managed Parking	819
Total Lessee Managed Parking	349
<b>Total Airport and Lessee Parking</b>	<b>1,168</b>



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# Draft Facility Requirements

## Tie Downs, Slips, Lease Lots



Calculation of 2015 Slip Demand	
2015 Slip Demand	(269 waitlist x .65 acceptance rate) = <b>175 unmet slip demand</b>
2015 Slip Inventory and <b>Unmet Slip Demand</b>	352 <b>175</b>
2015 Slip Demand	527 <b>352 + 175 = 527</b>

# Draft Facility Requirements

## Tie Downs, Slips, Lease Lots

Aircraft Parking Area	2015 Estimated Demand	2020 Estimated Demand	2025 Estimated Demand	2035 Estimated Demand
Slips	527	546	566	607
Tie Downs	467	469	471	475
Total Airport Managed Parking	994	1015	1,036	1,082
Total Lessee Managed Parking	349	374	401	461
<b>Total Airport and Lessee Parking</b>	<b>1,343</b>	<b>1,389</b>	<b>1,437</b>	<b>1,543</b>



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# Draft Facility Requirements

## Other

- **Improve security**
  - Limited fencing, gates, lighting, signage, cameras
  - Management/operations measures
  - Designated LHD visitor viewing areas



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# Accepted Conclusions of 2006 MP

- No need to relocate/pave/extend Runway 14-32
- Public access to and use of Lake Hood will continue
- No need for a public GA terminal



# Should These Conclusions of 2006 MP be Reconsidered in This MP?

- Acquire land east side of Lake Spenard as properties become available
- Continue shoreline erosion control program
- No aviation use of Spenard Beach and Lions Club Park
- Development east of runway 14-32
- Address Taxiway Object Free Areas and taxiway Safety Areas



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# Top Master Plan Issues from Survey

1. More floatplane parking
2. Affordable hangars and lease lots
3. Electric power to tie downs
4. Security
5. Aircraft/pedestrian access and conflicts
6. Slip erosion control and maintenance
7. Aprons/taxiways/roads paving and drainage
8. More tie downs
9. Slips with Hood Strip access



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# Discussion

## Should these 2006 MP issues be reconsidered?

1. Acquire land east side of Lake Spenard as properties become available
2. Continue shoreline erosion control program
3. No aviation use of Spenard Beach and Lions Club Park
4. Development east of Runway 14-32
5. Address Taxiway Object Free Areas and Taxiway Safety Areas

## Give us your ideas for solutions to the following issues:

1. More floatplane parking
  2. Affordable hangars and lease lots
  3. Electric power to tie downs
  4. Security
  5. Aircraft/pedestrian access and conflicts
  6. Slip erosion control and maintenance
  7. Aprons/taxiways/roads paving and drainage
  8. More tie downs
  9. Slips with Hood Strip access
- Other - Helicopters



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# Next Steps



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- **FAA Forecast Approval – May/June**
- **Finish Facility Requirements – May/June**
- **Develop Draft Alternatives – June - August**
- **Discuss Draft Alternatives – September/October**
- **Next Advisory Committee Meeting - September**

# Public Comments



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Public comments may also be submitted to

[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)

or

Rachel Steer at 907-562-2000

# Thank you for participating!



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## Contact Information:

Tom Middendorf, Project Manager

Leah Henderson, Assistant Project Manager

Rachel Steer, Public Involvement

[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)

907-562-2000

[www.lhdmasterplan.com](http://www.lhdmasterplan.com)

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*ADVISORY COMMITTEE MEETING 3*

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## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Lake Hood Master Plan Advisory Committee Meeting #3 Meeting Notes

**Date:** September 30th, 2015

**Time:** 11:00am-1:00pm

**Location:** ANC Badge Training Office

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#### Advisory Committee Attendees:

Jim Seeley, LHD Pilots Association  
Kirk McGee, Lake Hood Private Floatplane Pilot  
Steve Fishback, Lake Hood Private Pilot, Wheeled Aircraft  
Stephen Ratcliff, Ratcliff Development  
Gordon Edmiston, ANC Air Traffic Control Tower  
Josh Durand, MOA Parks and Recreation  
Thede Tobish, MOA, Senior Planner  
Steve Strait, Governor's Aviation Advisory Board Representative  
Mike Laughlin, Regal Air  
Brian Hove, Turnagain Community Council  
Clint Lentfer, Lake Hood Waitlist  
Dee Hanson, AOPA  
John Pratt, Seaplane Pilots Association  
Kottayam Natarajan Jr., Airline Technical Representative  
Carol Fraser, The Lakefront, General Manager

#### Staff Attendees:

Tim Coons (LHD)  
John Parrott (ANC/LHD)  
John Johansen (ANC/LHD)  
Teri Lindseth (ANC/LHD)  
Mike Lee (ANC/LHD)  
Katie Gage (ANC/LHD)  
Trudy Wassel (ANC/LHD)  
Alex Moss (AIAS)  
Tom Middendorf (DOWL)  
Rachel Steer (DOWL)  
Brian Hanson (DOWL)  
Christopher Cole (DOWL)

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#### Meeting Overview

The Lake Hood Seaplane Base Master Plan Update hosted its third Advisory Committee Meeting on Wednesday, September 30th, from 11:00am-1:00pm. The purpose of the meeting was to receive Advisory Committee comments on draft Master Plan alternatives. Tom Middendorf gave a presentation and Rachel Steer facilitated the discussion. Committee members individually ranked projects high, medium and low priority and then discussed the prioritization results. At the end of the meeting, the Advisory Committee received public comments.

The meeting presentation is available online at: [www.lhdmasterplan.com](http://www.lhdmasterplan.com)



## LAKE HOOD SEAPLANE BASE **MASTER PLAN UPDATE**

### **Advertising**

- Email to Master Plan Update contact list of approximately 980 addresses.
- Email invites to Advisory Committee with draft alternatives.
- State of Alaska's Online Public Notice.
- Gov Delivery Notice.
- Master Plan Update Website: [www.lhdmasterplan.com](http://www.lhdmasterplan.com).

### **Attendance**

31 people signed in to the event. Of those, 15 were from the public (not Advisory Committee, staff or DOWL).

### **Meeting Materials**

- Handouts
  - Hardcopies of Alternatives A-D



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Meeting Summary

#### **Meeting Presentation**

Tom Middendorf introduced DOWL staff and airport staff, and delivered the presentation, also available online at: [www.lhdmasterplan.com](http://www.lhdmasterplan.com). Tom discussed Alternatives A-D, and answered a few questions from Committee members.

#### **Advisory Committee Dot Exercise**

The Committee members were given colored dots and were asked to select high, medium or low priorities for the projects. Not all projects were rated by all members. The results of the exercise are summarized in the attached table. After the exercise DOWL staff recapped the results and accepted additional comments from the Committee. Those comments are also incorporated into the attached table.

#### **Other Issues/Comments by the Committee:**

**Advisory Committee member question:** What do “FAA Standards” mean? Why is it important to adhere to them?

**Planning team response:** *The FAA may decide not to give funding for Lake Hood improvements if FAA standards are not met. However, the FAA is reevaluating Seaplane Base standards, so some of them could change.*

**Advisory Committee member question:** Where does CIP funding come from?

**Planning team response:** *CIP funding at Lake Hood currently comes from the FAA, with matching funds from the airport using user fee revenues. Occasionally Lake Hood CIP projects are funded exclusively from user fees.*

**Advisory Committee member question:** What types of activity is anticipated for new lease areas?

**Planning team response:** *Likely similar to activities currently at Lake Hood – hangars (private and business), aircraft maintenance and parts, and other services.*

**Advisory Committee member question:** What is the demand for more wheeled tie downs at LHD? Any demand for growth could be met at Merrill Field.

**Planning team response:** *Tie down demand at LHD is pretty flat. In the short term, a few extra tie downs help provide flexibility for the Airport’s management of tie downs. In the long term very small growth is likely.*

**Advisory Committee member question:** What do the carriers think about raising rates to pay for expensive CIP projects?



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

**Planning team response:** Carriers are watchful of CIP expenses. Carriers have asked the airport to consider land rental rate increases at LHD and ANC.

**Carrier representative response:** Cargo carriers pay a large share of the bills for ANC and LHD. The future of air cargo at ANC and the revenues they generate for ANC is very unclear. The carriers do not want high costs to cause some cargo carriers to leave ANC. Carriers recognize that ANC subsidizes LHD, and want the airport to manage the level of subsidy. Carriers are more concerned about LHD capital costs than operating costs.

**Advisory Committee member comment:** The master plan is updated every 10 years so we should keep this in mind as we consider alternatives. We can reexamine some of these long term projects again in 10 years, before spending money on them.

**Advisory Committee member comment:** Would like to see LHD revenue/expense data.

**Planning team response:** Capital costs are fairly easy to identify. Operating costs are difficult to allocate between LHD and ANC, but the airport can develop an estimate.

**Advisory Committee member question:** If Lake Hood slips and lease areas grow, can the lake handle the increase in operations?

**Planning team response:** In the survey, users mostly responded that Lake Hood could grow. Historically there were more LHD operations than there are today.

**FAA ATC response:** Lake Hood can handle an increase in operations.

**Advisory Committee member question:** Have the alternatives addressed the priorities from the survey?

**Planning team response:** Yes, they appear to respond to the priorities.

**Advisory Committee member question/comment:** Some low priority ratings for adding slips is because the options shown are too big and expensive and likely exceed the future demand. Some more limited slip expansion is justified and more practical. Can you factor in costs to the evaluation? Other projects bundled together multiple components-some of the components might be more important than others.

**Planning team response:** Good points. Our intent was to show ways floatplane parking could be added so that any operational concerns or alternative layouts and locations could be proposed by reviewers. Costs will be factored into the recommended alternative and you will be asked to consider costs at that time. The plan may include projects that are not affordable during the next 20 years, but might be included in a longer term vision.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Public Comments

*\*\*Public comments below are a synopsis of what was stated and are not written verbatim.  
Response to comments will be provided in the comment response reports.*

Based on prior experience at the Scottsdale Airport, it's apparent that addressing runway standards early, before a lot of conflicting development happens, is more cost-effective than delaying the project and having to relocate more development later, or get a modification of standards, if possible. Also, Lake Hood should consider adopting Minimum Standards. What is the impact of not including a project in a Master Plan CIP?

Will we publish the results of the dot exercise?

Regarding the earlier question about Lake Hood capacity, the Committee should also consider – what is the Turnagain neighborhood's capacity to handle impacts of growth at Lake Hood? The trail shown east of Hood Strip has been opposed by Turnagain Community Council since the 90's. This opposition was further documented in the West Anchorage District Plan. How many additional tie downs are included in D5? Turnagain Community Council opposed hydrology benefits. The development west of Echo parking also fills Class A wetlands and is opposed by Turnagain Community Council. Where will the maintenance area affected by this development be relocated to?

**Advisory Committee member question:** Why does Turnagain Community Council oppose the trail east of Hood Strip?

**Response by Turnagain resident:** The trail would likely have fences on both sides, unsafely trapping people between a fence, when moose or other hazards might be present. The noise study proposed a berm for this area, which was also opposed by the Turnagain Community Council. Also, there is no good connection for the trail northward to connect to the Coastal Trail.

### Attachments

- Results of the Advisory Committee project ratings and comments

# Runway and Waterlane



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		High Priority	Medium Priority	Low Priority	Comments
<b>Alternative A</b> <b>No Capital Improvements</b>					
	No Projects for This Alternative				
<b>Alternative B</b> <b>Major Maintenance and FAA Standards</b>					
B1	Runway 14-32 Gravel Resurface, Improve Drainage and Replace Lighting	6	0	2	Lighting on runway was just done; why showing replacement lighting?
B2	Widen E-W Waterlane; Lower and Resurface Gull Island	3	2	3	<ul style="list-style-type: none"> <li>Do not lower Gull Island. It provides wind protection from crosswinds out of the north.</li> <li>Consider widening the channel on the south side by DOT&amp;PF as an alternative to widening on the north Gull Island side.</li> </ul>
B3	Selective Deepening of Waterlanes/Taxi Channel/Fingers	6	2		
B4	Address Runway Visibility Zone Conflicts Through Modification of Standards	1	2	1	
B5	Address Runway Protection Zone Conflicts With Lease Lot Management	1	5		
<b>Alternative C</b> <b>Improve Existing Facilities</b>					
	No Projects for This Alternative				
<b>Alternative D</b> <b>Expand Facilities</b>					
D1	Fencing and Gates for Runway 14-32		1	8	

# Taxiways, Roads, Paths, Ramps



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		High Priority	Medium Priority	Low Priority	Comments
<b>Alternative A</b> <b>No Capital Improvements</b>					
A2	Identify and Mitigate Aircraft and Structures From Aircraft Taxi Routes	2	4		Alternative A projects will happen anyway, so why rank them?
<b>Alternative B</b> <b>Major Maintenance and FAA Standards</b>					
B6	Realign Taxiways H and H3	6	2	1	
B7	Construct Parallel Lakeshore Taxilane, Road & Pedestrian Path With Connectors	1	4	1	
B7A	Construct Connector Taxilanes and Pedestrian Path	6			
B8	Construct Parallel Road and Taxilane on Commercial Finger	1	2	3	
B9	Resurface/Reconstruct Portions of Lakeshore Taxiway	3	4	1	
B10	Resurface/Reconstruct Taxiway V (ANC Project)		5	1	
B11	Repair/Replace Existing Floatplane Ramps	9	3		
<b>Alternative C</b> <b>Improve Existing Facilities</b>					
C2	Pave Runway 14-32 Parallel Taxiway H and Fingers	4	3	2	
C3	Expand Concrete Run-up Areas	6	1	1	
<b>Alternative D</b> <b>Expand Facilities</b>					
D2	Replace Pedestrian Path on West Side of Runway 14-32 With New Path on East Side	5	2	5	Concerns about noise and security for the adjacent neighborhood. Concerns that trail will have fence on both sides and moose and pedestrians would be unsafely trapped within a fenced corridor with no escape route.
D3	Extend Taxilane to More Slips on Lake Spenard	1	2	6	How will this affect Lions Club Park?
D4	Add Floatplane Ramp	2	9	3	

# Slips, Tie Downs, Lease Areas



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		High Priority	Medium Priority	Low Priority	Comments
<b>Alternative A</b> <b>No Capital Improvements</b>	No Projects For This Alternative				
<b>Alternative B</b> <b>Major Maintenance and FAA Standards</b>					
B12	Continue Erosion Control/Slip Dredging Projects	5	5		<ul style="list-style-type: none"> <li>Private lease space is also experiencing erosion control, is owned by the State, and should be included in the erosion control projects undertaken by the State.</li> <li>The airport should also support slip holders who want to do their own erosion control work.</li> </ul>
<b>Alternative C</b> <b>Improve Existing Facilities</b>					
C4	Pave, Drainage Improvements, Lighting and Electrical Service for Runway 14-32 Tie Downs	8	2		
C5	Pave and Drainage at Delta Tie Downs	4	3	1	
C6	Lighting, Electric Service and Fencing at Transient Slips		1	9	
<b>Alternative D</b> <b>Expand Facilities</b>					
D5	Expand Slip/Lease Area West of Hood Strip, Relocate Tie Downs East of Hood Strip With Lease Area, Parallel Taxiway and Road	7	1	1	<ul style="list-style-type: none"> <li>Concerns about noise and security for the adjacent neighborhood.</li> <li>Like the new parking east of 14/32 as opposed to dredging the lake.</li> <li>A new road could be built east of Hood Strip so that traffic that is not destined for the Hood Strip area can bypass all the activity.</li> </ul>
D5A	Expand Slip/Lease Area West of Hood Strip, Relocate Tie Downs to East of Hood Strip With Lease Area, Parallel Taxiway and Road		2	7	<ul style="list-style-type: none"> <li>Concerns about noise and security for the adjacent neighborhood.</li> <li>Like the new parking east of 14/32 as opposed to dredging the lake.</li> <li>A new road could be built east of Hood Strip so that traffic that is not destined for the Hood Strip area can bypass all the activity.</li> </ul>
D6	Expand Slips/Lease Areas in Lake Spenard	3	2	8	<ul style="list-style-type: none"> <li>Favor expanding slips or docks on the south side of Lake Spenard over the north side. North side would have more neighborhood impacts.</li> <li>Concern about impacts on Spenard Beach park use of using park waterfront for slips.</li> <li>Much of the waitlist demand could be addressed through changes to management of slips – remove slip holders who are not using slips. This would be no cost versus building expensive new slips.</li> <li>A dock may be a less expensive, quicker, incremental solution compared to filling in the lake. If you required anyone at the top of the list to first use the dock, you might more quickly weed out those who are less serious about needing floatplane parking.</li> <li>Not opposed to new slips, but just to the layout shown.</li> <li>Many of these alternatives will not be affordable.</li> <li>Where will the funding come for these expansions?</li> <li>Building portable docks for transient parking would free up space for more non-transient slips and the dock can be removed in the winter when not needed.</li> <li>Slips in front of the Spenard Beach may encourage the general public to climb on aircraft.</li> </ul>
D6A	Expand Docks/Lease Areas in Lake Spenard		1	9	<ul style="list-style-type: none"> <li>Favor expanding slips or docks on the south side of Lake Spenard over the north side. North side would have more neighborhood impacts.</li> <li>Concern about impacts on Spenard Beach park use of using park waterfront for slips.</li> <li>Much of the waitlist demand could be addressed through changes to management of slips – remove slip holders who are not using slips. This would be no cost versus building expensive new slips.</li> <li>A dock may be a less expensive, quicker, incremental solution compared to filling in the lake. If you required anyone at the top of the list to first use the dock, you might more quickly weed out those who are less serious about needing floatplane parking.</li> <li>Not opposed to new slips, but just to the layout shown.</li> <li>Many of these alternatives will not be affordable.</li> <li>Where will the funding come for these expansions?</li> <li>Building portable docks for transient parking would free up space for more non-transient slips and the dock can be removed in the winter when not needed.</li> <li>Slips in front of the Spenard Beach may encourage the general public to climb on aircraft.</li> </ul>
D7	Dry Dock Parking and Ramp East and West of DOT&PF		2	3	<ul style="list-style-type: none"> <li>The current uses on the east and west side of the DOT&amp;PF building are not the highest and best uses for a seaplane base.</li> <li>Prior plans have considered dredging this area for slips. This could be cheaper than filling in the lake and a better solution than dry dock.</li> </ul>
D9	New Lease Lot/Tie Down Space West of Echo Parking	1	4	1	
D11	Continue Land Acquisition	2	3	2	Some of the slips in this area are very difficult to use because of narrow taxi channel width and limited space.
D12	Explore Ways to Make Lease Lot Development Affordable	3	3	1	

## Others



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MASTER PLAN UPDATE

		High Priority	Medium Priority	Low Priority	Comments
Alternative A No Capital Improvements					
A1	Maintain Existing Facilities	9			
A3	Aircraft, Auto, Pedestrian Enforcement, Education, Signs, Flashing Lights and Markings (Area Wide, Location to be Determined)	10			
Alternative B Major Maintenance and FAA Standards					
	No Projects For This Alternative				
Alternative C Improve Existing Facilities					
C1	Enhance Viewing Areas at Spenard Beach and Next to DOT&PF Building	6	4	3	
C7	Paint Compass Rose		4	4	Why bother with a compass rose these days. Its not a bad idea, but funds should not be used for it.
C8	Fencing, Cameras and Lighting Safety/Security Upgrades	7	4		Suggest investing in the best technology/infrastructure possible and then allow people to police their own property using it.
Alternative D Expand Facilities					
D8	Transient Helipad at Lake Hood Seaplane Base	1	3	8	
D10	Permanent Pumped Toilets	4	2	5	What happened to the pilots lounge?
D13	Boathouse Expansion	1	2	5	



LAKE HOOD SEAPLANE BASE  
**MASTER PLAN UPDATE**

Advisory Committee Meeting #3  
September 30, 2015

# Meeting Agenda

1. Introductions/Agenda (5 minutes)
2. Master Plan Status/Schedule Update (2 minutes)
3. Top MP Issues From Survey (3 minutes)
4. Draft Alternatives Presentation (35 minutes)
- 5. Draft Alternatives Discussion (60 minutes)**
6. Next Steps (5 minutes)
7. Public Comments (10 minutes)



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**MASTER  
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UPDATE**

# Master Plan Schedule/Status Update

- Inventory – Completed
- Forecast – Completed and Approved by FAA
- Facility Requirements/Needs – Completed
- Draft Alternatives – Completed
- **Alternatives Evaluation – Under Way**
- Public Meeting #2 – November 18<sup>th</sup>
- Recommended Alternative and CIP – February
- Next Advisory Committee Meeting – February/March



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# Master Plan Alternatives

1. FAA Design Standards
2. Inventory
3. Forecast
4. Airport Staff Interviews
5. Advisory Committee Comments
6. Public Comments
7. User Interviews
8. Survey



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# Top Master Plan Issues from Survey

1. More floatplane parking
2. Affordable hangars and lease lots
3. Electric power to tie downs
4. Security
5. Aircraft/pedestrian access and conflicts
6. Slip erosion control and maintenance
7. Aprons/taxiways/roads paving and drainage
8. More tie downs
9. Slips with Hood Strip access



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# Overview of Alternatives

- A. No Capital Improvements
- B. Major Maintenance & FAA Standards
- C. Improve Existing Facilities
- D. Expand Facilities

***Recommended Alternative is likely to include features from all of the alternatives***

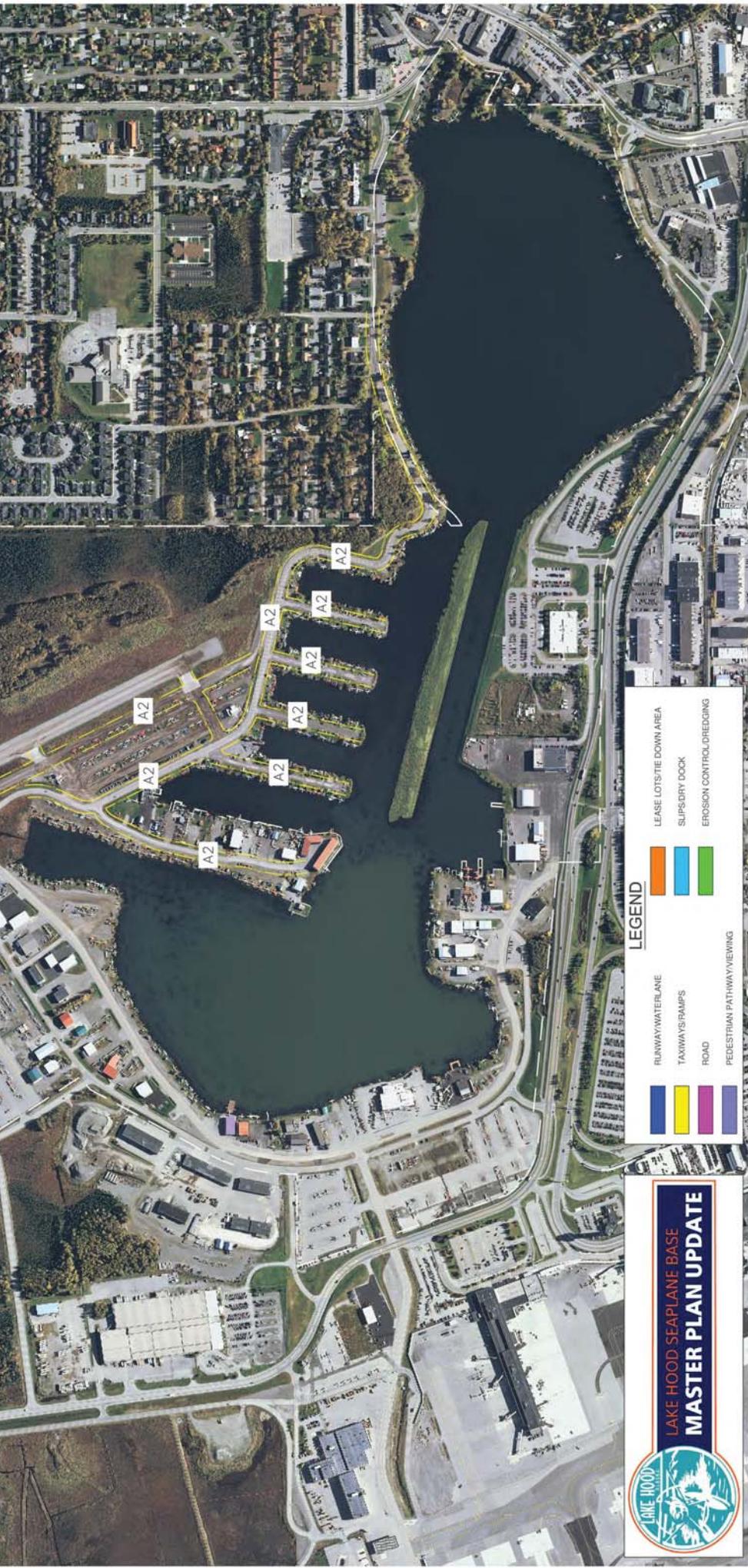


# ALTERNATIVE A

## NO CAPITAL IMPROVEMENTS

- A1 MAINTAIN EXISTING FACILITIES (AREA WIDE, NOT LABELED ON DRAWING)
- A2 IDENTIFY AND MITIGATE AIRCRAFT & STRUCTURES FROM AIRCRAFT TAXI ROUTES
- A3 AIRCRAFT AUTO, PEDESTRIAN ENFORCEMENT, EDUCATION, SIGNS, FLASHING LIGHTS & MARKINGS (AREA WIDE, LOCATION TO BE DETERMINED)

NOTE: RECOMMENDED ALTERNATIVE IS LIKELY TO CONTAIN FEATURES FROM ALL OF THE ALTERNATIVES.

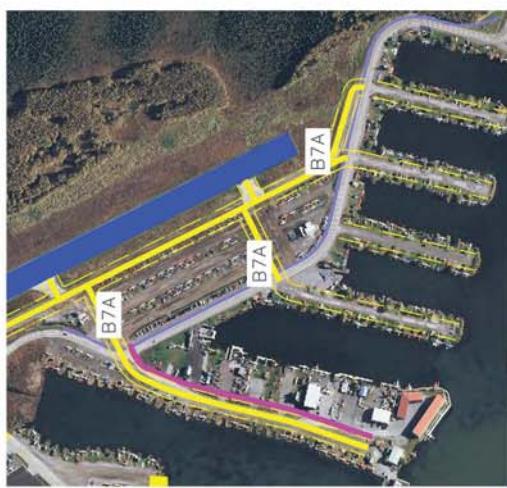
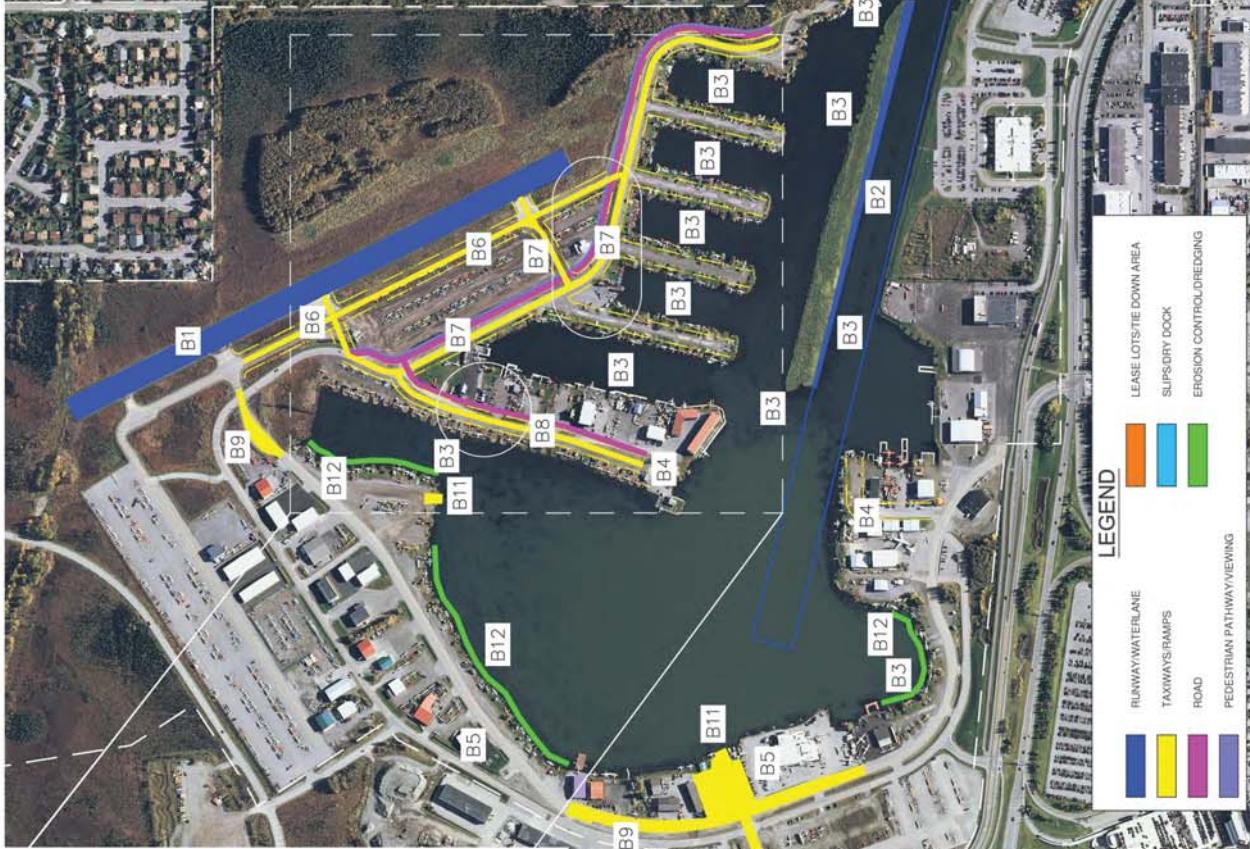
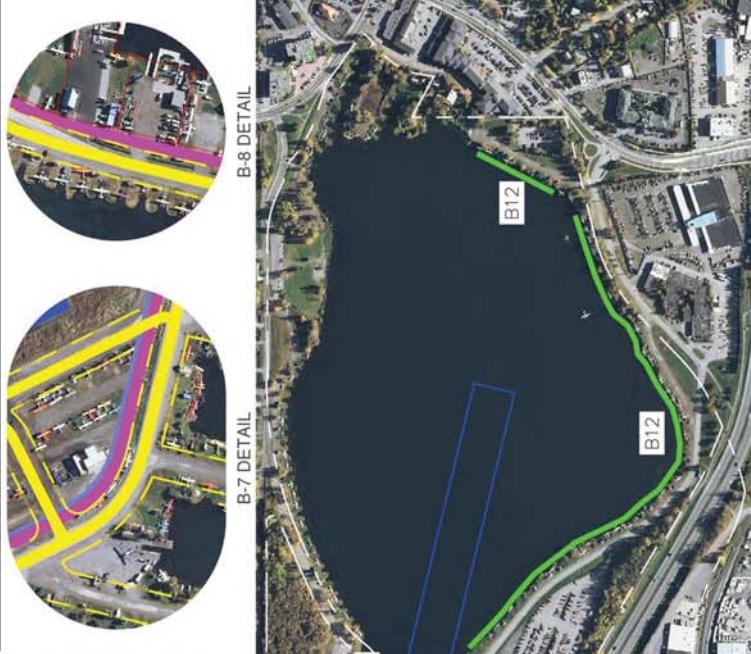


# ALTERNATIVE B

## MAJOR MAINTENANCE & FAA STANDARDS

- B1 RUNWAY 14-32 GRAVEL RESURFACE, IMPROVE DRAINAGE, & REPLACE LIGHTING
- B2 WIDEN E-W WATERLANE; LOWER & RESURFACE GULL ISLAND
- B3 SELECTIVE DEEPENING OF WATERLANES/TAXI CHANNEL/FINGERS
- B4 ADDRESS RUNWAY VISIBILITY ZONE CONFLICTS THROUGH MODIFICATION OF STANDARDS
- B5 ADDRESS RUNWAY PROTECTION ZONE CONFLICTS WITH LEASE LOT MANAGEMENT
- B6 REALIGN TAXIWAYS H & H3
- B7 CONSTRUCT PARALLEL LAKESHORE TAXILANE, ROAD & PEDESTRIAN PATH WITH CONNECTORS
- B8 CONSTRUCT CONNECTOR TAXILANES & PEDESTRIAN PATH
- B9 RESURFACE/RECONSTRUCT PORTIONS OF LAKESHORE TAXIWAY
- B10 RESURFACE/RECONSTRUCT TAXIWAY V (ANC PROJECT)
- B11 REPAIR/REPLACE EXISTING FLOATPLANE RAMPS
- B12 CONTINUE EROSION CONTROL/SLIP DREDGING PROJECTS

NOTE: RECOMMENDED ALTERNATIVE IS LIKELY TO CONTAIN FEATURES FROM ALL OF THE ALTERNATIVES.



B-7A ALTERNATIVE



B10



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# ALTERNATIVE C

## IMPROVE EXISTING FACILITIES

- C1 ENHANCE VIEWING AREAS AT SPENARD BEACH & NEXT TO DOT&PF BUILDING
- C2 PAVE RUNWAY 14/32 PARALLEL TAXIWAY H & FINGERS
- C3 EXPAND CONCRETE RUN-UP AREAS
- C4 PAVE, DRAINAGE IMPROVEMENTS, LIGHTING & ELECTRICAL SERVICE FOR RUNWAY 14/32
- C5 TIE DOWNS
- C6 PAVE & DRAINAGE AT DELTA TIE DOWNS
- C7 LIGHTING, ELECTRIC SERVICE & FENCING AT TRANSIENT SLIPS
- C8 PAINT COMPASS ROSE (LOCATION TO BE DETERMINED)
- C9 FENCING, CAMERAS, & LIGHTING SECURITY/SAFETY UPGRADES (AREA WIDE, LOCATION TO BE DETERMINED)

NOTE: RECOMMENDED ALTERNATIVE IS LIKELY TO CONTAIN FEATURES FROM ALL OF THE ALTERNATIVES.



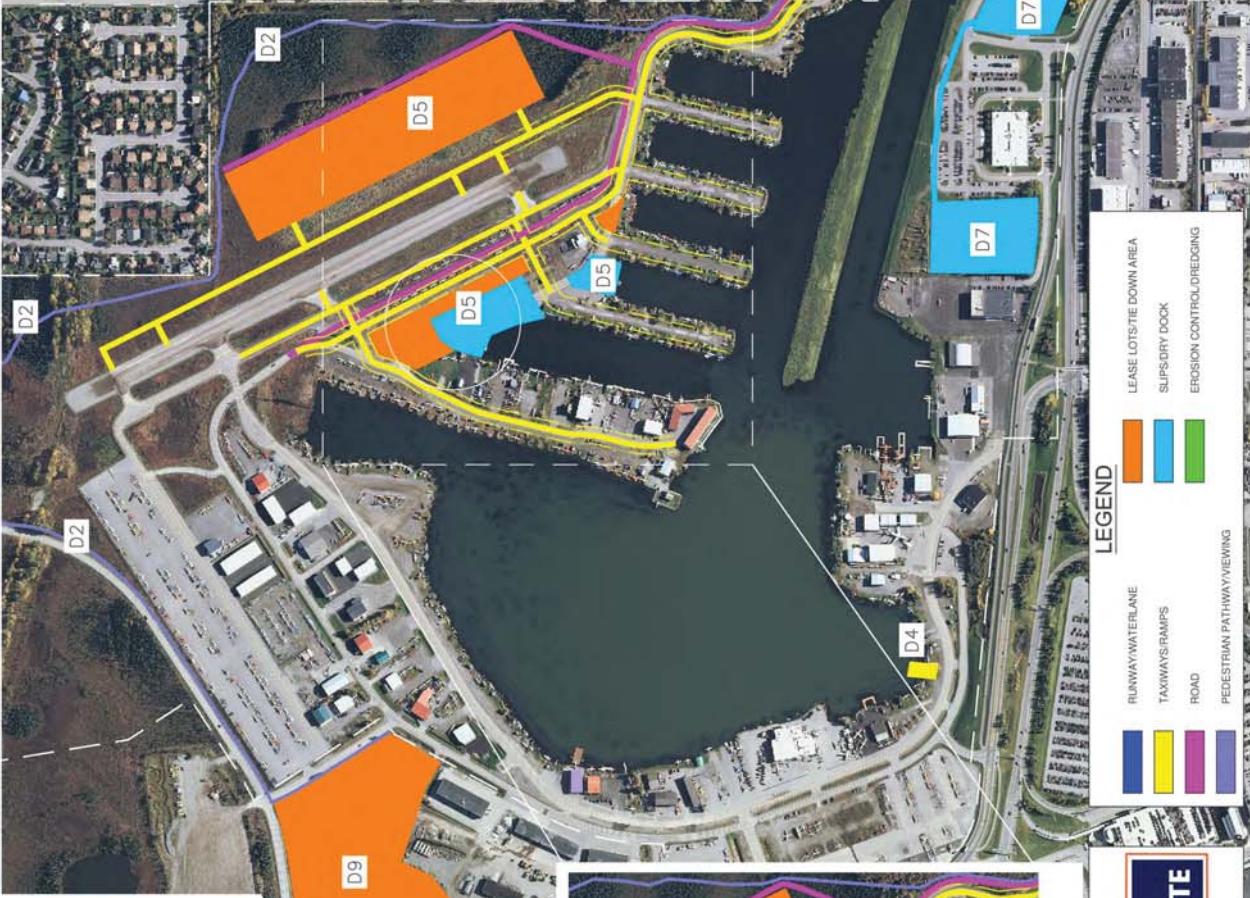
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# ALTERNATIVE D

## EXPAND FACILITIES

- D1 FENCING & GATES FOR RUNWAY 14/32 (LOCATION TO BE DETERMINED)
- D2 REPLACE PEDESTRIAN PATH ON WEST SIDE OF RUNWAY 14/32 WITH NEW PATH ON EAST SIDE
- D3 EXTEND TAXILANE TO MORE SLIPS ON LAKE SPENARD
- D4 ADD FLOATPLANE RAMP
- D5 EXPAND SLIP/LEASE AREA WEST OF HOOD STRIP, RELOCATE TIE DOWNS TO EAST OF HOOD STRIP WITH LEASE AREA, PARALLEL TAXIWAY & ROAD
- D6 EXPAND SLIP/LEASE AREA WEST OF HOOD STRIP, RELOCATE TIE DOWNS TO EAST OF HOOD STRIP WITH LEASE AREA, PARALLEL TAXIWAY & ROAD
- D7 EXPAND SLIP/LEASE AREAS IN LAKE SPENARD (VARIOUS OPTIONS/LOCATIONS FOR CONSIDERATION)
- D8 DRY DOCK PARKING & RAMP EAST & WEST OF DOT&PF TRANSIENT HELIPAD AT LAKE HOOD (LOCATION TO BE DETERMINED)
- D9 NEW LEASE LOT/TIE DOWN SPACE WEST OF ECHO PARKING PERMANENT PUMPED TOILETS (LOCATION TO BE DETERMINED)
- D10 CONTINUE LAND ACQUISITION
- D11 EXPLORE WAYS TO MAKE LEASE LOT DEVELOPMENT AFFORDABLE (LOCATION TO BE DETERMINED)
- D12 BOATHOUSE EXPANSION (LOCATION TO BE DETERMINED)
- D13



# Discussion

- Questions on Alternatives A – D?
- Dot Exercise Priorities
  - **Green** = High Priority
  - **Yellow** = Medium Priority
  - **Red** = Low Priority
- Discuss Results of Dot Exercise



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# Next Steps

- **Public Meeting #2 – November 18<sup>th</sup>,  
6-8 pm, The Lakefront Anchorage**
- **Recommend Alternative – February, 2016**
- **Advisory Committee Meeting # 4 – Feb/March**
- **Public Meeting – April, 2016**



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# Public Comments

Public comments may also be submitted to  
[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)  
or  
Rachel Steer at 907-562-2000



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# Thank you for participating!

## Contact Information:

Tom Middendorf, Project Manager

Leah Henderson, Assistant Project Manager

Rachel Steer, Public Involvement

[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)

907-562-2000

[www.lhdmasterplan.com](http://www.lhdmasterplan.com)



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# Taxiways, Roads, Paths, Ramps

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	High Priority	Medium Priority	Low Priority
<b>Alternative A No Capital Improvements</b>			
A2 Identify and Mitigate Aircraft and Structures From Aircraft Tax Routes	● ● ●	● ● ●	
<b>Alternative B Major Maintenance and FAA Standards</b>			
B6 Realign Taxiways H and H3	● ● ● ● ●	● ● ●	●
B7 Construct Parallel Lakeshore Taxilane, Road and Pedestrian Path With Connectors	●	● ● ● ●	●
B7A Construct Connector Taxilanes and Pedestrian Path	● ● ● ● ●		
B8 Construct Parallel Road and Taxilane on Commercial Finger	●	● ● ●	● ● ●
B9 Resurface/Reconstruct Portions of Lakeshore Taxiway	● ● ●	● ● ● ● ●	● ●
B10 Resurface/Reconstruct Taxiway V (ANC Project)		● ● ● ● ●	●
B11 Repair/Replace Existing Floatplane Ramps	● ● ● ● ●	● ● ● ●	
<b>Alternative C Improve Existing Facilities</b>			
C2 Pave Runway 14-32 Parallel Taxiway H and Fingers	● ● ●	● ● ●	● ●
C3 Expand Concrete Run-up Areas	● ● ● ● ●	●	●
<b>Alternative D Expand Facilities</b>			
D2 Replace Pedestrian Path on West Side of Runway 14-32 With new Path on East Side	● ● ● ●	● ● ●	● ● ● ●
D3 Extend Taxilane to More Slips on Lake Spenard	●	● ● ●	● ● ● ●
D4 Add Floatplane Ramp	● ●	● ● ● ● ●	● ● ● ●



# Slips, Tie Downs, Lease Areas

LAKE HOD SEAPLANE BASE · MASTER PLAN UPDATE

	High Priority	Medium Priority	Low Priority
<b>Alternative A No Capital Improvements</b>			
No Projects for This Alternative			
<b>Alternative B Major Maintenance and FAA Standards</b>			
B12 Continue Erosion Control/Slip Dredging Projects	● ● ●	● ● ●	
<b>Alternative C Improve Existing Facilities</b>			
C4 Pave, Drainage Improvements, Lighting and Electrical Service for Runway 14-32 Tie Downs	● ● ● ● ●	● ●	
C5 Pave and Drainage at Delta Tie Downs	● ● ●	● ● ●	●
C6 Lighting, Electric Service and Fencing at Transient Slips		●	● ● ● ● ●
<b>Alternative D Expand Facilities</b>			
D5 Expand Slip/Lease Area West of Hood Strip, Relocate Tie Downs to East of Hood Strip With Lease Area, Parallel Taxiway and Road	● ● ● ●	● ●	●
D5A Expand Slip/Lease Area West of Hood Strip, Relocate Tie Downs to East of Hood Strip With Lease Area, Parallel Taxiway and Road		● ● ●	● ● ● ● ● ● ●
D6 Expand Slips/Lease Areas in Lake Spenard	● ● ●	● ● ●	● ● ● ● ●
D6A Expand Slips/Lease Areas in Lake Spenard		● ●	● ● ● ● ● ● ●
D7 Dry Dock Parking and Ramp East and West of DOT&PF		● ● ●	● ● ●
D9 New Lease Lot/Tie Down Space West of Echo Parking	●	● ● ●	● ●
D11 Continue Land Acquisition	● ●	● ● ●	● ●
D12 Explore Ways to Make Lease Lot Development Affordable	● ●	● ● ●	●



## Others

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	High Priority	Medium Priority	Low Priority
<b>Alternative A No Capital Improvements</b>			
A1 Maintain Existing Facilities	●●●●●		
A3 Aircraft, Auto, Pedestrian Enforcement, Education, Signs, Flashing Lights and Markings, Move to Taxiways	●●●●●		
<b>Alternative B Major Maintenance and FAA Standards</b>			
No Projects for This Alternative			
<b>Alternative C Improve Existing Facilities</b>			
C1 Enhance Viewing Areas at Spenard Beach and Next to DOT&PF Building	●●●●	●●●●	●●●●
C7 Paint Compass Rose		●●●●	●●●●
C8 Fencing, Cameras and Lighting Safety/Security Upgrades	●●●●●	●●●●	
<b>Alternative D Expand Facilities</b>			
D8 Transient HeliPad at Lake Hood	●	●●●●	●●●●●
D10 Permanent Pumped Toilets	●●●●	●●●●	●●●●●
D13 Boathouse Expansion	●	●●●●	●●●●●



# Runway and Waterlane

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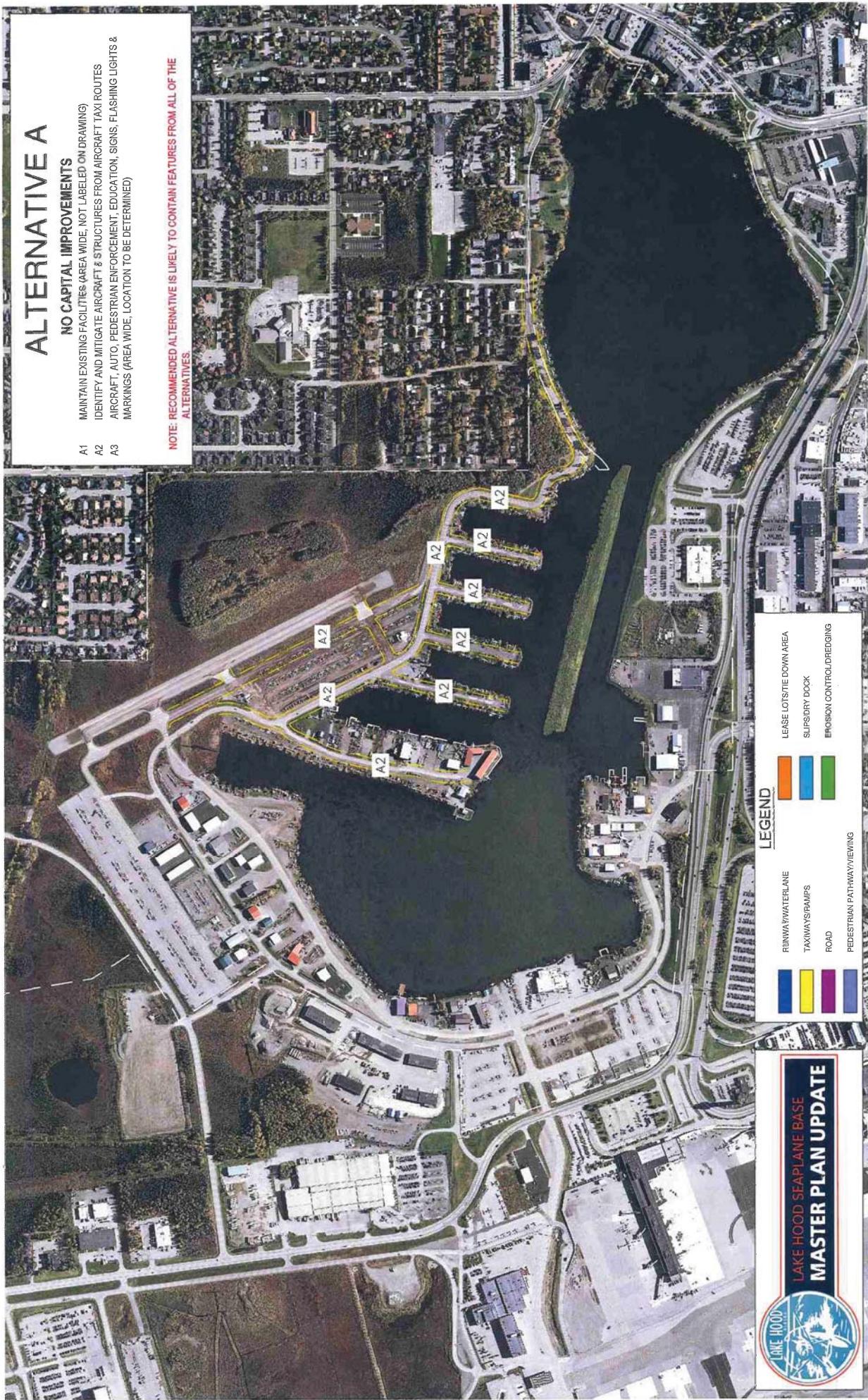
	High Priority	Medium Priority	Low Priority
<b>Alternative A</b> No Capital Improvements			
No Projects for This Alternative	●●● ●		
<b>Alternative B</b> Major Maintenance and FAA Standards			
B1 Runway 14-32 Gravel Resurface, Improve Drainage and Replace Lighting	●●●● ●●●		● ●
B2 Widen E-W Waterlane; Lower and Resurface Gull Island	●●● ●●	●●	●●● ●●
B3 Selective Deepening of Waterlanes/Taxi Channel/Fingers	●●●● ●●●	●● ●●	
B4 Address Runway Visibility Zone Conflicts Through Modification of Standards	●	●● ●●	●
B5 Address Runway Protection Zone Conflicts With Lease Lot Management	●	●●●● ●●●	
<b>Alternative C</b> Improve Existing Facilities			
No projects for This Alternative			
<b>Alternative D</b> Expand Facilities			
D1 Fencing and Gates for Runway 14-32		●	●●●● ●●●●

## ALTERNATIVE A

### NO CAPITAL IMPROVEMENTS

- A1 MAINTAIN EXISTING FACILITIES (AREA WIDE, NOT LABELED ON DRAWING)
- A2 IDENTIFY AND MITIGATE AIRCRAFT & STRUCTURES FROM AIRCRAFT TAXI ROUTES
- A3 AIRCRAFT, AUTO, PEDESTRIAN ENFORCEMENT, EDUCATION, SIGNS, FLASHING LIGHTS & MARKINGS (AREA WIDE, LOCATION TO BE DETERMINED)

NOTE: RECOMMENDED ALTERNATIVE IS LIKELY TO CONTAIN FEATURES FROM ALL OF THE ALTERNATIVES.

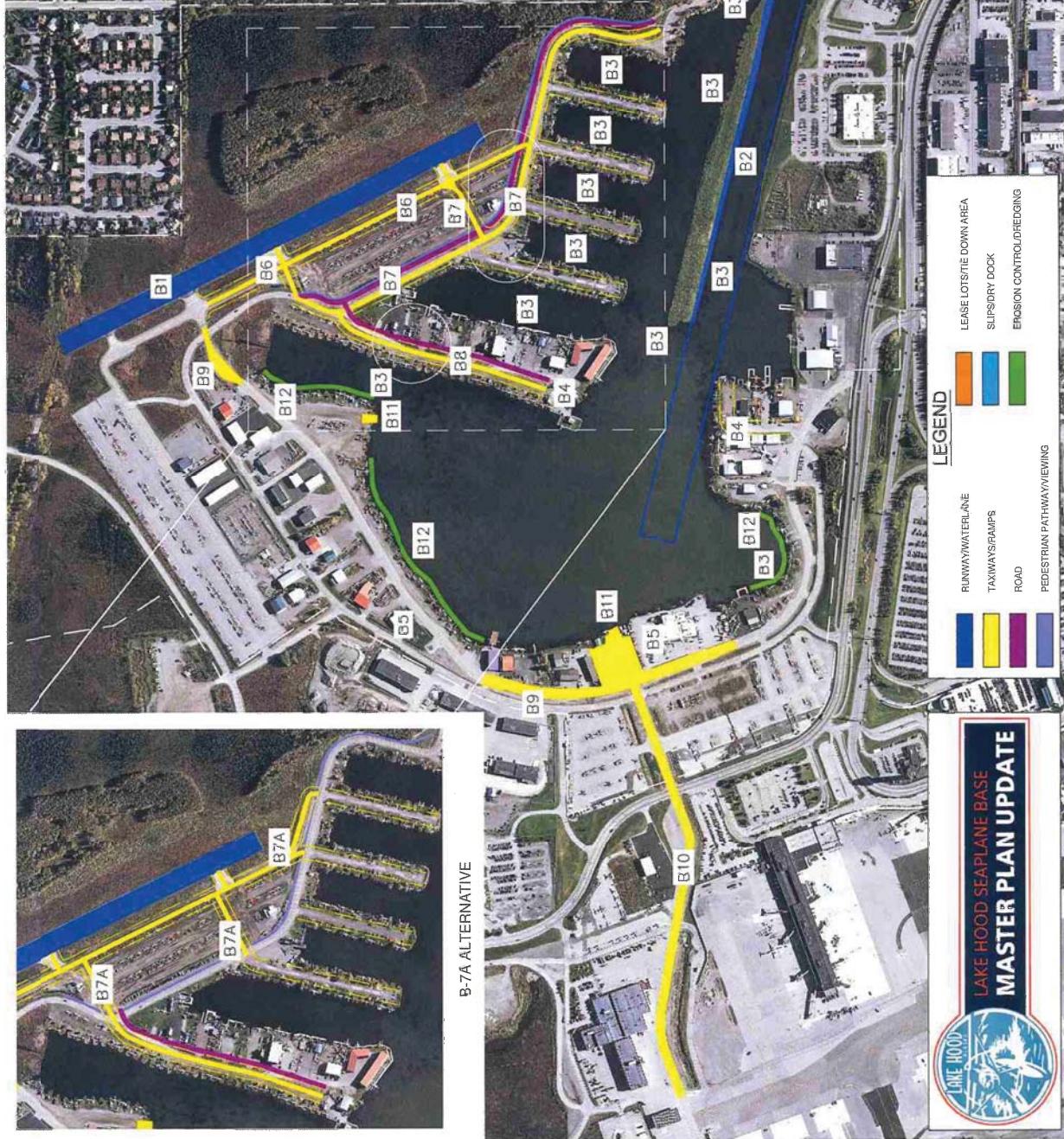


## ALTERNATIVE B

### MAJOR MAINTENANCE & FAA STANDARDS

- B1 RUNWAY 14-32 GRAVEL RESURFACE, IMPROVE DRAINAGE, & REPLACE LIGHTING
- B2 WIDEN E-W WATERLANE, LOWER & RESURFACE GULL ISLAND
- B3 SELECTIVE DEEPENING OF WATERLANES/TAXI CHANNEL/FINGERS
- B4 ADDRESS RUNWAY VISIBILITY ZONE CONFLICTS THROUGH MODIFICATION OF STANDARDS
- B5 ADDRESS RUNWAY PROTECTION ZONE CONFLICTS WITH LEASE LOT MANAGEMENT
- B6 REALIGN TAXIWAYS H & J13
- B7 CONSTRUCT PARALLEL LAKESHORE TAXILANE, ROAD & PEDESTRIAN PATH WITH CONNECTORS
- B7A CONSTRUCT CONNECTOR TAXILANES & PEDESTRIAN PATH
- B8 CONSTRUCT PARALLEL ROAD & TAXILANE ON COMMERCIAL FINGER
- B9 RESURFACE/RECONSTRUCT ROAD PORTIONS OF LAKESHORE TAXIWAY
- B10 RESURFACE/RECONSTRUCT TAXIWAY V (ANC PROJECT)
- B11 REPAIR/REPLACE EXISTING FLOATPLANE RAMPS
- B12 CONTINUE EROSION CONTROL/SLIP DREDGING PROJECTS

NOTE: RECOMMENDED ALTERNATIVE IS LIKELY TO CONTAIN FEATURES FROM ALL OF THE ALTERNATIVES.

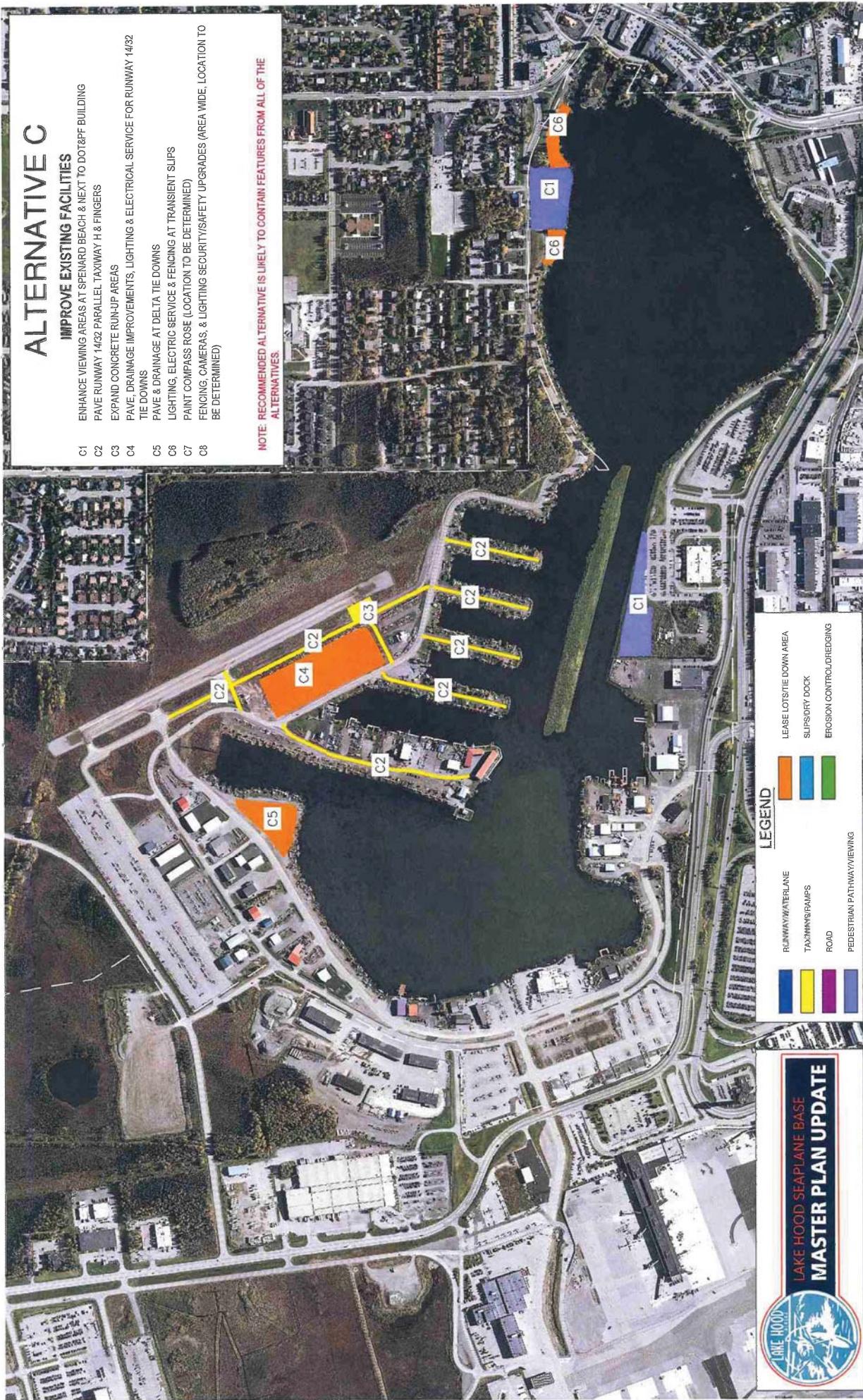


# ALTERNATIVE C

## IMPROVE EXISTING FACILITIES

- C1 ENHANCE VIEWING AREAS AT SPENARD BEACH & NEXT TO DOT&PF BUILDING
- C2 PAVE RUNWAY 14/32 PARALLEL TAXIWAY H & FINGERS
- C3 EXPAND CONCRETE RUNUP AREAS
- C4 PAVE, DRAINAGE IMPROVEMENTS, LIGHTING & ELECTRICAL SERVICE FOR RUNWAY 14/32
- C5 TIE DOMINS
- C6 PAVE & DRAINAGE AT DELTA TIE DOMINS
- C7 PAINT COMPASS ROSE (LOCATION TO BE DETERMINED)
- C8 LIGHTING, ELECTRIC SERVICE & FENCING AT TRANSIENT SLIPS
- C9 FENCING, CAMERAS, & LIGHTING SECURITY/SAFETY UPDATES (AREA WIDE, LOCATION TO BE DETERMINED)

NOTE: RECOMMENDED ALTERNATIVE IS LIKELY TO CONTAIN FEATURES FROM ALL OF THE ALTERNATIVES.



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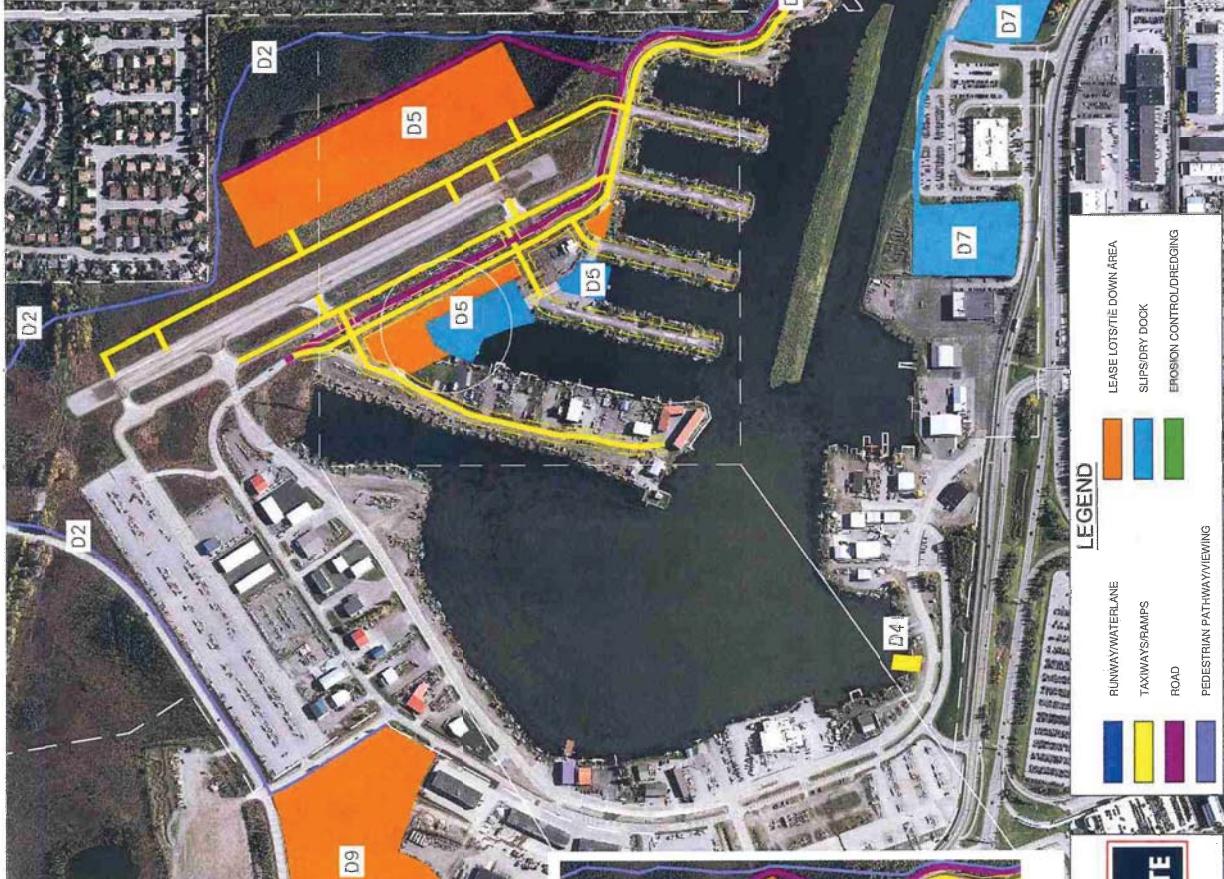


## ALTERNATIVE D

### EXPAND FACILITIES

- D1 FENCING & GATES FOR RUNWAY 14/32 (LOCATION TO BE DETERMINED)
- D2 REPLACE PEDESTRIAN PATH ON WEST SIDE OF RUNWAY 14/32 WITH NEW PATH ON EAST SIDE
- D3 EXTEND TAXI LANE TO MORE SLIPS ON LAKE SPENARD
- D4 ADD FLOAT PLANE RAMP
- D5 EXPAND SLIP/LEASE AREA WEST OF HOOD STRIP, RELOCATE TIE DOWNS TO EAST OF HOOD STRIP WITH LEASE AREA, PARALLEL TAXIWAY & ROAD
- D6A EXPAND SLIP/LEASE AREA WEST OF HOOD STRIP, RELOCATE TIE DOWNS TO EAST OF HOOD STRIP WITH LEASE AREA, PARALLEL TAXIWAY & ROAD
- D6 EXPAND SLIP/LEASE AREAS IN LAKE SPENARD (VARIOUS OPTIONS LOCATIONS FOR CONSIDERATION)
- D6A EXPAND DOCKS/LEASE AREAS IN LAKE SPENARD (VARIOUS OPTIONS LOCATIONS FOR CONSIDERATION)
- D7 DRY DOCK PARKING & RAMP EAST & WEST OF DOT&PF
- D8 TRANSIENT HELIPAD AT LAKE HOOD (LOCATION TO BE DETERMINED)
- D9 NEW LEASE LOT/TIE DOWN SPACE WEST OF ECHO PARKING
- D10 PERMANENT PUMPED TOILETS (LOCATION TO BE DETERMINED)
- D11 CONTINUE LAND ACQUISITION
- D12 EXPLORE WAY TO MAKE LEASE LOT DEVELOPMENT AFFORDABLE (LOCATION TO BE DETERMINED)
- D13 BOATHOUSE EXPANSION (LOCATION TO BE DETERMINED)

NOTE: RECOMMENDED ALTERNATIVE IS LIKELY TO CONTAIN FEATURES FROM ALL OF THE ALTERNATIVES.



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*ADVISORY COMMITTEE MEETING 4*

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## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Lake Hood Master Plan Advisory Committee Meeting #4 Meeting Notes

**Date:** March 10, 2016

**Time:** 11:00am-1:00pm

**Location:** ANC Badge Training Office

---

#### Advisory Committee Attendees:

Kirk McGee, Lake Hood Private Floatplane Pilot  
Steve Fishback, Lake Hood Private Pilot, Wheeled Aircraft  
Stephen Ratcliff, Ratcliff Development  
Steve Lauer, ANC Air Traffic Control Tower  
Tom Korosei, MOA Parks and Recreation  
Thede Tobish, MOA Senior Planner  
Steve Strait, Governor's Aviation Advisory Board Representative  
Mike Laughlin, Regal Air  
Clint Lentfer, Lake Hood Waitlist  
Dee Hanson, AOPA  
John Pratt, Seaplane Pilots Association  
Kottayam Natarajan Jr., Airline Technical Representative  
Carol Fraser, The Lakefront, General Manager

#### Staff Attendees:

Tim Coons (LHD)  
Cheryl McDowell (LHD)  
John Parrott (ANC/LHD)  
John Johansen (ANC/LHD)  
Teri Lindseth (ANC/LHD)  
Mike Lee (ANC/LHD)  
Katie Gage (ANC/LHD)  
Terri Tibbe (ANC/LHD)  
Alex Moss (AIAS)  
Tom Middendorf (DOWL)  
Rachel Steer (DOWL)  
Christopher Cole (DOWL)  
Leah Henderson (DOWL)

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#### Meeting Overview

The Lake Hood Seaplane Base Master Plan Update hosted its fourth Advisory Committee (AC) Meeting on Thursday, March 10th, from 11:00am-1:00pm. The purpose of the meeting was to receive AC suggestions on how to phase the master plan's recommended capital projects over 20 years or more. Tom Middendorf gave a presentation on the recommended plan's projects and Rachel Steer facilitated the discussion. Committee members met in small groups and then individually completed worksheets that phased the projects over 20 or more years. At the end of the meeting, the AC received public comments.

The meeting presentation is available online at: [www.lhdmasterplan.com](http://www.lhdmasterplan.com)



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Advertising

- Email to Master Plan Update contact list of approximately 980 addresses.
- Email invites to AC with draft alternatives.
- State of Alaska's Online Public Notice.
- Gov Delivery Notice.
- Master Plan Update Website: [www.lhdmasterplan.com](http://www.lhdmasterplan.com).

### Attendance

35 people signed in to the event. Of those, 9 were from the public (not AC members, staff or DOWL).

### Meeting Materials

- Handouts
  - Recommended CIP Phasing Plan Table
  - Public Involvement Results Table
  - Recommended Plan Graphic
  - Recommended Plan CIP & Other Projects tables

## Meeting Summary

### Meeting Presentation

Tom Middendorf welcomed the group, explained the purpose and agenda for the meeting, and reviewed the master plan status/schedule. He then reviewed the handout showing the prior public input received from the survey, public meeting, and last AC meeting on master plan project priorities. Tom presented the Recommended Plan, describing each of the Recommended Plan projects and their costs, as shown in the handouts. He also explained why some projects were not recommended. Tom explained that an average of \$2 million per year is projected for Lake Hood capital project funding over the next 20 years, a forecasted amount to be used in determining how to phase the capital projects within a realistic but optimistic long term capital budget. Tom answered a few questions from AC members throughout the presentation. The presentation is available online at:

[www.lhdmasterplan.com](http://www.lhdmasterplan.com).

### Advisory Committee Exercise

The Committee members were divided into 3 groups and asked to phase the CIP project costs into 1-5 year, 6-10 year, 11- 20 year and 20 + year timeframes. After the exercise the AC discussed the project priorities and then provided their phasing plans to DOWL staff. The results of the scoring are in the attached table.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

Most AC member recommendations did not stay within the funding targets of about \$10 million every 5 years. The AC members' average proposed spending recommended in the exercise was \$14 million in the first 5 years, \$7 million in the second 5 years, \$3 million in the last 10 years, and \$14 million sometime beyond 20 years. As noted in the table, several AC members recommended not implementing several of the projects.

### Other Issues/Comments by the Committee:

**Advisory Committee member question:** How much were the AC ratings of the projects considered in the Recommended Plan?

**Planning team response:** *The AC ratings were one of many sources of public feedback, like the survey and the public meeting, that were considered in the Recommended Plan.*

**Advisory Committee member question:** How many people participated in the alternatives survey and attended the open house?

**Planning team response:** *Approximately 100 people filled out survey and about 50 people attended the public open house.*

**Advisory Committee member question:** How much FAA funding does LHD receive and is it guaranteed?

**Planning team response:** *About 15 years ago LHD was separated from ANC and started earning FAA Airport Improvement Program (AIP) entitlements. Since then LHD has received \$1 million per year of FAA AIP entitlements. While this funding is not guaranteed, it is very likely, hence the FAA term "entitlement". The amount of AIP discretionary funding varies from year to year and LHD must compete with other airports for this funding. It is not guaranteed and it depends on FAA's priority ranking system. The CIP list handout shows that FAA favors runway, taxiway, and safety projects. LHD has averaged about \$600,000 per year in discretionary funding over the last 15 years. Roughly \$275,000 per year in increased AIP funding is projected for this master plan capital improvement program, but this is very uncertain and subject to Congressional actions. Combined with the airport's matching funds of \$125,000 per year, LHD can expect a total of approximately \$2,000,000 in funding per year.*

**Advisory Committee member comment:** Several AC members agreed that separating the taxiway and roadway on the commercial finger is not a high priority. It is rarely used by aircraft and most aircraft owners are very careful. It seems to be a lot of money for not a lot of benefit. Have you spoken with individual leaseholders about the need for this separated road and taxiway?

**Planning team response:** *We have not spoken to individual leaseholders in this area about this project, but have asked all users to comment about it in the survey and at the public meeting. It was also recommended in the prior master plan. This project is included in the CIP because it is an FAA priority to separate roads and taxiways. You may document your sense of priority for this project in the phasing exercise. Options could be to build it as shown, build it later after other priorities are taken care of, or reserve the space so it can be built when needed. Its possible uses at these lease lots will change over time, either increasing or decreasing the amount of conflicting airplane and automobile traffic.*



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

**Advisory Committee member question:** What is the breakdown of costs for project 12 that relocates tie downs and roads and builds slips? We realize all parts are dependent on the other parts, but a breakdown would be helpful.

**Planning team response:** *The team can break down this project into its parts for future meetings. Note: the breakout of costs is as follows:*

East of Hood Strip:

• Gravel Tie Down Area	\$5,486,000
• Gravel Parallel Taxiway	\$2,247,000
• Gravel Road	\$ 731,000
• Lighting & Electrical Service	<u>\$ 502,000</u>
• Total East of Hood Strip	\$8,966,000

West of Hood Strip:

• Gravel Lease Lot/Tie Down Area	\$ 195,000
• Paved Taxiway Connectors to Fingers	\$ 737,000
• New Lakeshore Drive and Pathway	\$ 928,000
• Slip/Lease Area Grading/Dredging	<u>\$4,519,000</u>
• Total West of Hood Strip	\$6,379,000
• <b>Total Project 12 Cost</b>	<b>\$15,400,000 (rounded)</b>

**Advisory Committee member question:** Are these costs 2016 costs or do they have some sort of inflation escalation? Will the \$1 million entitlement increase with inflation?

**Planning team response:** *The cost estimates are in 2016 dollars and do not include an escalation. The airport would update the costs as needed prior to requesting funding. Congress sets the amount of AIP entitlement money and does not automatically increase the entitlement amount to reflect inflation. Lake Hood's entitlements have been \$1 million per year for about 15 years.*

**Advisory Committee member question:** How were the costs calculated?

**Planning team response:** *The cost estimates were either existing estimates provided by ANC or estimates created by DOWL using unit prices from estimates or bids provided by ANC for other similar projects. For example, the erosion control project was based on the per slip costs from prior erosion control projects at LHD. They are planning level estimates, meaning they are less precise than estimates that will be developed during design.*

**Advisory Committee member comment:** If heavy equipment is mobilized to dredge for project 12, it would make sense to use that equipment to deepen other shallow areas next to nearby slips.

**Planning team response:** *That's a good thought to consider if there is enough money to add that type of work.*



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

**Advisory Committee member question:** Are there environmental concerns for project 12's apron development east of Hood Strip that would make it expensive or difficult to build?

**Planning team response:** *The area around the apron in project 12 is wetlands, but the apron itself is mostly uplands. Because the uplands probably have poor soils, it will be expensive to build. Turnagain Community Council has historically not been supportive of development east of Hood Strip.*

**Advisory Committee member comment:** Are the 49 slips feasible? It is very expensive to build the slips, and costs would go up in the long term. The plan affects 3 leaseholders. An alternative layout could be done that is cheaper, such as dredging at Delta parking or slip expansion on the east side of Spenard Lake. Slip demand may not justify this expense. There is a better way to spend the money than shown for projects 12 and 13.

**Advisory Committee member comment:** Projects 12 and 13 should slip beyond 20 years so they can fit within the projected funding amounts.

**Advisory Committee member comment:** Some projects may have an operational need that will drive the priority, i.e. Taxiway V pavement.

### Public Comments

*\*\*Public comments below are a synopsis of what was stated and are not written verbatim. Response to comments will be provided in the comment/response reports.*

**Public comment:** When you have the draft and master plan report, will you release a draft to the public for public comment? For how many days? When? Turnagain Community Council has opposed the pedestrian trail east of Hood Strip for many years. The trail was not included in the West Anchorage District Plan. The trail would be located in Class A wetlands and would create a dike that would affect the natural flow of the water. Visitors want to walk closer to the lake and would not use the trail. We ask this not be included in the 20 year plan. We support the use of signage, flashing lights and other methods to separate pedestrians from aircraft and vehicles.

Turnagain Community Council also does not support the apron development east of Hood Strip in project 12. The treed uplands provide a nice visual buffer. The area is surrounded by Class A wetlands. This project will not make the airport a good neighbor to the adjacent neighborhood.

**Advisory Committee member comment:** Why would moving the pedestrians away from aircraft activity not be a good thing? **Response from public member**—only a few people would possibly use that new path. People want to be by the Lake and would come down Lakeshore Drive. The cost benefit is not there.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

**Advisory Committee members' comments:** Several committee members agreed they would use a new trail east of Hood Strip and several indicated they support the need to separate aircraft and pedestrians.

**Public comment:** I have operated my aircraft in this area for a long time and have not experienced a conflict with pedestrians.

**Public comment:** I ride my bike around Lake Hood. It would be good to have it more clear where the pedestrians and bikers should be. A designated trail would be helpful so that I know where I should be.

**Planning team response:** The survey responses and public meeting comments received about the separation of aircraft, autos and pedestrians were very diverse, similar to this discussion. Some people think that the current mix of aircraft, vehicles and pedestrians works fine as it is while others feel it is important to separate them to improve safety. The FAA is in favor of separating where feasible.

### Attachments

- Results of the AC's recommended phasing

**Lake Hood Seaplane Base Master Plan Recommended Capital Improvement Program Project Phasing**  
**Advisory Committee Recommended Phasing Results**  
(2 Phased means 2 AC members recommended phasing project over multiple years)

Project	Cost	1-5 Years (\$10M)	6-10 Years (\$10M)	11-20 Years (\$20M)	20+ Years	Never or Not Rated	Comments
1 Rehab runway surface, improve drainage & replace lighting	\$3,200,000	5 1 Phased	2 1 Phased	5 1 Phased			
2 Reconstruct and realign Taxiway H (parallel taxiway)	\$1,500,000	9	2	2			
3 Construct parallel road & taxilane on commercial finger	\$1,100,000	1	2		5	4	
4 Resurface/reconstruct portions of Lakeshore Taxiway and west Lake Hood floatplane ramp	\$4,000,000	\$4,000,000					
5 Resurface/reconstruct Taxiway V	\$8,800,000	4 5 Phased	6 Phased	2 Phased		1	ANC should pay half - 2 raters
6 Repair/replace existing floatplane ramp	\$1,000,000	7	4	1			
7 Continue erosion control/slip dredging projects	\$6,200,000	6 Phased	10 Phased	1 6 Phased	1 1 Phased		Too expensive?

**Lake Hood Seaplane Base Master Plan Recommended Capital Improvement Program Project Phasing**  
**Advisory Committee Recommended Phasing Results**

(2 Phased means 2 AC members recommended phasing project over multiple years)

Project	Cost	1-5 Years (\$10M)	6-10 Years (\$10M)	11-20 Years (\$20M)	20+ Years	Never or Not Rated	Comments
8 Realign Taxiway H3	\$200,000	2	4	3	1	2	
9 Fencing, cameras & lighting security/safety upgrades (area wide)	\$2,000,000	8	1		4		
10 Fencing & gates for taxiway access to Runway 14/32	\$1,000,000	1	1	5	1	4	
11 Add floatplane ramp in south Lake Hood	\$500,000	2	3		6	1	
12 Expand slip/lease area west of Runway 14/32, relocate tie downs to east of Runway 14/32 with new taxiway and road	\$15,400,000	1 Phased		1 Phased	6	5	Need revised plan - 3 raters
13 Continue land acquisition in east Lake Spenard	\$2,500,000			1	2	4	5 Need revised plan - 3 raters
Total \$47,400,000							



LAKE HOOD SEAPLANE BASE  
**MASTER PLAN UPDATE**

Advisory Committee Meeting #4

March 10, 2016

# Meeting Agenda

1. Introductions/Agenda (5 minutes)
2. Master Plan Status/Schedule Update (5 minutes)
3. Recap Project Evaluation – Advisory Committee, Public Meeting and Survey (10 minutes)
4. Master Plan Capital Funding Projections (5 minutes)
5. Recommended Plan – Capital Projects and Other Projects (20 minutes)
- 6. Recommended Plan Discussion/Phasing (60 minutes)**
7. Next Steps (5 minutes)
- 8. Public Comments (10 minutes)**



# Master Plan Schedule/Status Update

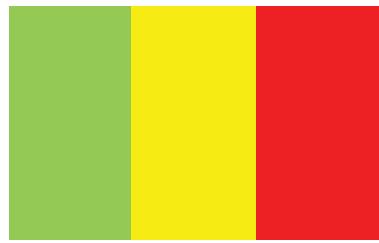
- Inventory – Completed
- Forecast – Completed and Approved by FAA
- Facility Requirements/Needs – Completed
- Draft Alternatives – Completed
- **Recommended Plan – Draft Completed**
- Public Meeting #3 – April 28, 2016 (tentative) Lakefront Hotel CIP – May
- Final Advisory Committee Meeting – May



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# Recap Project Evaluation

- Project evaluations from September Advisory Committee Meeting, November Public Meeting, and December Survey
- Recommended Plan:
  - Addresses all of top 1/3 from survey, except expansion into Lake Spenard.
  - Addresses most of the middle 1/3
  - Addresses some of the bottom 1/3



Top 1/3 ranked projects

Middle 1/3 ranked projects

Bottom 1/3 projects



# Recap Project Evaluation



# LAKE HOOD SEAPLANE BASE **MASTER PLAN UPDATE**

Ranked Projects		Rec	Remarks
A1	Maintain existing facilities (area wide)	X	
B12	Continue erosion control/slip dredging projects	X	
D10	Continue land acquisition	X	Ongoing discussion.
C8	Fencing, cameras & lighting security/safety upgrades (area wide)	X	Slips with taxiway access in D5 on Lake Hood.
D11	Explore more ways to make lease lot development affordable		Slips with taxiway access in D5 on Lake Hood.
D6D	Expand floatplane parking/lease areas in Lake Spenard		Slips with taxiway access in D5 on Lake Hood.
D6B	Expand floatplane parking/lease areas in Lake Spenard		Slips with taxiway access in D5 on Lake Hood.
C3	Expand concrete run-up areas	X	
D5	Expand slip/lease area west of Hood Strip, relocate tie downs to east of Hood Strip with lease area, parallel taxiway & road	X	
D4	Add floatplane ramp	X	
D5A	Expand slip/lease area west of Hood strip, relocate tie downs to east of Hood Strip with lease area,parallel taxiway & road	X	
D6C	Expand floatplane parking/lease areas in Lake Spenard		Slips with taxiway access in D5 on Lake Hood.
D8	New lease lot/tie down space west of Echo Parking		
B11	Repair/replace existing floatplane ramps		Tie downs to be relocated in D5.
C4	Pave, drainage improvements, lighting & electrical service for Runway 14/32 tie downs		
D2	Replace pedestrian path on west side of Runway 14/32 with new/ path on east side	X	
D9	Permanent pumped toilets	X	
C2	Pave parallel taxiway for Runway 14/32 & fingers	X	
D3	Extend taxilane to more slips on Lake Spenard		High cost. Other slips with taxiway available.
A3	Aircraft, auto, pedestrian enforcement, education, signs, flashing lights & markings (area wide)	X	
B3	Selective deepening of waterlanes/taxi channel/fingers	X	
B1	Rehab runway surface, improve drainage & replace lighting	X	
C1	Enhance viewing areas at Spenard Beach & next to DOT&PF building	X	
D6A	Expand floatplane parking/lease areas in Lake Spenard		Slips with taxiway access in D5 on Lake Hood.
A2	Identify and mitigate aircraft & structures from aircraft taxi routes	X	
B2	Widen E-W waterlane, lower & resurface Gull Island		\$5.2 million for 10 tie downs - poor soils, contamination, high water table.
B7A	Construct connector taxilanes & pedestrian path		
B5	Address runway protection zone conflicts with lease lot management	X	
B7	Construct parallel Lakeshore taxilane, road & pedestrian path with connectors	X	
D1	Fencing & gates for Runway 14/32	X	
C5	Pave & drainage at Delta tie downs		
B8	Construct parallel road & taxilane on Commercial Finger		
C6	Lighting, electric service & fencing at transient slips	X	
C7	Paint compass rose	X	Lack of user interest/need.
B4	Address runway visibility zone conflicts through modification of standards	X	
B6	Realign Taxiways H & H3	X	
B9	Resurface/reconstruct portions of Lakeshore Taxiway	X	
D7	Transient helipad at Lake Hood		Provided by FBO's on ANC. Can be reconsidered for LHD if needed.
D12	Boathouse expansion		Not a high priority of airport safety.
P10	Resurface/reconstruct Taxiways V		✓

Top 1/3  
Middle 1/3  
Bottom 1/3

\* Alternative D6 was a single project in the open house and multiple alternatives in the survey

# Master Plan Capital Funding Projections

- Master Plan CIP to be based on a realistic, but optimistic funding forecast
- Considers historical FAA Airport Improvement Program (AIP) funding amounts

Funding Sources	Amounts
Current LHD Annual AIP Passenger Entitlements	\$1,000,000
Recent LHD Annual Average AIP Discretionary Funding & Potential AIP Increases	\$ 875,000
International Airport Revenue Fund AIP Match	<u>\$ 125,000</u>
Average Annual CIP Funding Projection	\$2,000,000

- $20 \text{ Year Funding Projection} = \$2M \times 20 \text{ Years} = \$40 \text{ Million}$
- Some projects could occur beyond 20 years if funding amounts are not achieved



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# Recommended Plan



LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

# Recommended Plan – CIP Projects

## Lake Hood Seaplane Base Master Plan Recommended Capital Improvement Program Projects

Project	Notes	FAA National Priority Rating Score			Cost
		H - High,	M - Medium,	L - Low	
1 Rehab runway surface, improve drainage & replace lighting	Runway and lighting system needs major CIP project every 15 - 20 years.		\$3,200,000	H - runway	
2 Reconstruct and realign Taxiway H (parallel taxiway)	Recommended in last master plan.		\$1,500,000	M/H - taxiway	
3 Construct parallel road & taxilane on commercial finger	Higher frequency of taxiing aircraft to lease areas. Recommended in last master plan.		\$1,100,000	M/H - taxiway	
4 Resurface/reconstruct portions of Lakeshore Taxiway and west Lake Hood floatplane ramp	Project engineering has already started due to existing pavement problems.		\$4,000,000	M/H - taxiway	
5 Resurface/reconstruct Taxiway V	Existing pavement problems.		\$8,800,000	M/H - taxiway	
6 Repair/replace existing floatplane ramp	Repairs/replaces north (Delta) ramp. Estimate assumes replacement of ramp.		\$1,000,000	L	
7 Continue erosion control/slip dredging projects	Assumes erosion control/dredging for about 100 slips with the highest amounts of erosion, likely split into multiple phases over 20 years. High priority of slip holders. Continuation from prior master plan.		\$6,200,000	L	
8 Realign Taxiway H3	Small project recommended in last master plan.		\$200,000	M/H - taxiway	
9 Fencing, cameras & lighting security/safety upgrades (area wide)	Project needs further scoping prior to implementation. High priority of users.		\$2,000,000	M/H - RSAT	
10 Fencing & gates for taxiway access to Runway 14/32	Assumes 4 new gates with adjacent ditch fencing to reduce runway incursions.		\$1,000,000	M/H - RSAT	
11 Add floatplane ramp in south Lake Hood	Provides new ramp in South Lake Hood, which is beneficial during certain winds and when ramps are busy. Recommended in last master plan. Will lose several slips.		\$500,000	L	
12 Expand slip/lease area west of Runway 14/32, relocate tie downs to east of Runway 14/32 with new taxiway and road	Initiates lease lot and tie down development east of Runway 14/32 by building gravel taxiway, tie downs, road and electric power. Relocates Lakeshore Drive with aircraft, autos, and pedestrians on separate paved surfaces. Adds 49 floatplane slips and/or lease areas (12 affected slips, net 61 slips). Development east of Runway 14/32 was in last master plan.		\$15,400,000	M - taxiway elements higher	
13 Continue land acquisition in east Lake Spenard	Continue acquisitions when owners want to sell. Continuation from prior master plan.		\$2,500,000	L	
		Total	\$47,400,000		



LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

# Recommended Plan – Other Projects

Lake Hood Seaplane Base Master Plan Other Recommended Projects (Other Funding Sources or Management Actions)		
Project	Notes	
A Maintain existing facilities (area wide)	Operating Budget	
B Identify and mitigate aircraft & structure infringement on aircraft taxi routes	Operating Budget	
C Aircraft, auto, pedestrian separation, education, signage, flashing lights, markings & enforcement (area wide)	Operating Budget	
D Selective maintenance of waterlanes/taxi channels/fingers (area wide)	Operating Budget if/when depth becomes less than 3 feet.	
E Address runway visibility zone conflicts through modification of standards	Request modification of standards from FAA based on air traffic control tower management of operations. Was recommended in last master plan.	
F Address runway protection zone conflicts with lease lot management	Identify runway protection zones on ALP and airport staff monitor new development.	
G Enhance viewing areas at Spennard Beach & next to DOT&PF building	Operating Budget or Annual Improvements. Possibly partner with museum, MOA parks or others.	
H Expand run-up area	Operating Budget	
I Lighting, electric service and/or fencing at transient slips	Operating Budget, as needed.	
J Pedestrian path on east side of Runway 14/32	Assumes non-airport funding with possible airport contribution of waste soils from other projects.	
K Long term expansion of new lease lot/tie down space west of Echo Parking and east of Runway 14/32	Timing is demand dependent and unlikely needed during 20 year CLP. Show on ALP with access provided when new Postmark Drive is built on ANC in long term.	
L Permanent pumped toilets	Annual improvements or include with other projects such as D5 at a cost of \$140,000 per toilet.	



LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

# Discussion - Phasing

Lake Hood Seaplane Base Master Plan Recommended Capital Improvement Program Project Phasing					
Project	Cost	1-5 Years (\$10M)	6-10 Years (\$10M)	11-20 Years (\$20M)	20+ Years
1 Rehab runway surface, improve drainage & replace lighting	\$3,200,000				
2 Reconstruct and realign Taxiway H (parallel taxiway)	\$1,500,000				
3 Construct parallel road & taxilane on commercial finger	\$1,100,000				
4 Resurface/reconstruct portions of Lakeshore Taxiway and west Lake Hood floatplane ramp	\$4,000,000	\$4,000,000			
5 Resurface/reconstruct Taxiway V	\$8,800,000				
6 Repair/replace existing floatplane ramp	\$1,000,000				
7 Continue erosion control/slip dredging projects	\$6,200,000				
8 Realign Taxiway H3	\$200,000				
9 Fencing, cameras & lighting security/safety upgrades (area wide)	\$2,000,000				
10 Fencing & gates for taxiway access to Runway 14/32	\$1,000,000				
11 Add floatplane ramp in south Lake Hood	\$500,000				
12 Expand slip/lease area west of Runway 14/32, relocate tie downs to east of Runway 14/32 with new taxiway and road	\$15,400,000				
13 Continue land acquisition in east Lake Spenard	\$2,500,000				
Total \$47,400,000					



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# Next Steps

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- **Public Meeting #3 – April 28, 2016 (tentative),  
6-8 pm, The Lakefront Anchorage**
- **Final Advisory Committee Meeting # 5 – May, 2016**
  - Master Plan Capital Improvement Program
  - Lake Hood Revenues and Expenses
- **Draft and Final Master Plan Report – Summer,  
2016**

# Public Comments

Public comments may also be submitted to  
[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)  
or  
Rachel Steer at 907-562-2000



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# Thank you for participating!

## Contact Information:

Tom Middendorf, Project Manager

Rachel Steer, Public Involvement

[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)

907-562-2000

[www.lhdmasterplan.com](http://www.lhdmasterplan.com)



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## RECOMMENDED CAPITAL IMPROVEMENT PROGRAM PROJECTS

- 1** REHAB RUNWAY SURFACE, IMPROVE DRAINAGE & REPLACE LIGHTING
- 2** RECONSTRUCT AND REALIGN TAXIWAY H (PARALLEL TAXIWAY)
- 3** CONSTRUCT PARALLEL ROAD & TAXIWAY ON COMMERCIAL FINGER
- 4** RESURFACE/RECONSTRUCT PORTIONS OF LAKESHORE TAXIWAY AND WEST LAKE HOOD FLOATPLANE RAMP
- 5** RESURFACE/RECONSTRUCT TAXIWAY V
- 6** REPAIR/REPLACE EXISTING FLOATPLANE RAMP
- 7** CONTINUE EROSION CONTROL/SITE DREDGING PROJECTS
- 8** REALIGN TAXIWAY H3
- 9** FENCING, CAMERAS & LIGHTING SECURITY/SAFETY UPDATES (AREA WIDE - NOT ON DRAWING)
- 10** FENCING & GATES FOR TAXIWAY ACCESS TO RUNWAY 14/32
- 11** ADD FLOATPLANE RAMP IN SOUTH LAKE HOOD
- 12** EXPAND SLIP/LEASE AREA WEST OF RUNWAY 14/32, RELOCATE TIE DOWN TO EAST OF RUNWAY 14/32 WITH NEW TAXIWAY AND ROAD
- 13** CONTINUE LAND ACQUISITION IN EAST LAKE SPENARD

## OTHER RECOMMENDED PROJECTS (OTHER FUNDING SOURCES OR MANAGEMENT ACTIONS)

- A** MAINTAIN EXISTING FACILITIES (AREA WIDE - NOT SHOWN ON DRAWING)
- B** IDENTIFY AND MITIGATE AIRCRAFT & STRUCTURE FROM INFILTRATION ON AIRCRAFT TAXI ROUTES
- C** AIRCRAFT AUTO PEDESTRIAN SEPARATION EDUCATION, SIGNAGE, FLASHING LIGHTS, MARKINGS & ENFORCEMENT (AREA WIDE - NOT SHOWN ON DRAWING)
- D** SELECTIVE MAINTENANCE OF WATERLANES/TAXI CHANNELS/FINGERS (AREA WIDE - NOT SHOWN ON DRAWING)
- E** ADDRESS RUNWAY VISIBILITY ZONE CONFLICTS THROUGH MODIFICATION OF STANDARDS (AREA WIDE - NOT SHOWN ON DRAWING)
- F** ADDRESS RUNWAY PROTECTION ZONE CONFLICTS WITH LEASE LOT MANAGEMENT
- G** ENHANCE VIEWING AREAS AT SPENARD BEACH & NEXT TO DOT&P BUILDING
- H** EXPAND RUN-UP AREA
- I** LIGHTING, ELECTRIC SERVICE AND/OR FENCING AT TRANSIENT SLIPS
- J** PEDESTRIAN PATH ON EAST SIDE OF RUNWAY 14/32
- K** LONG TERM EXPANSION OF NEW LEASE LOT/TIE DOWN SPACE WEST OF ECHO PARKING AND EAST OF RUNWAY 14/32
- L** PERMANENT PUMPED TOILETS (NOT SHOWN ON DRAWING)



**Lake Hood Master Plan**  
**Alternatives Public Comment Summary**

Ranked Projects	Survey	Open House	Advisory Committee	Recommended Plan	Remarks
A1 Maintain existing facilities (area wide)				X	
B12 Continue erosion control/slip dredging projects				X	
D10 Continue land acquisition			Red		X
C8 Fencing, cameras & lighting security/safety upgrades (area wide)				X	
D11 Explore more ways to make lease lot development affordable			Red		Ongoing discussion.
D6D Expand floatplane parking/lease areas in Lake Spenard		*	**		Slips with taxiway access in D5 on Lake Hood.
D6B Expand floatplane parking/lease areas in Lake Spenard		*	**		Slips with taxiway access in D5 on Lake Hood.
C3 Expand concrete run-up areas			Yellow		X
Expand slip/lease area west of Hood Strip, relocate tie downs to east of Hood Strip with lease area, parallel taxiway & road		Yellow			X
D4 Add floatplane ramp			Red		X
Expand slip/lease area west of Hood strip, relocate tie downs to east of Hood Strip with lease area, parallel taxiway & road		Yellow	Red		X
D6C Expand floatplane parking/lease areas in Lake Spenard		*	**		Slips with taxiway access in D5 on Lake Hood.
D8 New lease lot/tie down space west of Echo Parking			Red		X
B11 Repair/replace existing floatplane ramps					X
C4 Pave, drainage improvements, lighting & electrical service for Runway 14/32 tie downs					Tie downs to be relocated in D5.
D2 Replace pedestrian path on west side of Runway 14/32 with new path on east side			Green		X
D9 Permanent pumped toilets			Red		X
C2 Pave parallel taxiway for Runway 14/32 & fingers			Red		X
D3 Extend taxilane to more slips on Lake Spenard			Red		High cost. Other slips with taxiway available.
A3 Aircraft, auto, pedestrian enforcement, education, signs, flashing lights & markings (area wide)			Green		X
B3 Selective deepening of waterlanes/taxi channel/fingers			Red		X
B1 Rehab runway surface, improve drainage & replace lighting			Yellow		X
C1 Enhance viewing areas at Spenard Beach & next to DOT&PF building			Green		X
D6A Expand floatplane parking/lease areas in Lake Spenard		*	**		Slips with taxiway access in D5 on Lake Hood.
A2 Identify and mitigate aircraft & structures from aircraft taxi routes	Red	Yellow	Red		X
B2 Widen E-W waterlane; lower & resurface Gull Island					Need is pending update to FAA SPB AC.
B7A Construct connector taxilanes & pedestrian path		Yellow	Green		Addressed in CIP Project D5.
B5 Address runway protection zone conflicts with lease lot management					X
B7 Construct parallel Lakeshore taxilane, road & pedestrian path with connectors					X
D1 Fencing & gates for Runway 14/32					X
C5 Pave & drainage at Delta tie downs					\$5.2 million for 10 tie downs - poor soils, contamination, high water table.
B8 Construct parallel road & taxilane on Commercial Finger					X
C6 Lighting, electric service & fencing at transient slips					X
C7 Paint compass rose					Lack of user interest/need.
B4 Address runway visibility zone conflicts through modification of standards					X
B6 Realign Taxiways H & H3		Yellow	Green		X
B9 Resurface/reconstruct portions of Lakeshore Taxiway		Red	Yellow		X
D7 Transient helipad at Lake Hood		Yellow	Red		Provided by FBO's on ANC. Can be reconsidered for LHD if needed.
D12 Boathouse expansion		Red	Yellow		Not a high priority of airport safety.
B10 Resurface/reconstruct Taxiway V		Red	Red		X



\* Alternative D6 was a single project in the open house and multiple alternatives in the survey

\*\* Alternative D6 was two projects for the Advisory Committee and was rated Middle and Bottom 1/3

## Lake Hood Recommended Plan

### Lake Hood Seaplane Base Master Plan Recommended Capital Improvement Program Projects

Project	Notes	FAA National Priority Rating Score H- High, M - Medium, L- Low	Cost
1 Rehab runway surface, improve drainage & replace lighting	Runway and lighting system needs major CIP project every 15 - 20 years.	\$3,200,000	H - runway
2 Reconstruct and realign Taxiway H (parallel I taxiway)	Recommended in last master plan.	\$1,500,000	M/H - taxiway
3 Construct parallel road & taxilane on commercial finger	Higher frequency of taxiing aircraft to lease areas. Recommended in last master plan.	\$1,100,000	M/H - taxiway
4 Resurface/reconstruct portions of Lakeshore Taxiway and west Lake Hood floatplane ramp	Project engineering has already started due to existing pavement problems.	\$4,000,000	M/H - taxiway
5 Resurface/reconstruct Taxiway V	Existing pavement problems.	\$8,800,000	M/H - taxiway
6 Repair/replace existing floatplane ramp	Repairs/replaces north (Delta) ramp. Estimate assumes replacement of ramp.	\$1,000,000	L
7 Continue erosion control/slip dredging projects	Assumes erosion control/dredging for about 100 slips with the highest amounts of erosion, likely split into multiple phases over 20 years. High priority of slip holders. Continuation from prior master plan.	\$6,200,000	L
8 Realign Taxiway H3 Fencing, cameras & lighting security/safety upgrades (area wide)	Small project recommended in last master plan.	\$200,000	M/H - taxiway
9 Project needs further scoping prior to implementation. High priority of users.		\$2,000,000	M/H - RSAT
10 Fencing & gates for taxiway access to Runway 14/32	Assumes 4 new gates with adjacent ditch fencing to reduce runway incursions.	\$1,000,000	M/H - RSAT
11 Add floatplane ramp in south Lake Hood	Provides new ramp in South Lake Hood, which is beneficial during certain winds and when ramps are busy. Recommended in last master plan. Will lose several slips.	\$500,000	L
12 Expand slip/lease area west of Runway 14/32, relocate tie downs to east of Runway 14/32 with new taxiway and road lease areas (12 affected slips, net 61 slips). Development east of Runway 14/32 was in last master plan.	Initiates lease lot and tie down development east of Runway 14/32 by building gravel taxiway, tie downs, road and electric power. Relocates Lakeshore Drive with aircraft, autos, and pedestrians on separate paved surfaces. Adds 49 floatplane slips and/or lease areas (12 affected slips, net 61 slips). Development east of Runway 14/32 was in last master plan.	\$15,400,000	M - taxiway elements higher
13 Continue land acquisition in east Lake Spenerd	Continue acquisitions when owners want to sell. Continuation from prior master plan.	\$2,500,000	L
Total		<b>\$47,400,000</b>	

## Lake Hood Recommended Plan

Lake Hood Seaplane Base Master Plan Other Recommended Projects (Other Funding Sources or Management Actions)		
Project	Notes	
A Maintain existing facilities (area wide)	Operating Budget	
B Identify and mitigate aircraft & structure infringement on aircraft taxi routes	Operating Budget	
C Aircraft, auto, pedestrian separation, education, signage, flashing lights, markings & enforcement (area wide)	Operating Budget	
D Selective maintenance of waterlanes/taxi channels/fingers (area wide)	Operating Budget if/when depth becomes less than 3 feet.	
E Address runway visibility zone conflicts through modification of standards	Request modification of standards from FAA based on air traffic control tower management of operations. Was recommended in last master plan.	
F Address runway protection zone conflicts with lease lot management	Identify runway protection zones on ALP and airport staff monitor new development.	
G Enhance viewing areas at Spennard Beach & next to DOT&PF building	Operating Budget or Annual Improvements. Possibly partner with museum, MOA parks or others.	
H Expand run-up area	Operating Budget	
I Lighting, electric service and/or fencing at transient slips	Operating Budget, as needed.	
J Pedestrian path on east side of Runway 14/32	Assumes non-airport funding with possible airport contribution of waste soils from other projects.	
K Long term expansion of new lease lot/tie down space west of Echo Parking and east of Runway 14/32	Timing is demand dependent and unlikely needed during 20 year CLP. Show on ALP with access provided when new Postmark Drive is built on ANC in long term.	
L Permanent pumped toilets	Annual improvements or include with other projects such as D5 at a cost of \$140,000 per toilet.	

Project	Cost (\$10M)	1-5 Years	6-10 Years (\$10M)	11-20 Years (\$20M)	20+ Years (\$20M)
1 Rehab runway surface, improve drainage & replace lighting	\$3,200,000				
2 Reconstruct and realign Taxiway H (parallel taxiway)	\$1,500,000				
3 Construct parallel road & taxilane on commercial finger	\$1,100,000				
4 Resurface/reconstruct portions of Lakeshore Taxiway and west Lake Hood floatplane ramp	\$4,000,000	\$4,000,000			
5 Resurface/reconstruct Taxiway V	\$8,800,000				
6 Repair/replace existing floatplane ramp	\$1,000,000				
7 Continue erosion control/slip dredging projects	\$6,200,000				
8 Realign Taxiway H3	\$200,000				
9 Fencing, cameras & lighting security/safety upgrades (area wide)	\$2,000,000				
10 Fencing & gates for taxiway access to Runway 14/32	\$1,000,000				
11 Add floatplane ramp in south Lake Hood	\$500,000				
12 Expand slip/lease area west of Runway 14/32, relocate tie downs to east of Runway 14/32 with new taxiway and road	\$15,400,000				
13 Continue land acquisition in east Lake Spenard	\$2,500,000				
Total	<b>\$47,400,000</b>				

*Advisory Committee Meeting 5*

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## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Lake Hood Master Plan Advisory Committee Meeting #5 Meeting Notes

**Date:** May 25, 2016

**Time:** 11:00am-1:00pm

**Location:** ANC Badge Training Office

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#### **Advisory Committee Attendees:**

Jim Seeley, Lake Hood Pilots Association  
Kirk McGee, Lake Hood Private Floatplane Pilot  
Brian Hove, Turnagain Community Council  
Steve Fishback, Lake Hood Private Pilot, Wheeled Aircraft  
Gordon Edmiston, ANC Air Traffic Control Tower  
Steve Strait, Governor's Aviation Advisory Board Representative  
Mike Laughlin, Regal Air  
Clint Lentfer, Lake Hood Waitlist  
Dee Hanson, AOPA  
John Pratt, Seaplane Pilots Association  
Kottayam Natarajan Jr., Airline Technical Representative

#### **Staff Attendees:**

Tim Coons (LHD)  
Cheryl McDowell (LHD)  
John Parrott (ANC/LHD)  
John Johansen (ANC/LHD)  
Teri Lindseth (ANC/LHD)  
Katie Gage (ANC/LHD)  
Scott Lytle (ANC/LHD)  
Alex Moss (AIAS)  
Tom Middendorf (DOWL)  
Charles Guinchard (DOWL)  
Maria Kartezhnikova (DOWL)

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#### **Meeting Overview**

The Lake Hood Seaplane Base Master Plan Update hosted its fifth Advisory Committee (AC) Meeting on Wednesday, May 25th, from 11:00am-1:00pm. The purpose of the meeting was to receive AC comments on the Draft Development Plan and Capital Improvement Program over the next 20 years or more. Tom Middendorf gave a presentation on the Draft Development Plan and Capital Improvement Program and facilitated the discussion. Committee members asked questions during and after the presentation and some of them individually completed comment forms to provide feedback on the AC process. At the end of the meeting, the AC received public comments.

The meeting presentation is available online at: [www.lhdmasterplan.com](http://www.lhdmasterplan.com)



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Advertising

- Email to Master Plan Update contact list of approximately 980 addresses.
- Email invites to AC with the Draft Mater Plan and Capital Improvement Plan presentation.
- State of Alaska's Online Public Notice.
- GovDelivery Notice.
- Master Plan Update Website: [www.lhdmasterplan.com](http://www.lhdmasterplan.com).

### Attendance

Twenty (20) people singed into the event. Of those, one (1) was from the public (non AC members, staff or DOWL).

### Meeting Materials

- Handouts
  - Draft CIP Phasing Plan Table
  - Draft Development Plan Graphic
  - Advisory Committee Comment Form

## Meeting Summary

### Meeting Presentation

Tom Middendorf welcomed the group, explained the purpose and agenda for the meeting, and reviewed the master plan status/schedule. He reviewed the handout showing the prior public input received from the survey, public meeting, and last AC meeting on the Draft Development Plan and CIP. Tom presented the Draft Development Plan, describing each of the projects and their costs, as shown in the handouts. He also explained why some projects were not recommended. Tom explained that an average of \$2 million per year is projected for Lake Hood capital project funding over the next 20 years, a forecasted amount to be used in determining how to phase the capital projects within a realistic but optimistic long term capital budget. Tom answered a few questions from AC members throughout the presentation. The presentation is available online at: [www.lhdmasterplan.com](http://www.lhdmasterplan.com).

### Comments and Questions from the Committee

*Note: Questions and comments from the Advisory Committee Members and the Planning team in this summary are a synopsis of the meeting's dialogue. When appropriate, Master Plan Update planning team responses have been supplemented to supply complete responses.*



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

**Advisory Committee member question:** Do you coordinate with FAA officials in determining FAA priorities for funding and what is their rating system/rationale for project funding?

**Planning team response:** *The project team did coordinate with the FAA in developing this CIP and FAA priorities were shown on a figure in the presentation. FAA has a priority ranking system it uses to prioritize funding for CIP projects - that system generally favors runways, taxiways, aprons, safety and security.*

**Advisory Committee member question:** Is the CIP in order of priority?

**Planning team response:** *It is based on priority but it also takes into account the required sequencing for some projects as well as how much can be funded given costs and funding limitations. In other words, a high priority project may appear lower on the list because other improvements would need to happen first, because there are other priorities that are also needed, and because there may not be enough funding to complete the project when we would like to complete it. Funding for some expensive projects, like project 10, is spread out over a longer period of time because there is not enough funding to do it all at once.*

**Advisory Committee member comment:** Please break out the CIP funding into entitlement and discretionary funding sources.

**Planning team response:** *This is hard to precisely determine, but we could at least identify those which we think are high priority for discretionary funds.*

**Advisory Committee member comment:** Can you complete 10B, Lakeshore Drive & path relocation and taxiway connectors, before 11, Reconstruct & realign taxiway H (parallel taxiway)?

**Planning team response:** *The connectors will connect to the parallel taxiway but probably do not depend on the parallel taxiway to be built first. It will be important to develop new tie downs (10C) before eliminating some tie downs when the parallel taxiway is realigned.*

**Advisory Committee member comment:** Project 7, construct parallel road and taxi lane on commercial finger, is not needed or at least is a lower priority than other needs.

**Planning team response:** *Any improvements to the commercial finger would need to meet FAA standards for aircraft/vehicle separation as well as object free zones. The planning team has received both support and opposition to this project from businesses on the commercial finger and the timing of this item can be reevaluated based on public input. Some of the opposition is because some leaseholders are currently using space off of their leases that would be used in the future for the parallel road and taxiway.*

**Advisory Committee member comment:** Please provide more detailed fencing plans and seek public input when item 3 is implemented.

**Advisory Committee member comment:** Public bathroom facilities should be constructed on the commercial finger and in other areas for non-lease holders.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

**Planning team response:** *Public bathrooms are item L on the "Other Projects" list. The airport proposes to provide improved public bathroom facilities with operating funds, so this has not been included in the CIP list.*

**Advisory Committee member question:** Why is improvement to the east side of Lake Spenard not included in the CIP?

**Planning team response:** *Improvements to the east side of Lake Spenard were considered during the alternatives as one way to expand slips by redeveloping the area and extending fingers into the lake, but this alternative was dismissed due to cost and because many slips would also be eliminated by the construction. Complete redevelopment of this entire area cannot be accomplished until property acquisition is finished. At that time the Airport would plan improvements to the east side of Lake Spenard. It will be expensive to redevelop this area. The width of taxi channels built must meet FAA standards and will likely result in fewer slips unless the fingers are extended into the lake.*

**Advisory Committee member comment:** It would be worth redeveloping and improving this area even if slips are reduced. Many of the slips are difficult to access because of the narrow channel. Land acquisition is very expensive. Money would be better spent on improvements instead of land acquisition. Interim use of the acquired properties should be considered.

**Planning team response:** *Because the East Lake Spenard area is a less desirable slip area, we see some slipholders transfer from this area when a better slip becomes available elsewhere on LHD. We will consider relabeling item 6 as "Land Acquisition and Redevelopment in East Lake Spenard."*

**Advisory Committee member comment:** I have a lease in the East Lake Spenard area and am happy with the layout where I am located.

**Advisory Committee member comment:** I would be concerned about losing floatplane slips if east Lake Spenard is redeveloped.

**Advisory Committee member comment:** With regards to project 10A, a full parallel taxiway on the east side of Runway 14-32 that extends all the way to Runway 14 is needed to avoid traffic from crossing the runway.

**Planning team response:** *We received a similar comment from Gordon Edmiston of the ATCT (a member of the AC).*

**Advisory Committee member question:** Will item 3 include fencing of the entire Lake Hood area and can the airport establish fencing standards for lease holders?

**Planning team response:** *No, it does not include fencing the entire airport; the airport will likely only gate/fence the taxiway connectors that access Runway 14-32. The airport does not intend to dictate fencing standards to lease holders but does sometimes make suggestions during the building permit process.*



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

**Advisory Committee member question:** Where do the AC, FAA, and public comments go? Are comments from any group weighted more heavily than others?

**Planning team response:** *The planning team does not use a specific formula for how comments are weighted. The airport considers all comments and ultimately makes decisions on how best to proceed with the master plan and comply with FAA requirements.*

**Advisory Committee member question:** How are the operating costs of Lake Hood determined?

**Planning team response:** *Operating costs of Lake Hood are staff estimates of the proportion of staff, equipment and commodities spent at LHD vs. ANC. ANC/LHD's combined annual operating costs are roughly \$60 million and LHD's share of that is about \$3.1 million. LHD operating costs are reasonable estimates, but are not precise. It would be expensive and a poor use of time to more precisely account for these costs, with limited benefits. These estimates generally document that LHD expenses are greater than LHD revenues, and consequently ANC subsidizes LHD. The airport and airlines do not require that LHD should break even, and view LHD as a valuable asset to the community and State.*

### Advisory Committee Feedback on the Committee Process

**Advisory Committee member comment:** Overall a good process but the long time between meetings required additional review each meeting.

**Advisory Committee member comment:** The demographics of LHD's future aviation community should have been discussed. Pilots are aging and the waitlist is likely to be reduced because of this.

**Planning team response:** *The airport did complete a review of ages of a sample of the slipholders and this data will be in the report.*

**Advisory Committee member comment:** The group should have been provided with some type of summary information to bring back to their respective constituents.

**Advisory Committee member comment:** It may have been beneficial if the planning team put this plan into the context of the aviation system.

**Planning team response:** *The planning team is also conducting a floatplane facility siting study for the Mat-Su Borough.*

**Advisory Committee member comment:** It would have been nice to discuss the economic impact of LHD at the beginning of the AC process.

**Advisory Committee member comment:** A review of the past master plan and what was accomplished/left outstanding should have been presented early on in the AC process.

**Planning team response:** *The past master plan was intentionally not reviewed so the AC would start with a clean slate and be encouraged to consider new ideas. In the future this approach could be reconsidered.*



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Advisory Committee Comment Sheet Summary

#### **1. What was done well?**

- Keeping the Committee advised in meetings.
- Open discussion of ideas and options. You shared ideas and we could discuss and evaluate and discard some.
- Meeting location and times were good.
- The planning process worked well, lots of ideas came up for discussion, concerns were heard and action taken on the most appropriate items. Control of “public” discussion was also well managed and limited during the Committee meetings.
- Very prepared/well laid out productive meetings and a good process.

#### **2. What did you like?**

- Meetings well timed.
- Ready access to consultants.
- Great discussions. You put together materials that enabled good, robust discussion.
- Did a good job of evaluating and describing multiple user needs and competing uses.
- The drawings are beneficial and help to understand what we are looking at.
- The graphics were well thought out and clear.
- Fair process allowed for all viewpoints. Suggestions respected and well represented.

#### **3. What could we improve upon?**

- Provide idea of how input from the Advisory Committee is evaluated and projects decided. How is input weighted – Advisory Committee vs. public input vs. airport management.
- More frequent meetings of the Committee. Include some less formal get-togethers.
- Would be good to do a continuum of previous master plans.
- More thought on regional issues and how LHD fits in with the entire region.
- The plan needs to begin with past master plan and projects and status of plans.
- I personally had difficulty remembering discussion details between meetings. Perhaps the time between meetings could be shortened.
- Explain the expectations for the committee better. What are our expectations specifically?

#### **4. What did you dislike?**

- Provide information in a format that can be distributed to user groups represented.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

- Long time between meetings; information not ‘pushed’ to Committee between meetings.
- N/A.
- I sometimes felt there was more information covered than there was time for. This seemed particularly true at the third meeting (9/15).
- N/A

### 5. Do you feel that the Advisory Committee made a difference in the master plan?

- Yes, thank you for the opportunity.
- Yes.
- Yes. I think comments and feedback were incorporated into the document and plans.
- Absolutely – Thank you for including the ATCT.
- Yes, the role of the Advisory Committee was made clear through the process. Our thoughts were incorporated into the plan.
- Yes, good cross section of committee members. Good alternatives with some new ideas.

### 6. Please provide any additional comments.

- Meetings were well run and very informative and useful.
- The Committee was comprised of a very good cross section of users. Having someone familiar with the airlines, tower operations, air taxi and private pilots benefited the Committee.

### Public Comments

*\*\*Public comments below are a synopsis of what was stated and are not written verbatim. Response to comments will be provided in the comment/response reports.*

**Public comment:** Provide hard copy handouts of the meeting presentations in addition to what is already posted online to public members attending the meeting.

**Public comment:** Turnagain Community Council does not support the development east of Hood Strip and the expansion of Echo parking. The treed uplands provide a nice visual buffer. The area is surrounded by Class A wetlands. This project will not make the airport a good neighbor to the adjacent neighborhood.



LAKE HOOD SEAPLANE BASE  
**MASTER PLAN UPDATE**

Advisory Committee Meeting #5  
May 25, 2016 11AM - 1PM

# Meeting Agenda

1. Introductions/Agenda
2. Master Plan Status/Schedule Update
3. Capital Improvement Program Phasing Plan
4. Revenues and Expenses
5. Next Steps
6. Evaluation of Advisory Committee Process
7. Public Comments



# Master Plan Schedule/Status Update

- Inventory – Completed
- Forecast – Completed and Approved by FAA
- Facility Requirements/Needs – Completed
- Draft Alternatives – Completed
- Recommended Plan and CIP – Draft Completed, Public Comments requested by May 27
- Public Meeting #3 – April 28 - Completed
- **Final Advisory Committee Meeting – May 25**
- Draft Report and Airport Layout Plan – May to August
- Public Review of Draft – September to October
- Final Plan – November to December



LAKE HODD  
SEAPLANE BASE  
**MASTER  
PLAN  
UPDATE**

# Master Plan Capital Funding Projections

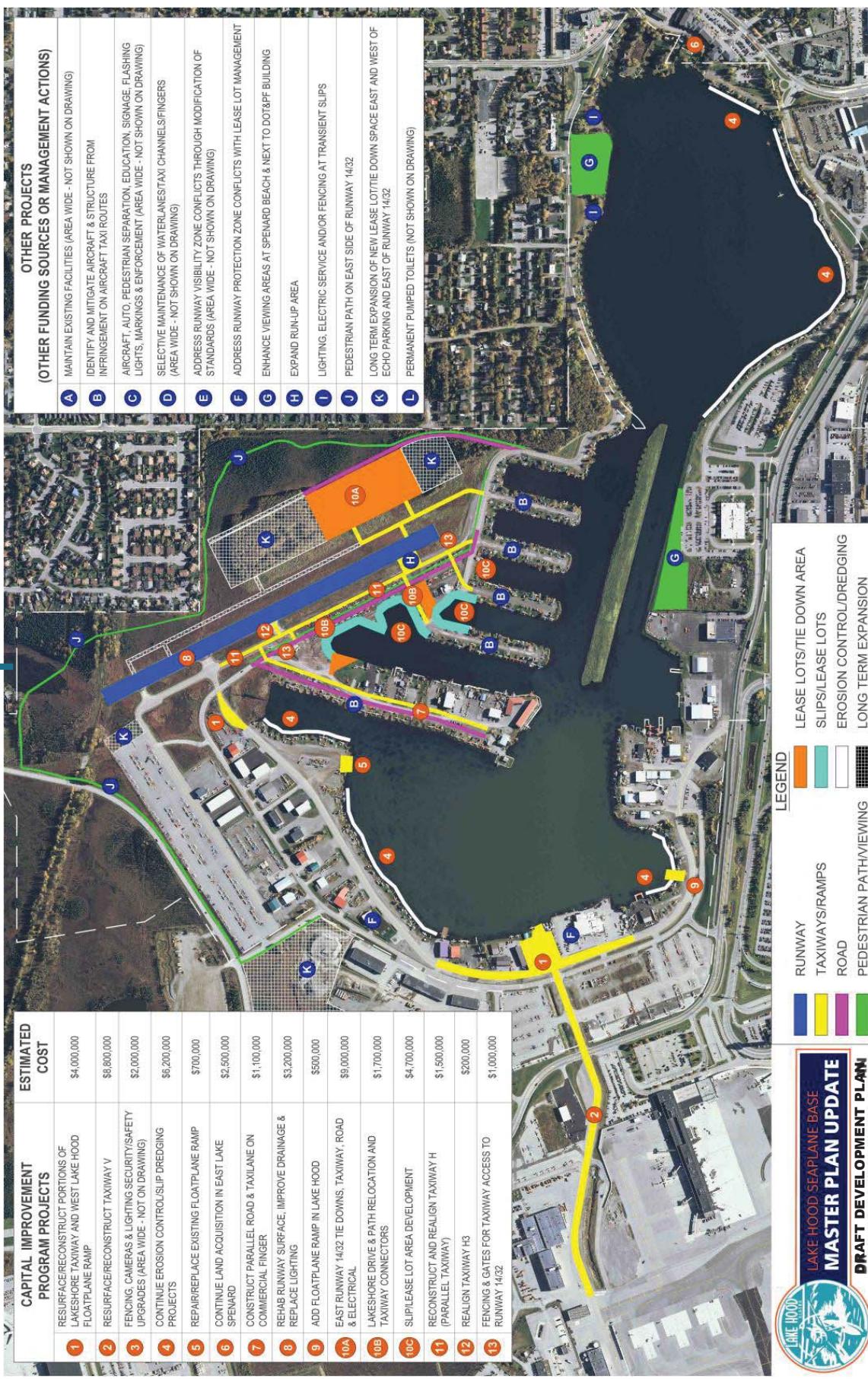
- Master Plan CIP to be based on a realistic, but optimistic funding forecast
- Considers historical FAA Airport Improvement Program (AIP) funding amounts

Funding Sources	Amounts
Current LHD Annual AIP Passenger Entitlements	\$1,000,000
Recent LHD Annual Average AIP Discretionary Funding & Potential AIP Increases	\$ 875,000
International Airport Revenue Fund AIP Match	<u>\$ 125,000</u>
Average Annual CIP Funding Projection	\$2,000,000

- $20 \text{ Year Funding Projection} = \$2M \times 20 \text{ Years} = \$40 \text{ Million}$
- Some projects could occur beyond 20 years if funding amounts are not achieved



# Draft Development Plan



Lake Hood Seaplane Base  
MASTER PLAN UPDATE  
DRAFT DEVELOPMENT PLAN



LAKE HOD SEAPLANE BASE MASTER PLAN UPDATE

# Draft Development Plan – CIP Projects/Costs

## Lake Hood Seaplane Base Master Plan Capital Improvement Program Projects

Project	Notes	Cost	FAA National Priority Rating Score H- High, M - Medium, L - Low
1 Rehab runway surface, improve drainage & replace lighting	Runway and lighting system needs major CIP project every 15 - 20 years.	\$3,200,000	H - runway
2 Reconstruct and realign Taxiway H (parallel taxiway)	Recommended in last master plan.	\$1,500,000	M/H - taxiway
3 Construct parallel road & taxilane on commercial finger	Higher frequency of taxiing aircraft to lease areas. Recommended in last master plan.	\$1,100,000	M/H - taxiway
4 Resurface/reconstruct portions of Lakeshore Taxiway and west Lake Hood floatplane ramp	Project engineering has already started due to existing pavement problems.	\$4,000,000	M/H - taxiway
5 Resurface/reconstruct Taxiway V	Existing pavement problems.	\$8,800,000	M/H - taxiway
6 Repair/replace existing floatplane ramp	Repairs/replaces north (Delta) ramp. Estimate assumes replacement of ramp.	\$1,000,000	M/H - taxiway
7 Continue erosion control/slip dredging projects	Assumes erosion control/dredging for about 100 slips with the highest amounts of erosion, likely split into multiple phases over 20 years. High priority of slip holders. Continuation from prior master plan.	\$6,200,000	L
8 Realign Taxiway H3	Small project recommended in last master plan.	\$200,000	M/H - taxiway
9 Fencing, cameras & lighting security/safety upgrades (area wide)	Project needs further scoping prior to implementation. High priority of users.	\$2,000,000	M/H - RSAT
10 Fencing & gates for taxiway access to Runway 14/32	Assumes 4 new gates with adjacent ditch fencing to reduce runway incursions.	\$1,000,000	M/H - RSAT
11 Add floatplane ramp in south Lake Hood	Provides new ramp in South Lake Hood, which is beneficial during certain winds and when ramps are busy. Recommended in last master plan. Will lose several slips.	\$500,000	L
12 Expand slip/lease area west of Runway 14/32, relocate tie downs to east of Runway 14/32 with new taxiway and road	Initiates lease lot and tie down development east of Runway 14/32 by building gravel taxiway, tie downs, road and electric power. Relocates Lakeshore Drive with aircraft, autos, and pedestrians on separate paved surfaces. Adds 49 floatplane slips and/or lease areas (12 affected slips, net 61 slips). Development east of Runway 14/32 was in last master plan.	\$15,400,000	M - taxiway elements higher
13 Continue land acquisition in east Lake Spenard	Continue acquisitions when owners want to sell. Continuation from prior master plan.	\$2,500,000	L
<b>Total</b>		<b>\$47,400,000</b>	

**LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE**



# Phasing Considerations

- Advisory Committee and public input
- FAA funding priority and safety concerns
- Shorter term priority given to:
  - immediate surface condition issues
  - user priorities
  - continuing ongoing projects
  - FAA/airport safety priorities
- Longer term projects:
  - Higher cost
  - Required construction of new tie downs first
  - Not immediate need



LAKE HODD  
SEAPLANE BASE  
**MASTER  
PLAN  
UPDATE**

# Draft Development Plan – CIP Project Phasing



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

Capital Improvement Program Project Phasing		1-5 Years	6-10 Years	11-20 Years	20+ Years	Funding Source
						Airport Match
<b>1</b>	Resurface/reconstruct portions of Lakeshore Taxiway & west Lake Hood floatplane ramp <small>Addresses existing surface condition problems.</small>	\$4,000,000				\$3,750,000 \$250,000
<b>2</b>	Resurface/reconstruct Taxiway V <small>Addresses existing surface condition problems for this important connection between LHD and ANC.</small>	\$2,300,000	\$6,500,000			\$8,250,000 \$550,000
<b>3</b>	Fencing, cameras & lighting security/safety upgrades (area wide) <small>Detailed plan needed. High priority of users and FAA.</small>	\$1,000,000	\$1,000,000			\$1,875,000 \$125,000
<b>4</b>	Continue erosion control/slip dredging projects <small>High priority of users. In prior Master Plan.</small>	\$500,000	\$2,850,000			\$5,812,500 \$387,500
<b>5</b>	Repair/replace existing floatplane ramp <small>Addresses user concerns about ramp condition.</small>	\$700,000				\$656,250 \$43,750
<b>6</b>	Continue land acquisition in east Lake Spennard <small>Phased acquisition when owners want to sell. In prior Master Plan.</small>	\$800,000	\$800,000			\$2,343,750 \$156,250
<b>7</b>	Construct parallel road & taxilane on commercial finger <small>Separates aircraft and automobiles. In prior Master Plan.</small>	\$1,100,000				\$1,031,250 \$68,750
<b>8</b>	Rehab runway surface, improve drainage & replace lighting <small>Major rehabilitation needed every 15 - 20 years.</small>			\$3,200,000		\$3,000,000 \$200,000
<b>9</b>	Add floatplane ramp in Lake Hood <small>In prior Master Plan.</small>			\$500,000		\$468,750 \$31,250
<b>10</b>	Tie down & Lakeshore Drive relocation & lease lot/slip expansion <b>10A</b> East Runway 14/32 tie downs, taxiway, road & electrical <small>Tie down relocation is needed before Taxiway H is realigned and Lakeshore Drive is relocated.</small>			\$9,000,000		\$8,437,500 \$562,500
<b>10B</b>	Lakeshore Drive & path relocation and taxiway connectors <small>Separates aircraft, automobiles, and pedestrians.</small>			\$1,700,000		\$1,593,750 \$106,250
<b>10C</b>	Slip/lease area development <small>High priority of users.</small>				\$4,700,000	\$4,406,250 \$293,750
<b>11</b>	Reconstruct & realign Taxiway H (parallel taxiway) <small>Addresses FAA standards and surface condition. Priority of FAA.</small>			\$1,500,000		\$1,406,250 \$93,750
<b>12</b>	Realign Taxiway H3 <small>Addresses FAA standards. Construct with Taxiway H.</small>			\$200,000		\$187,500 \$12,500
<b>13</b>	Fencing & gates for taxiway access to Runway 14/32 <small>High priority of FAA to prevent incursions. Build after connectors are built.</small>				\$1,000,000	\$937,500 \$62,500
<b>TOTAL</b>		\$10,400,000	\$11,150,000	\$19,850,000	\$5,700,000	<b>\$47,100,000</b> <b>\$44,156,250</b> <b>\$2,943,750</b>

# Summary of Public Comments on Draft Plan

- High costs of TW V, land acquisition, relocation of tie downs and Lakeshore Drive
- More transient parking on Hood Strip
- Afraid CIP drives increase in user fees
- Slip demand vs. lease lot demand
  - Transient helicopter area on LHD needed
  - Mixed opinions on aircraft, autos, pedestrian conflicts
  - Mixed opinions about slip erosion control and design
- Development east of Hood Strip opposed by neighbors – wetlands, noise, visual, trail not effective
- Interest in discussing details of west ramp and north (Delta) ramp improvements
  - Support for new south ramp
  - Support for more affordable lease areas
- Development plan for land acquired on the east shore of Lake Spenard



# Summary of Public Comments on Draft Plan

- Delta parking is muddy and needs gravel
- Extend taxiway access to South Lake Spenard
- Airmens Association building blocks waterlane visibility
- Soundproof homes around LHD
- Support for public parks/viewing areas
- Weed control needs to continue
- Slip and tie down management
- Need more tree topping
- Full parallel taxiway needed on Hood Strip to avoid incursions (ATC)
- More development for floatplanes instead of wheeled planes
- Need for fill and anchors for transient floatplanes
- Support for trail around the airport
- Support for extending the trail to Coastal Trail



LAKE HOOD  
SEAPLANE BASE  
**MASTER  
PLAN  
UPDATE**

# LHD Revenues and Operating Expenses

LHD Revenue Categories	Lake Hood Revenues (2015 actual)	LHD Expense Categories	Lake Hood Operating Expenses (estimated)
Tie Downs	\$253,000	Administration	\$498,000
Slips	\$414,000	Field and Equipment Maintenance	\$1,373,000
Land Leases	\$194,000	Police and Fire	\$578,000
		Operations	\$445,000
		Facilities (utilities)	\$43,000
		Other	\$178,000
Total Revenues	\$861,000	Total Expenses	\$3,115,000



LAKE HODD  
SEAPLANE BASE  
**MASTER  
PLAN  
UPDATE**

# Next Steps

- Recommended Plan and CIP – Public Comments requested by May 27
- Draft Report and Airport Layout Plan – May to August
- Public Review of Draft – September to October
- Final Plan – November to December



# Evaluation of Advisory Committee Process

- What was done well? What did you like?
- What could we improve upon? What did you dislike?
- Do you feel the Advisory Committee made a difference in the master plan?
  - Discussion
  - Comment Sheet
  - Follow-up Email



# Public Comments



LAKE HODD  
SEAPLANE BASE  
**MASTER  
PLAN  
UPDATE**

Public comments may also be submitted to  
[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)  
or  
Rachel Steer at 907-562-2000

# Thank you for participating!

## Contact Information:

Tom Middendorf, Project Manager

Rachel Steer, Public Involvement

[lhdmasterplan@dowl.com](mailto:lhdmasterplan@dowl.com)

907-562-2000

[www.lhdmasterplan.com](http://www.lhdmasterplan.com)





LAKE HODD SEAPLANE BASE  
MASTER PLAN UPDATE

Capital Improvement Program Project Phasing		1-5 Years	6-10 Years	11-20 Years	20+ Years	Funding Source	Airport Match
		FAA				FAA	
<b>1</b>	<b>Resurface/reconstruct portions of Lakeshore Taxiway &amp; west Lake Hood floatplane ramp</b> Addresses existing surface condition problems.	\$4,000,000				\$3,750,000	\$250,000
<b>2</b>	<b>Resurface/reconstruct Taxiway V</b> Addresses existing surface condition problems for this important connection between LHD and ANC.	\$2,300,000	\$6,500,000			\$8,250,000	\$550,000
<b>3</b>	<b>Fencing, cameras &amp; lighting security/safety upgrades (area wide)</b> Detailed plan needed. High priority of users and FAA. High priority of users. In prior Master Plan.	\$1,000,000	\$1,000,000			\$1,875,000	\$125,000
<b>4</b>	<b>Continue erosion control/slip dredging projects</b>	\$500,000	\$2,850,000	\$2,850,000		\$5,812,500	\$387,500
<b>5</b>	<b>Repair/replace existing floatplane ramp</b> Addresses user concerns about ramp condition.	\$700,000				\$656,250	\$43,750
<b>6</b>	<b>Continue land acquisition in east Lake Spenard</b> Phased acquisition when owners want to sell. In prior Master Plan.	\$800,000	\$800,000	\$900,000		\$2,343,750	\$156,250
<b>7</b>	<b>Construct parallel road &amp; taxilane on commercial finger</b> Separates aircraft and automobiles. In prior Master Plan.	\$1,100,000				\$1,031,250	\$68,750
<b>8</b>	<b>Rehab runway surface, improve drainage &amp; replace lighting</b> Major rehabilitation needed every 15 - 20 years.			\$3,200,000		\$3,000,000	\$200,000
<b>9</b>	<b>Add floatplane ramp in Lake Hood</b> In prior Master Plan.			\$500,000		\$468,750	\$31,250
<b>10</b>	<b>Tie down &amp; Lakeshore Drive relocation &amp; lease lotslip expansion</b>				\$9,000,000	\$8,437,500	\$562,500
<b>10A</b>	<b>East Runway 14/32 tie downs, taxiway, road &amp; electrical</b> Tie down relocation is needed before Taxiway H is realigned and Lakeshore Drive is relocated.					\$1,593,750	\$106,250
<b>10B</b>	<b>Lakeshore Drive &amp; path relocation and taxiway connectors</b> Separates aircraft, automobiles, and pedestrians.			\$1,700,000			\$293,750
<b>10C</b>	<b>Slip/lease area development</b> High priority of users.				\$4,700,000	\$4,406,250	
<b>11</b>	<b>Reconstruct &amp; realign Taxiway H (parallel taxiway)</b> Addresses FAA standards and surface condition. Priority of FAA.			\$1,500,000		\$1,406,250	\$93,750
<b>12</b>	<b>Realign Taxiway H3</b> Addresses FAA standards. Construct with Taxiway H.			\$200,000		\$187,500	\$12,500
<b>13</b>	<b>Fencing &amp; gates for taxiway access to Runway 14/32</b> High priority of FAA to prevent incursions. Build after connectors are built.				\$1,000,000	\$937,500	\$62,500
<b>TOTAL</b>		\$10,400,000	\$11,150,000	\$19,850,000	\$5,700,000	\$47,100,000	\$44,156,250
							\$2,943,750



## **Frequently Asked Questions**

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## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### Frequently Asked Questions

#### **What is an airport master plan update?**

According to the Federal Aviation Administration (FAA), an airport master plan is a comprehensive study of an airport that usually describes the short-, medium-, and long-term development plans to meet future aviation demand. The primary objective of the Lake Hood Seaplane Base (LHD) Master Plan Update will be to reassess LHD development issues, needs, and priorities, and prepare a 20-year development plan. The purpose of a master plan is not to resolve most airport maintenance, operations, property leasing, management, and policies issues; however when these issues are identified during the master planning process, they will be documented so that they can be considered outside of the master plan process.

#### **Why is the airport doing a master plan update now?**

The Federal Aviation Administration recommends that airports update their master plans at busy airports every 5-7 years. A Master Plan was last completed for LHD in 2006.

#### **How long will it take to complete the Lake Hood Master Plan Update?**

Our plan is to complete the update in about 24 months, between Fall 2014 and Fall 2016.

#### **Will the public have input on the Master Plan Update?**

Absolutely. Public input on this update is very important to the Airport, and will be accepted throughout the duration of the Master Plan Update. Public input is of most value when submitted early, particularly during the investigations and solutions phases of the project, as described in the Public Involvement Plan. To view the Public Involvement Plan, as well as a tentative schedule of meetings and public involvement events, please visit the project website at [www.lhdmasterplan.com](http://www.lhdmasterplan.com). The project will provide plenty of opportunity for public comment, and will host several public meetings to encourage public input. Most public involvement activities will be conducted outside of the busy summer season. Although the Airport is responsible for all development decisions, the influence of public input will be documented where possible.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### **How can I provide my input on the Master Plan Update?**

The Airport encourages anyone interested to participate in the Master Plan Update by providing written comments and attending public events. Beginning in October 2014 and continuing through May 2016, opportunities will include an online survey, open houses, Advisory Committee Meetings, , Great Alaska Aviation Gathering, stakeholder meetings, and e-newsletter and website updates. Visit [www.lhdmasterplan.com](http://www.lhdmasterplan.com) to join the email distribution list and to view the Public Involvement Plan, which describes the public process for the Master Plan Update.

### **Can I participate in the project without having to attend public meetings?**

Certainly. The airport is committed to seeking input from a broad spectrum of stakeholders and will provide many opportunities for comments and feedback. PowerPoint presentations at public open houses will be posted to the project website (along with meeting materials) after each meeting. Formal comments can be submitted at any time to the project team via email, phone, verbally during the Q&A portion of a public meeting, or in writing. Formal public comments and project team responses will be recorded in a comment database and posted to the project website periodically.

### **What is the Master Plan (MP) Advisory Committee?**

The MP Advisory Committee has been formed to advise the project team at key stages in the project. This committee is made up of aviation interests, community council members, and other stakeholder representatives. Committee members were nominated by stakeholder groups or were individuals who previously expressed interest in LHD issues. Most aviation members are pilots or leaseholders who use LHD. The Committee represents diverse interests, but has been limited to less than 20 people to facilitate a working dialogue. The public is welcome to observe Advisory Committee meetings. The Advisory Committee meeting dates are listed on the Lake Hood Master Plan Update website at [www.lhdmasterplan.com](http://www.lhdmasterplan.com).

### **How can I find out about upcoming meetings?**

The airport maintains a tentative meeting schedule at [www.lhdmasterplan.com](http://www.lhdmasterplan.com). Prior to each public meeting, including the Advisory Committee meetings, notices will be sent out via the project email distribution list, through the State of Alaska Online Public Notice system, as well as through DOT&PF's GovDelivery. To sign up for GovDelivery notifications, go to [www.dot.alaska.gov/inform](http://www.dot.alaska.gov/inform).



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### I've heard about other airport studies. What else is going on?

Several other airport-related studies have recently been completed. Website addresses for those projects are listed below (and are posted on the "Links" page of the project website).

- **Ted Stevens Anchorage International Airport Master Plan Update:** [www.ancmasterplan.com](http://www.ancmasterplan.com)  
*A comprehensive study that will help the Ted Stevens Anchorage International Airport make informed decisions about infrastructure investments and be prepared to meet future demand for landings and take offs, passengers, cargo, and general aviation. Completed: December, 2014*
- **Alaska International Airport System (AIAS) Planning Study:** [www.aias.alaska.gov](http://www.aias.alaska.gov)  
*AIAS is a system plan that developed a coordinated vision for development at Ted Stevens Anchorage and Fairbanks International Airports. Completed Fall 2013.*
- **Part 150 Noise Compatibility Study:** [www.anc150study.com](http://www.anc150study.com)  
*A noise study, following FAA standards, to forecast future noise levels and identify ways to reduce the noise impact to people. Anticipated completion: Spring 2016*

### What are you doing about managing airport noise?

The Airport recently completed a Federal Aviation Regulation (FAR) Part 150 Noise Compatibility Study. A Part 150 Study is a voluntary noise exposure and land use compatibility study. According to the project website at [www.anc150study.com](http://www.anc150study.com), "The overall purpose of a Part 150 Study is to reduce the number of people affected by significant aircraft noise levels within acceptable economic, environmental, and legal parameters." The study recommended noise mitigation measures and land use measures to reduce noise impacts. Some of those measures are specific to Lake Hood.

### What alternatives are being considered in the Master Plan Update?

The initial stages of the project consisted of evaluating and documenting existing conditions and issues and determining forecasts of future aviation activity and airport facility needs. In mid-2015, the planning team started developing alternatives to meet those needs. As alternatives are developed, they will be shared through public meetings, Advisory Committee meetings, briefings to stakeholder groups, drafts placed on the website, and through email alerts. The evaluation of alternatives began in mid-2015. All steps will be completed with input from users and stakeholders. A recommended alternative will be proposed in late winter 2016.



## LAKE HOOD SEAPLANE BASE MASTER PLAN UPDATE

### **How long is the floatplane slip wait list? Are more slips needed?**

As of January 2016, there were 267 people on the floatplane slip waitlist. The master plan will evaluate the need for more slips and how to address that need. To learn more about the floatplane slip wait list, call the Lake Hood Manager's office at 266-2410.

### **Why can't I bike/walk all of the way around the lake?**

You can. Lake Hood Seaplane Base values being a place that the community can enjoy. While the Airport's primary purpose is to provide a safe place for aircraft to takeoff, land, and park, a pedestrian route is available around the entire lake to ensure the safety of both aircraft and pedestrians (map available at [www.dot.alaska.gov/anc/business/generalAviation/images/Pedestrian-map.JPG](http://www.dot.alaska.gov/anc/business/generalAviation/images/Pedestrian-map.JPG)). The pedestrian route is intended to safely separate pedestrians from aircraft operating areas such as the runway, the taxiways, and aircraft parking ramps. Several areas are used by both aircraft and pedestrians. Pedestrians need to be vigilant and aware of their surroundings, and always yield to aircraft. We ask that everyone respect safety precautions and continue to enjoy Lake Hood in a safe and prudent way.

### **Are LHD and ANC the same thing? Why isn't LHD separate from ANC?**

Lake Hood Seaplane Base is a physically separate aviation facility, with its own aviation code identifiers (LHD/PALH). Lake Hood Seaplane Base is managed, owned and operated as a fully integrated part of Ted Stevens Anchorage International Airport. It is part of the Alaska International Airport System, within the State of Alaska Department of Transportation and Public Facilities, and as such benefits from being part of a world class airport system.

## **APPENDIX E**

### **Solid Waste Plan**

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## **Review of the Solid Waste Recycling at Lake Hood Airport**

Lake Hood Airport (LHD) is owned and managed by the Alaska Department of Transportation and Public Facilities as part of Ted Stevens Anchorage International Airport (ANC). While ANC has a solid waste recycling program, it is limited by feasibility to centralized areas such as the North and South ANC terminals, and a few centralized hangars. The Airport provides trash and recycling dumpsters, and a cardboard compactor in the central ANC areas, and pickup services for those trash and recycling dumpsters. The airport contracts with various companies for the recycling services to pick up cardboard and paper, aluminum cans, batteries and electronics, printer toner and ink cartridges, used oil and antifreeze, building materials, and scrap metal from ANC terminal areas and some other centralized airport building. However, those facilities and services are only for use by ANC tenants located in the North and South terminals and the few centralized airport-owned buildings, and are paid for as part of the terminal area rent.

LHD accommodates mostly General Aviation activity, which is spread out around the facility, and has no central terminal or gathering place. A few air taxis, aviation support businesses, and other organizations are also located at LHD. However, those entities have separate buildings, and again, no central gathering place. Consequently, any recycling in the LHD area, as well as in other non-centralized areas of ANC, is the responsibility of the airport tenants.

LHD, as part of ANC, operates under the State of Alaska, Department of Transportation and Public Facilities (DOT&PF). Current DOT&PF policy regarding airport waste management practices provides that all State employees and tenants who handle, store, and dispose of waste at an airport under its management must do so in a manner that does not result in any adverse impacts to the environment. Alaska Administrative Code 17 AAC 42.020 states "{A} person may not place, spill, or dump garbage, trash, sewage, refuse or other wasteful material on an airport except in a waste receptacle the Airport manager has approved for the purpose or in a waste receptacle designed and provided for the purpose by the lessee, permit holder, or concessionaire on its premises."

Tenants at LHD are obligated to deal with solid waste according to State policy and law. As the programs offered at central ANC areas are not feasible at LHD, those airport tenants are responsible for their own recycling. There are many opportunities to access recycling services in the Anchorage area.

### **Central Transfer Station Recycling Area**

- Location: Entrance for cars and pickups is located between Old Seward Hwy and Juneau Street on E. 54th Avenue (4.5 miles from LHD). Phone: 907-748-7400.
- Hours: During regular operating hours; Monday - Saturday 8:00am - 5pm. Closed on Sunday.
- Accepts: Aluminum cans, steel cans, mixed paper, corrugated cardboard, newspaper, #1 PET plastic bottles, #2 HDPE plastic jugs, glass bottles and jars, and used oil. Accepts commercial recycling only.

## Anchorage Recycling Center (also known as West Rock Recycling and Scrap Metal)

- Location: 6161 Rosewood Street, Anchorage (5.5 miles from LHD). Phone: 907-562-2267.
- Hours: 24 hours a day, 7 days a week; regular weekday business hours for redemption of aluminum cans.
- Accepts: Aluminum cans, steel cans, mixed paper, corrugated cardboard, newspaper, #1 PET plastic bottles, #2 HDPE plastic jugs, plastic bags and film, glass bottles and jars. Will purchase some scrap metals.

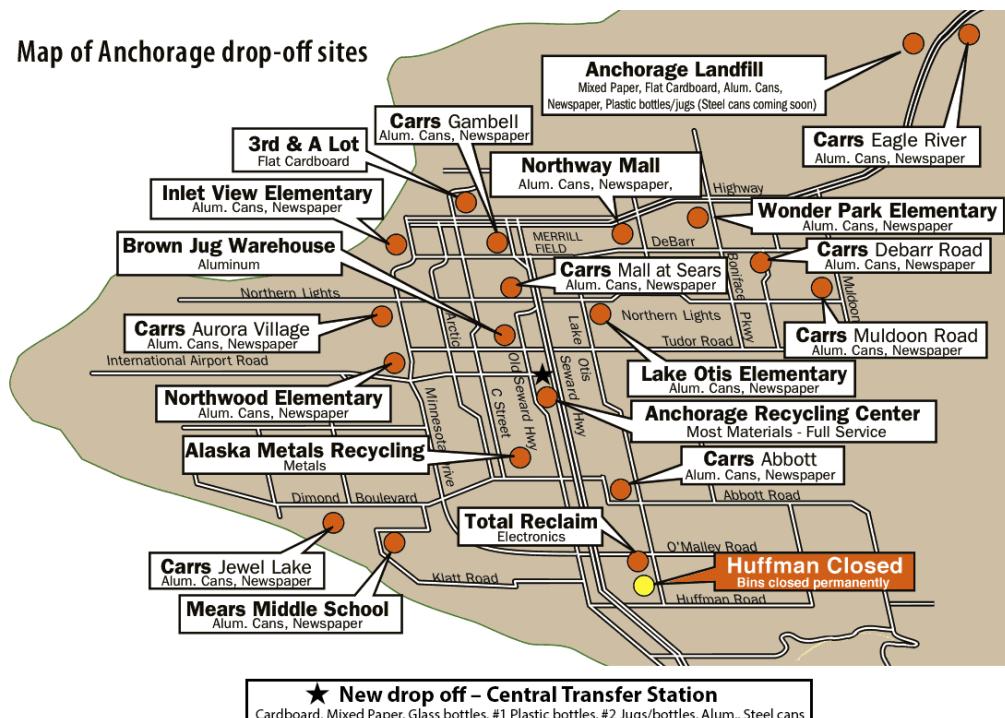
## Anchorage Regional Landfill Recycling Area

- Location: Hiland Road, Eagle River (20.7 miles from LHD). Phone: 90-373-6262.
- Hours: During regular landfill hours; Mon.-Fri. 7:30am - 5pm, Sat. 8am - 5pm. Sun closed.
- Accepts: Aluminum cans, steel cans, mixed paper, corrugated cardboard, newspaper, #1 PET plastic bottles, #2 HDPE plastic jugs, glass bottles and jars.

## Alaska Recycling Center

- Location: 311 North Sitka Street (7.5 miles from LHD). Phone: 907-748-7675.
- Hours: Mon.-Fri. 8:00am to 5:00pm.
- Accepts: Metal and batteries.

The following map was developed by the Alaskans for Litter Prevention and Recycling (ALPAR), and shows additional drop-off locations for recyclables in the Anchorage area.



The Municipality of Anchorage is evaluating the need to establish additional community recycling centers, potentially on the east side of Anchorage and Girdwood.

The ANC airfield maintenance and security services located on ANC property also serve LHD, and airfield maintenance personnel perform routine inspections of Lake Hood. If toxic spills are detected, booms are available for containment. They will pick up trash on the LHD grounds if they see it, and they also retrieve floating debris from the Lake. Weeds growing in Lake Hood are routinely cut by ANC airfield maintenance, and dumped in an empty area on ANC property, where they are allowed to deteriorate naturally. In addition, there are three trash bins located along the public walking trails at LHD which are provided by and their contents disposed of by ANC management.

LHD tenants were interviewed in late 2014 in conjunction with an LHD Airport Master Plan Update. The following comments and concerns regarding solid waste recycling at LHD were received in that process:

- Interview of an aviation-related organization: They recycle when they have a large quantity of waste paper. They take it over to the recycle center themselves. The airport used to recycle waste oil, but the pilots misused the system, so the airport stopped. ANC and LHD airport management is hesitant to attempt this program again.
- Interview of an air taxi operator: They have a dumpster for waste, but they do not recycle. They get rid of waste oil whenever and however they can. They take it over to the nearby transfer station, but it is not an ideal solution.
- Interview of an aircraft vendor - sales and service: They do not currently recycle, but would if it were more convenient - especially cardboard and, aluminum. They have a used oil collection tank, and have it hauled off.
- Interview of an aircraft vendor - sales and service: They recycle aluminum. They bought a used oil-burning heater in 2014, and other tenants bring in their waste oil for them to burn<sup>1</sup>.
- Interview with an air taxi operator: They recycle paper, plastic and cans, and bring it to the recycling center on Dowling Road. Some lodges they serve have them fly their recycling back to Anchorage. They have a big hanger and five mechanics so do a lot of engine work. They take their used oil to their shop in Talkeetna to burn.
- Interview of a government agency providing service to government aircraft: They recycle batteries, plastic, paper, cans, and used oil. They give the waste oil to those who burn it for heat. In this person's opinion, it would help businesses at LHD if ANC extended their recycling collection activities to all facilities and tenants at LHD.

Interviews with ANC environmental personnel and LHD management indicate that the previous waste oil collection program that was discontinued is not likely to start again due to past abuse by users.

Following are suggestions for improvements in solid waste disposal at LHD:

---

<sup>1</sup> According to 18 AAC 50.326(g)(8), waste oil burners producing less than 300,000 Btu's per hour (enough to heat about 10,000 square feet) do not require an air quality permit. Those producing higher Btu's must obtain a major stationary source permit from the Alaska Department of Environmental Conservation's Air Quality section.

- Include LHD in the current and developing recycling guidelines and plans that are incorporated into the ANC Environmental Management System when feasible.
- Provide LHD tenants with information about recycling options and locations near the airport.

## **APPENDIX F**

### **Airport Layout Plan**

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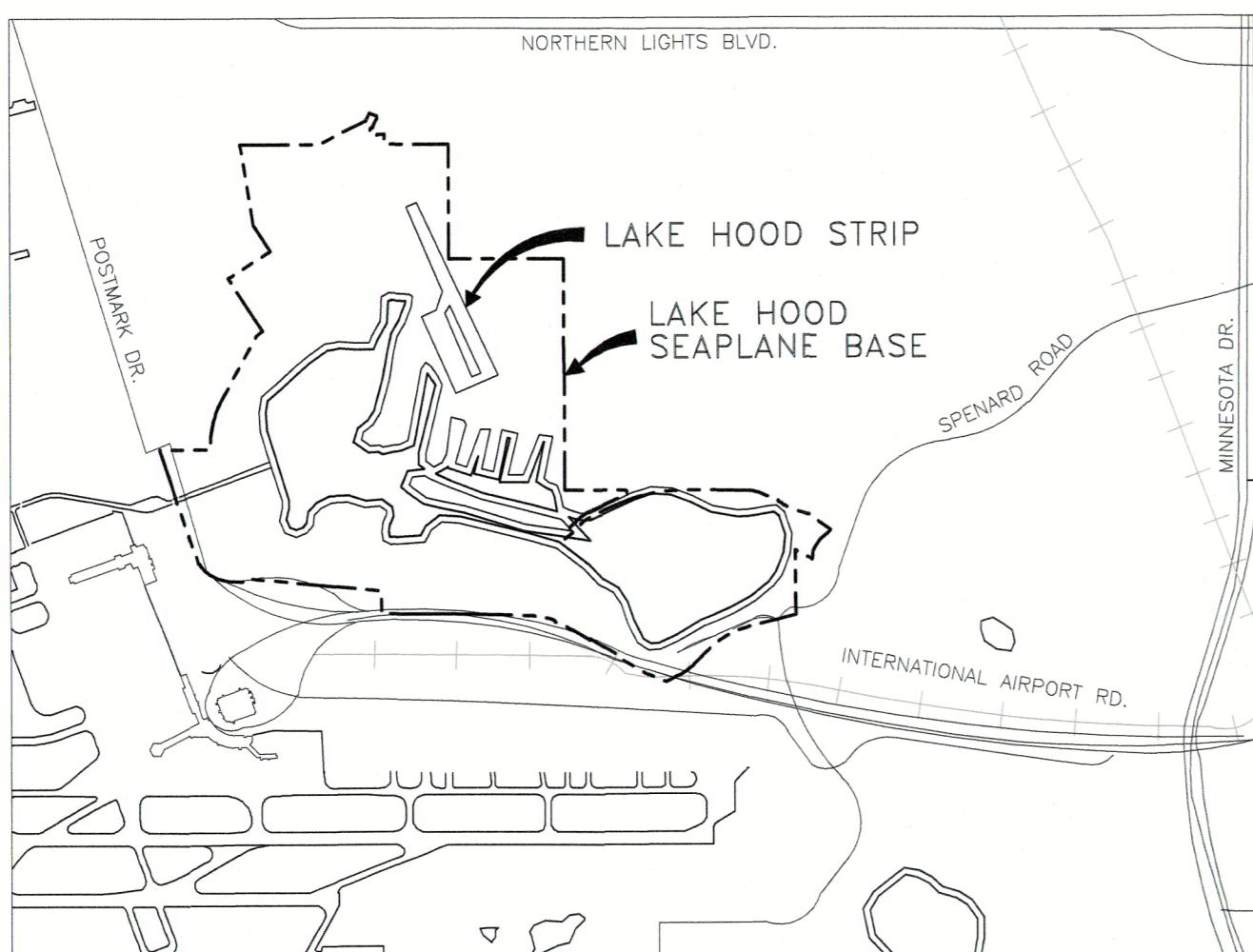
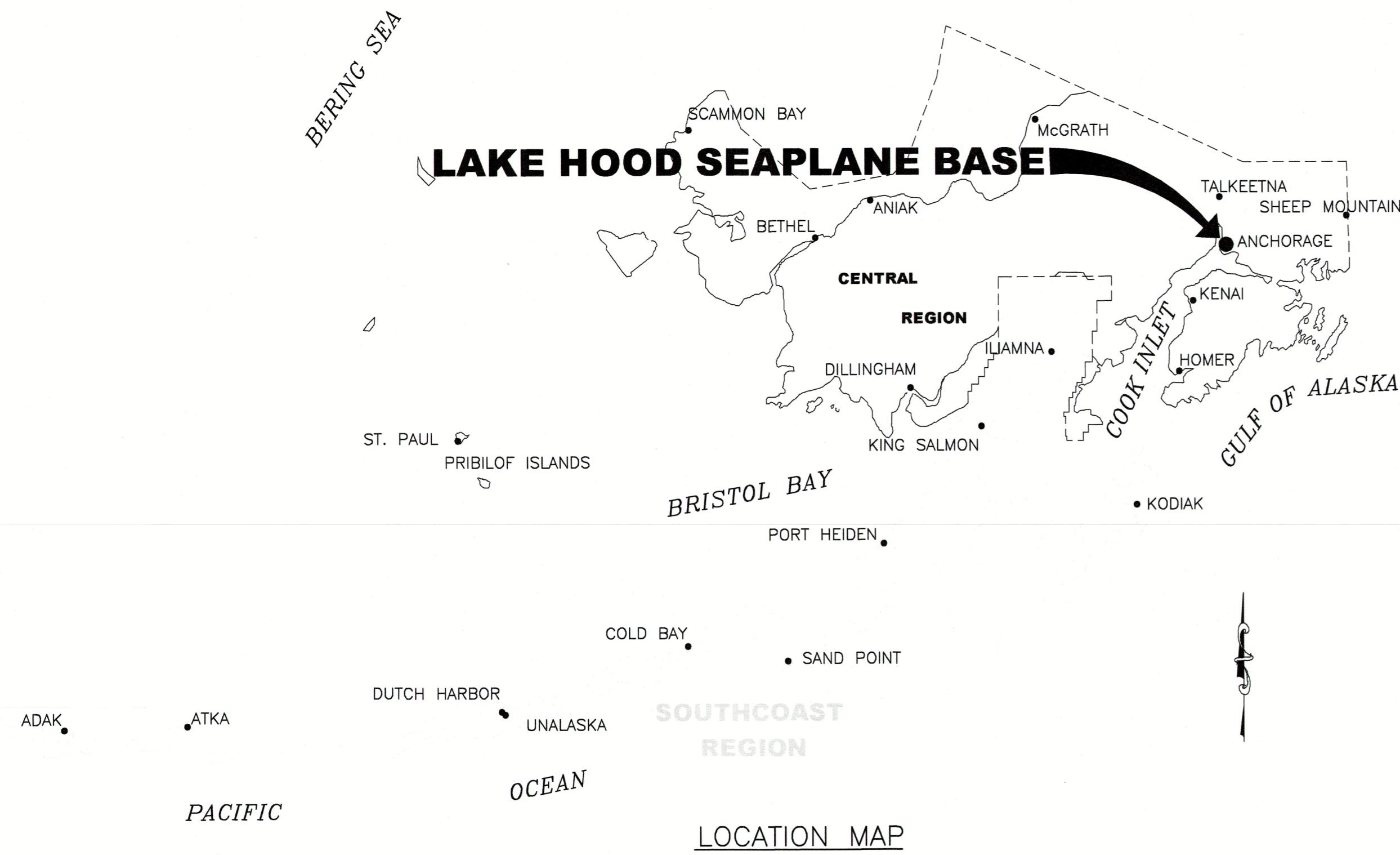
## DRAWING INDEX

SHT#	TITLE
1	TITLE SHEET
2	AIRPORT DATA SHEET - RUNWAYS
3	AIRPORT DATA SHEET - WINDROSE
4	AIRPORT DATA SHEET - TAXIWAYS
5	AIRPORT LAYOUT PLAN - EXISTING
6	AIRPORT LAYOUT PLAN - EXISTING RUNWAY 14-32
7	AIRPORT LAYOUT PLAN - ULTIMATE
8	AIRPORT LAYOUT PLAN - ULTIMATE RUNWAY 14-32
9	AIRPORT AIRSPACE DRAWING
10	AIRPORT AIRSPACE PROFILES
11	INNER PORTION OF THE APPROACH SURFACE RUNWAY 14-32
12	INNER PORTION OF THE APPROACH SURFACE RUNWAY 14-32
13	INNER PORTION OF THE APPROACH SURFACE WATERLANE E-W
14	INNER PORTION OF THE APPROACH SURFACE WATERLANE E-W
15	INNER PORTION OF THE APPROACH SURFACE WATERLANE N-S
16	INNER PORTION OF THE APPROACH SURFACE WATERLANE NW-SE
17	FACILITIES AREA DRAWING
18	LAND USE PLAN
19	AIRPORT PROPERTY PLAN

# LAKE HOOD SEAPLANE BASE (LHD) AIRPORT LAYOUT PLAN ANCHORAGE, ALASKA

Designed By: C. STATTEN

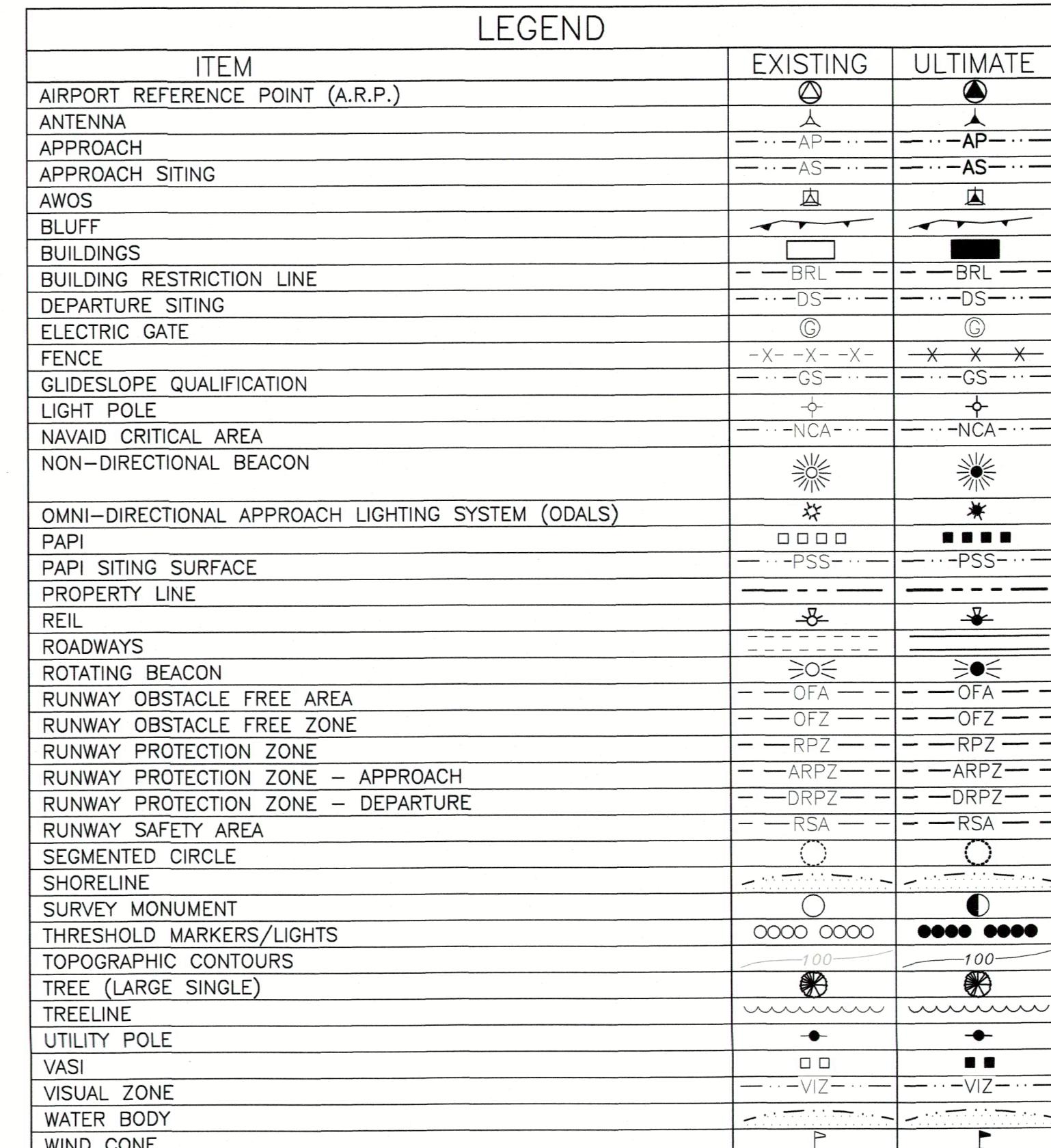
Drawn By: C. KARTEZENKOVA



T 13 N, R 4 W, SECTIONS 27, 28, 34, & 35  
SEWARD MERIDIAN  
U.S.G.S. ANCHORAGE (A-8) & TYONEK (A-1), ALASKA

1 SM .5 SM 0 1 SM 2 SM

WAC DEC = 1714E 2015



## NOTES:

1. ALL LATITUDE/LONGITUDE COORDINATES ARE NAD83.
2. ALL ELEVATIONS ARE NAVD88 GEOD 12A.
3. ALL DIMENSIONS ARE IN FEET.
4. MAPPING AND OBSTRUCTIONS ELEVATIONS ARE BASED ON THE 2016 AERONAUTICAL SURVEY PERFORMED BY DOWL.

SPONSOR APPROVAL:	DATE: 07-05-17
<i>John Johansen, PE, AAE</i>	
JOHN JOHANSEN, PE, AAE	DIR. ENG, ENV. & PLANNING
PREPARED BY:	DATE: 7-11-2017
<i>Brian Hanson, PE</i>	
BRIAN HANSON, PE	
DOWL ENGINEERS	
FAA APPROVAL LETTER DATED 7-11-17 FAA AIRSPACE REVIEW NUMBER: 2017-AAL-115-NRA	
DATE: 7-11-17	
FAA, AIRPORTS DIVISION ALASKAN REGION, AAL 602	

BY DATE REVISION

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
CENTRAL REGION

LAKE HOOD SEAPLANE BASE  
ANCHORAGE, ALASKA  
AIRPORT LAYOUT PLAN  
TITLE SHEET  
DATE: 6/30/2017  
SHEET: 1 OF 19

AIRPORT DATA TABLE		
ITEM	EXISTING	ULTIMATE
ICAO IDENTIFIER	LHD	LHD
NATIONAL AIRPORT IDENTIFIER	PLHD	PLHD
FAA SITE NUMBER	50037,*C	50037,*C
AIRPORT ELEVATION NAVD88	79.3'	79.3'
AIRPORT REFERENCE CODE	A-I	A-I
MEAN MAX. TEMPERATURE, HOTTEST MONTH	69.4°F, JULY	69.4°F, JULY
MAGNETIC DECLINATION, YEAR, RATE OF CHANGE	17.2°E, 2015, 0.20'W	17.2°E, 2015, 0.20'W
DESIGN GROUP OR AIRCRAFT IF OVER 60,000LBS	-	-
AIRPORT AND TERMINAL NAVIGATION AIDS	NONE	NONE
NPIAS SERVICE LEVEL	COMMERCIAL SERVICE-PRIMARY	COMMERCIAL SERVICE-PRIMARY
STATE EQUIVALENT SERVICE ROLE	LOCAL NPIAS HIGH ACTIVITY	LOCAL NPIAS HIGH ACTIVITY
CRITICAL DESIGN AIRCRAFT	DHC-2 DEHAVILLAND BEAVER	DHC-2 DEHAVILLAND BEAVER

Designed By: C. SLATEN  
Drawn By: M. KARTEZHNIKOVA  
Checked By:

GEOGRAPHIC COORDINATES		
ITEM	EXISTING	ULTIMATE
ARP		
LATITUDE	N61°10'53.9"	N61°10'53.9"
LONGITUDE	W149°57'59.4"	W149°57'59.4"
ELEVATION	79.3'	79.3'
THRESHOLD RW 14		
LATITUDE	N61°11'21.58"	N61°11'21.58"
LONGITUDE	W149°58'05.48"	W149°58'05.48"
STATION	STA 147+00.00	STA 147+00.00
ELEVATION	74.6'	74.6'
THRESHOLD RW 32		
LATITUDE	N61°11'02.22"	N61°11'02.22"
LONGITUDE	W149°57'45.34"	W149°57'45.34"
STATION	STA 169+00.15	STA 169+00.15
ELEVATION	79.3'	79.3'
BEGIN WATERLANE N		
LATITUDE	N61°11'03.25"	
LONGITUDE	W149°58'14.48"	
STATION	STA 600+00.00	
ELEVATION	76.0'	
BEGIN WATERLANE S		
LATITUDE	N61°10'45.69"	
LONGITUDE	W149°58'29.56"	
STATION	STA 619+30.48	
ELEVATION	76.0'	
BEGIN WATERLANE E		
LATITUDE	N61°10'39.57"	
LONGITUDE	W149°57'00.91"	
STATION	STA 395+00.00	
ELEVATION	76.0'	
BEGIN WATERLANE W		
LATITUDE	N61°10'50.58"	
LONGITUDE	W149°58'30.66"	
STATION	STA 440+40.52	
ELEVATION	76.0'	
BEGIN WATERLANE NW		
LATITUDE	N61°10'58.27"	
LONGITUDE	W149°58'27.89	
STATION	STA 813+69.46	
ELEVATION	76.0'	
BEGIN WATERLANE SE		
LATITUDE	N61°10'48.02"	
LONGITUDE	W149°58'09.74"	
STATION	STA 800+00.00	
ELEVATION	76.0'	

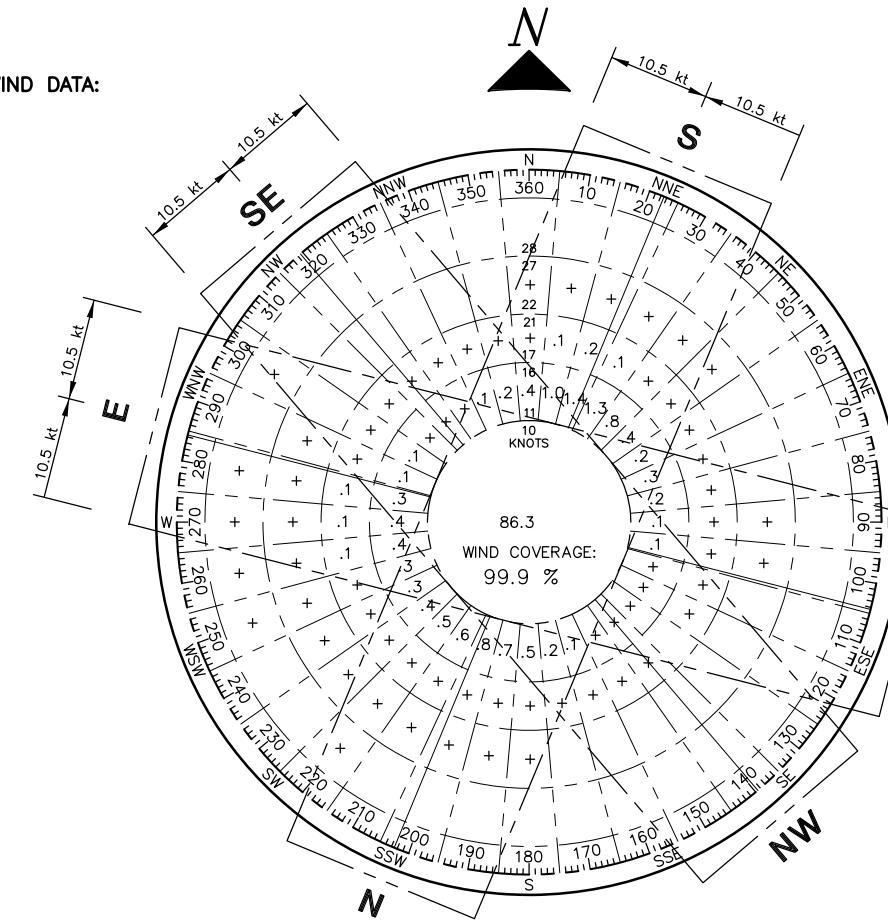
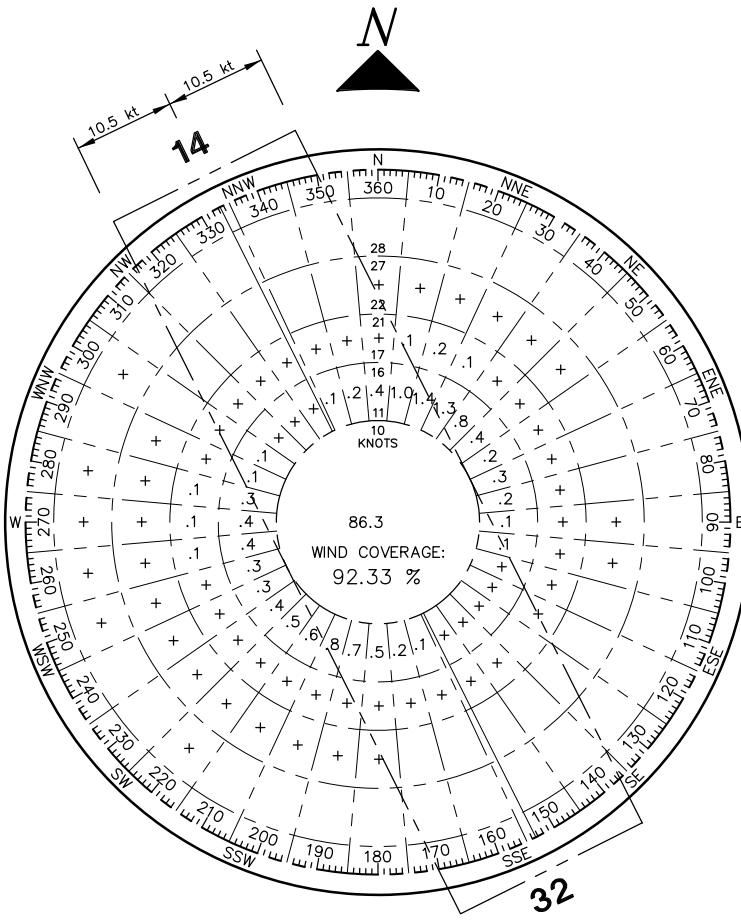
RUNWAY / DATA TABLE RUNWAY 14/32		
ITEM	EXISTING	ULTIMATE
RUNWAY TYPE (UTILITY OR OTHER THAN UTILITY)	UTILITY	UTILITY
FAR PART 77 APPROACH CATEGORY (V, NPI, P)	V / V	V / V
FAR PART 77 APPROACH SURFACES SLOPE	20:1 / 20:1	20:1 / 20:1
FAR PART 77 VISIBILITY MINIMUM (V, NPA, APV, PA)	>1 SM / >1 SM	>1 SM / >1 SM
RUNWAY SURFACE	GRAVEL	GRAVEL
AIRPLANE GEAR CONFIG/PAVE STRENGTH x1000lbs	N/A	N/A
PAVEMENT STRENGTH BY PCN	N/A	N/A
SURFACE TREATMENT	N/A	N/A
RUNWAY DESIGN CODE	A/I/VIS	A/I/VIS
APPROACH RUNWAY REFERENCE CODE (APRC)	B/(S)/VIS	B/(S)/VIS
DEPARTURE RUNWAY REFERENCE CODE (DPRC)	B/(S)	B/(S)
DESIGN GROUP OR AIRCRAFT IF > 60,000 lbs	-	-
MEAN GEODETIC BEARING	N26°38'24.1"W	N26°38'24.1"W
MAXIMUM ELEVATION NAVD88	79.3'	79.3'
EFFECTIVE GRADE	0.21%	0.21%
MAXIMUM GRADE	0.21%	0.21%
TOUCHDOWN ZONE ELEVATION NAVD88	79.3'	79.3'
RUNWAY DIMENSIONS	2200 x 75	2200 x 75
RUNWAY SAFETY AREA (RSA)	2680 x 120	2680 x 120
RUNWAY PROTECTION ZONE (RPZ) APPROACH RW14	250 x 1000 x 450	250 x 1000 x 450
	RW32	RW32
RUNWAY PROTECTION ZONE (RPZ) DEPARTURE RW14	250 x 1000 x 450	250 x 1000 x 450
	RW32	RW32
RUNWAY OBJECT FREE AREA (OFA)	2680 x 250	2680 x 250
RUNWAY OBSTACLE FREE ZONE (OFZ)	2600 x 250	2600 x 250
PRECISION OBSTACLE FREE ZONE (POFZ)	N/A / N/A	N/A / N/A
RUNWAY LIGHTING	MIRL	MIRL
RUNWAY MARKING TYPE	NONE	NONE
RUNWAY NAVIGATIONAL AIDS	NONE	NONE
AERONAUTICAL SURVEY TYPE REQUIRED	NON-VERTICALLY GUIDED	NON-VERTICALLY GUIDED
THRESHOLD SITING SURFACE	20:1 / 20:1	20:1 / 20:1
DEPARTURE SURFACE	N/A	N/A

RUNWAY / DATA TABLE WATERLANE N-S		
ITEM	EXISTING	ULTIMATE
RUNWAY TYPE (UTILITY OR OTHER THAN UTILITY)	UTILITY	UTILITY
FAR PART 77 APPROACH CATEGORY (V, NPI, P)	V / V	V / V
FAR PART 77 APPROACH SURFACES SLOPE	20:1 / 20:1	20:1 / 20:1
FAR PART 77 VISIBILITY MINIMUM (V, NPA, APV, PA)	>1 SM / >1 SM	>1 SM / >1 SM
RUNWAY SURFACE	WATER	WATER
AIRPLANE GEAR CONFIG/PAVE STRENGTH x1000lbs	N/A	N/A
PAVEMENT STRENGTH BY PCN	N/A	N/A
SURFACE TREATMENT	N/A	N/A
RUNWAY DESIGN CODE	N/A	N/A
APPROACH RUNWAY REFERENCE CODE (APRC)	N/A	N/A
DEPARTURE RUNWAY REFERENCE CODE (DPRC)	N/A	N/A
DESIGN GROUP OR AIRCRAFT IF > 60,000 lbs	-	-
MEAN GEODETIC BEARING	S22°32'25.3"N	S22°32'25.3"N
MAXIMUM ELEVATION NAVD88	76.0'	76.0'
EFFECTIVE GRADE	0%	0%
MAXIMUM GRADE	0%	0%
TOUCHDOWN ZONE ELEVATION NAVD88	76.0'	76.0'
RUNWAY DIMENSIONS	1930 x 200	1930 x 200
RUNWAY SAFETY AREA (RSA)	N/A	N/A
RUNWAY PROTECTION ZONE (RPZ) APPROACH N	250 x 1000 x 450	250 x 1000 x 450
	S	S
RUNWAY PROTECTION ZONE (RPZ) DEPARTURE N	250 x 1000 x 450	250 x 1000 x 450
	S	S
RUNWAY OBJECT FREE AREA (OFA)	N/A	N/A
RUNWAY OBSTACLE FREE ZONE (OFZ)	N/A	N/A
PRECISION OBSTACLE FREE ZONE (POFZ)	N/A / N/A	N/A / N/A
RUNWAY LIGHTING	PARTIAL	PARTIAL
RUNWAY MARKING TYPE	NONE	THRESHOLD
RUNWAY NAVIGATIONAL AIDS	NONE	NONE
AERONAUTICAL SURVEY TYPE REQUIRED	NON-VERTICALLY GUIDED	NON-VERTICALLY GUIDED
THRESHOLD SITING SURFACE	20:1 / 20:1	20:1 / 20:1
DEPARTURE SURFACE	N/A	N/A

RUNWAY / DATA TABLE WATERLANE E-W		
ITEM	EXISTING	ULTIMATE
RUNWAY TYPE (UTILITY OR OTHER THAN UTILITY)	UTILITY	UTILITY
FAR PART 77 APPROACH CATEGORY (V, NPI, P)	V / V	V / V
FAR PART 77 APPROACH SURFACES SLOPE	20:1 / 20:1	20:1 / 20:1
FAR PART 77 VISIBILITY MINIMUM (V, NPA, APV, PA)	>1 SM / >1 SM	>1 SM / >1 SM
RUNWAY SURFACE	WATER	WATER
AIRPLANE GEAR CONFIG/PAVE STRENGTH x1000lbs	N/A	N/A
PAVEMENT STRENGTH BY PCN	N/A	N/A
SURFACE TREATMENT	N/A	N/A
RUNWAY DESIGN CODE	N/A	N/A
APPROACH RUNWAY REFERENCE CODE (APRC)	N/A	N/A
DEPARTURE RUNWAY REFERENCE CODE (DPRC)	N/A	N/A
DESIGN GROUP OR AIRCRAFT IF > 60,000 lbs	N/A	N/A
MEAN GEODETIC BEARING	S75°41'32.7"E	S75°41'32.7"E
MAXIMUM ELEVATION NAVD88	76.0'	76.0'
EFFECTIVE GRADE	0%	0%
MAXIMUM GRADE	0%	0%
TOUCHDOWN ZONE ELEVATION NAVD88	76.0'	76.0'
RUNWAY DIMENSIONS	4541 x 188	4541 x 188
RUNWAY SAFETY AREA (RSA)	N/A	N/A
RUNWAY PROTECTION ZONE (RPZ) APPROACH E	250 x 1000 x 450	250 x 1000 x 450
	W	W
RUNWAY PROTECTION ZONE (RPZ) DEPARTURE E	250 x 1000 x 450	250 x 1000 x 450
	W	W
RUNWAY OBJECT FREE AREA (OFA)	N/A	N/A
RUNWAY OBSTACLE FREE ZONE (OFZ)	N/A / N/A	N/A / N/A
RUNWAY LIGHTING	PARTIAL	PARTIAL
RUNWAY MARKING TYPE	NONE	THRESHOLD
RUNWAY NAVIGATIONAL AIDS	NONE	NONE
AERONAUTICAL SURVEY TYPE REQUIRED	NON-VERTICALLY GUIDED	NON-VERTICALLY GUIDED
THRESHOLD SITING SURFACE	20:1 / 20:1	20:1 / 20:1
DEPARTURE SURFACE	N/A	N/A

RUNWAY / DATA TABLE WATERLANE NW-SE		
ITEM	EXISTING	ULTIMATE
RUNWAY TYPE (UTILITY OR OTHER THAN UTILITY)	UTILITY	UTILITY
FAR PART 77 APPROACH CATEGORY (V, NPI, P)	V / V	V / V
FAR PART 77 APPROACH SURFACES SLOPE	20:1 / 20:1	20:1 / 20:1
FAR PART 77 VISIBILITY MINIMUM (V, NPA, APV, PA)	>1 SM / >1 SM	>1 SM / >1 SM
RUNWAY SURFACE	WATER	WATER
AIRPLANE GEAR CONFIG/PAVE STRENGTH x1000lbs	N/A	N/A
PAVEMENT STRENGTH BY PCN	N/A	N/A
SURFACE TREATMENT	N/A	N/A
RUNWAY DESIGN CODE	N/A	N/A
APPROACH RUNWAY REFERENCE CODE (APRC)	N/A	N/A
DEPARTURE RUNWAY REFERENCE CODE (DPRC)	N/A	N/A
DESIGN GROUP OR AIRCRAFT IF &		

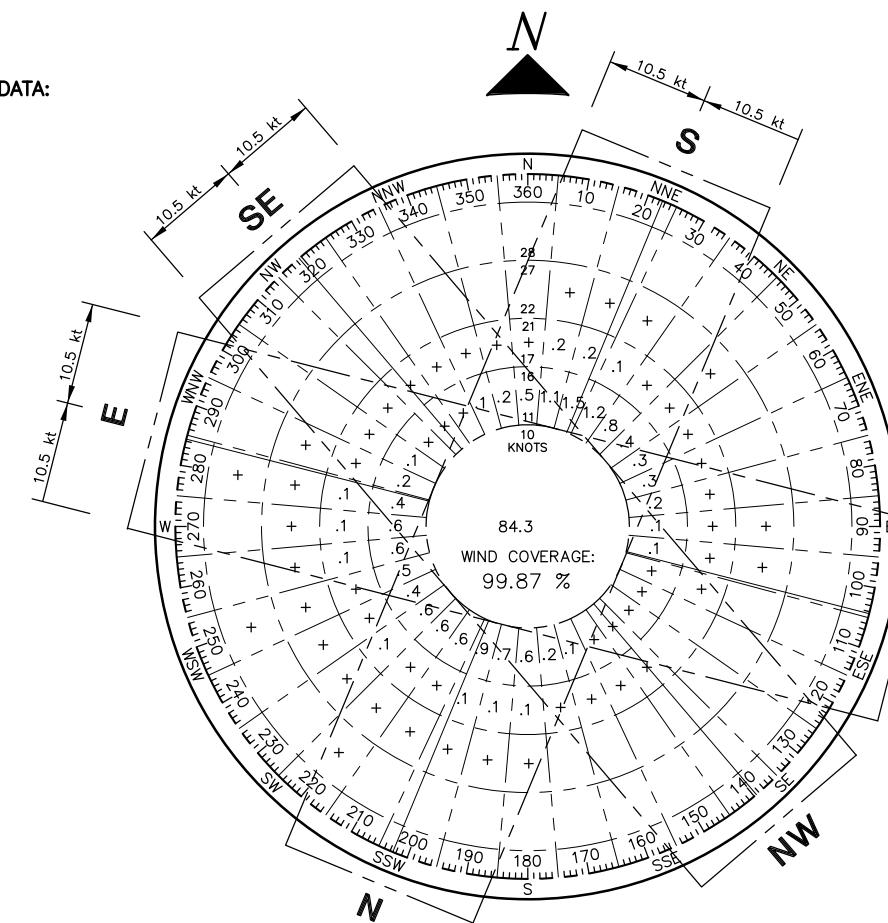
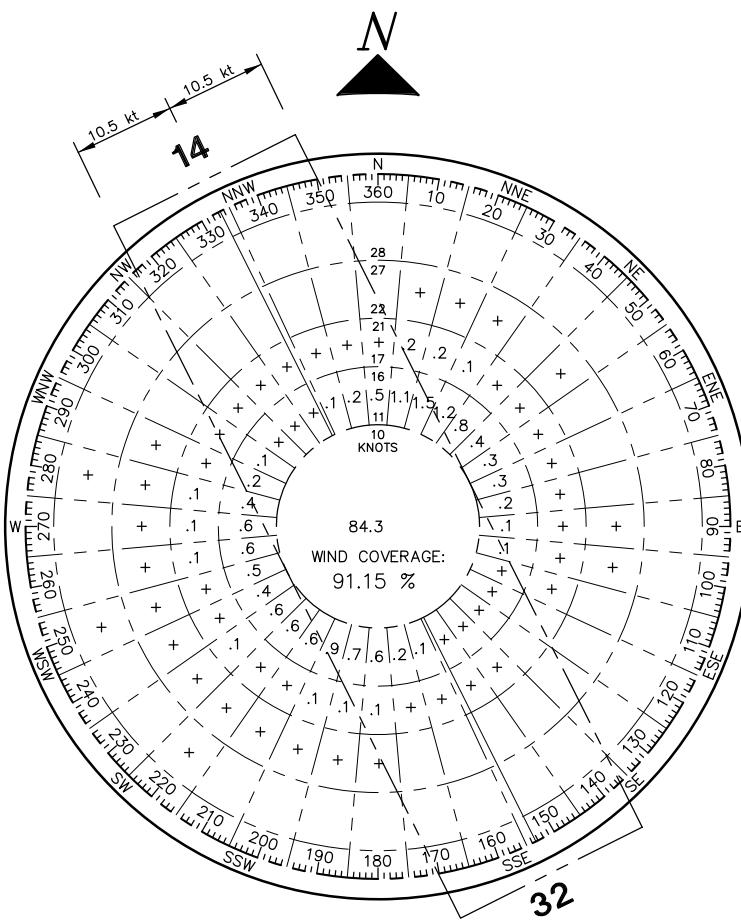
Designed By: C SLATEN  
Drawn By: C SLATEN  
Checked By: M KARTEZHNIKOVA



ALL WEATHER WIND DATA	
RUNWAY	10.5 kt
RW 14/32	92.33%
N-S	97.66%
E-W	90.27%
NW-SE	90.35%
COMBINED WATERLANES	99.90%

SOURCE: U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL CLIMATIC DATA CENTER FEBRUARY 5, 2016

PERIOD: 2006 – 2015



VFR WIND DATA	
RUNWAY	10.5 kt
RW 14/32	91.15%
N-S	96.91%
E-W	89.37%
NW-SE	89.16%
COMBINED WATERLANES	99.87%

SOURCE: U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL CLIMATIC DATA CENTER FEBRUARY 5, 2016

PERIOD: 2006 – 2015

TAXIWAY "H" DATA		
ITEM	EXISTING	ULTIMATE
AIRPLANE DESIGN GROUP	A-I	A-I
TAXIWAY DESIGN GROUP	TDG-1	TDG-1
TAXIWAY SURFACE	ASPHALT/GRAVEL	ASPHALT
WIDTH x LENGTH	25 ft x 2535 ft	25 ft x 2600 ft
SHOULDER WIDTH	10 ft	10 ft
SAFETY AREA (TSA) WIDTH	49 ft	49 ft
EDGE SAFETY MARGIN (TESM)	5 ft	5 ft
OBJECT FREE AREA (TOFA) WIDTH	60 ft	89 ft
TAXIWAY LIGHTING	MTL	MTL
TAXIWAY MARKING		

NOTE: TAXIWAY H TO FA IS RESTRICTED TO 60' DUE TO THE AIRCRAFT PARKING AREA ALONG THE GRAVEL PORTION OF THE TAXIWAY

TAXIWAY "H1" DATA		
ITEM	EXISTING	ULTIMATE
AIRPLANE DESIGN GROUP	A-I	A-I
TAXIWAY DESIGN GROUP	TDG-1	TDG-1
TAXIWAY SURFACE	ASPHALT	ASPHALT
WIDTH X LENGTH	25 ft x 170 ft	25 ft x 170 ft
SHOULDER WIDTH	10 ft	10 ft
SAFETY AREA (TSA) WIDTH	49 ft	49 ft
EDGE SAFETY MARGIN (TESM)	5 ft	5 ft
OBJECT FREE AREA (TOFA) WIDTH	89 ft	89 ft
TAXIWAY LIGHTING	MTL	MTL
TAXIWAY MARKING		

TAXIWAY "H2" DATA		
ITEM	EXISTING	ULTIMATE
AIRPLANE DESIGN GROUP	A-I	A-I
TAXIWAY DESIGN GROUP	TDG-1	TDG-1
TAXIWAY SURFACE	ASPHALT	ASPHALT
WIDTH X LENGTH	69 ft x 170 ft	25 ft x 170 ft
SHOULDER WIDTH	10 ft	10 ft
SAFETY AREA (TSA) WIDTH	49 ft	49 ft
EDGE SAFETY MARGIN (TESM)	5 ft	5 ft
OBJECT FREE AREA (TOFA) WIDTH	89 ft	89 ft
TAXIWAY LIGHTING	MITL	MITL
TAXIWAY MARKING		

TAXIWAY "H3" DATA		
ITEM	EXISTING	ULTIMATE
AIRPLANE DESIGN GROUP	A-1	A-1
TAXIWAY DESIGN GROUP	TDG-1	TDG-1
TAXIWAY SURFACE	ASPHALT	ASPHALT
WIDTH X LENGTH	63 ft x 170 ft	25 ft x 165 ft
SHOULDER WIDTH	10 ft	10 ft
SAFETY AREA (TSA) WIDTH	49 ft	49 ft
EDGE SAFETY MARGIN (TESM)	5 ft	5 ft
OBJECT FREE AREA (TOFA) WIDTH	89 ft	89 ft
TAXIWAY LIGHTING	MITL	MITL
TAXIWAY MARKING		

TAXIWAY "H4" DATA		
ITEM	EXISTING	ULTIMATE
AIRPLANE DESIGN GROUP	A-1	A-1
TAXIWAY DESIGN GROUP	TDG-1	TDG-1
TAXIWAY SURFACE	ASPHALT	ASPHALT
WIDTH X LENGTH	70 ft x 150 ft	25 ft x 150 ft
SHOULDER WIDTH	10 ft	10 ft
SAFETY AREA (TSA) WIDTH	49 ft	49 ft
EDGE SAFETY MARGIN (TESM)	5 ft	5 ft
OBJECT FREE AREA (TOFA) WIDTH	89 ft	89 ft
TAXIWAY LIGHTING	MITL	MITL
TAXIWAY MARKING		

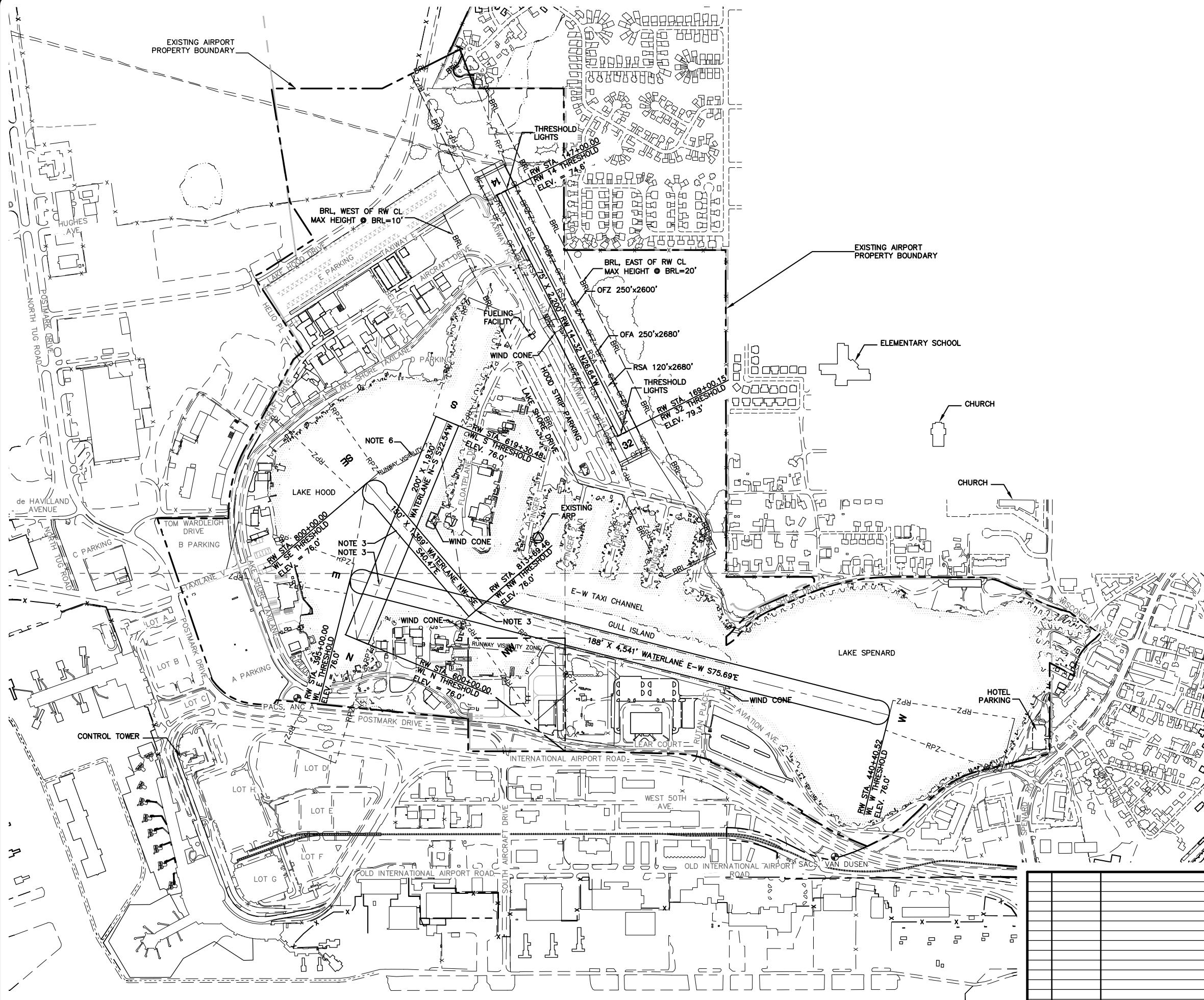
TAXILANE "LAKE SHORE" DATA		
ITEM	EXISTING	ULTIMATE
AIRPLANE DESIGN GROUP	A-1	A-1
TAXIWAY DESIGN GROUP	TDG-1	TDG-1
TAXIWAY SURFACE	ASPHALT	ASPHALT
WIDTH X LENGTH	25 ft x 6315 ft	25 ft x 6315 ft
SHOULDER WIDTH	10 ft	10 ft
SAFETY AREA (TSA) WIDTH	49 ft	49 ft
EDGE SAFETY MARGIN (TESM)	5 ft	5 ft
OBJECT FREE AREA (TOFA) WIDTH	89 ft	79 ft
TAXIWAY LIGHTING	N/A	N/A
TAXIWAY MARKING		

TAXILANE "V" DATA		
ITEM	EXISTING	ULTIMATE
AIRPLANE DESIGN GROUP	A-1	A-1
TAXIWAY DESIGN GROUP	TDG-4	TDG-2
TAXIWAY SURFACE	ASPHALT	ASPHALT
WIDTH X LENGTH	50 ft x 605 ft	35 ft x 605 ft
SHOULDER WIDTH	10 ft	10 ft
SAFETY AREA (TSA) WIDTH	49 ft	49 ft
EDGE SAFETY MARGIN (TESM)	5 ft	5 ft
OBJECT FREE AREA (TOFA) WIDTH	79 ft	79 ft
TAXIWAY LIGHTING	N/A	N/A
TAXIWAY MARKING		

TAXIWAY "E" DATA		
ITEM	EXISTING	ULTIMATE
AIRPLANE DESIGN GROUP	A-I	A-I
TAXIWAY DESIGN GROUP	TDG-1	TDG-1
TAXIWAY SURFACE	ASPHALT	ASPHALT
WIDTH X LENGTH	25 ft x 1790 ft	25 ft x 1790 ft
SHOULDER WIDTH	10 ft	10 ft
SAFETY AREA (TSA) WIDTH	49 ft	49 ft
EDGE SAFETY MARGIN (TESM)	5 ft	5 ft
OBJECT FREE AREA (TOFA) WIDTH	89 ft	89 ft
TAXIWAY LIGHTING	N/A , MITL	N/A , MITL
TAXIWAY MARKING		

ULTIMATE EAST PARALLEL TAXIWAY		
ITEM	EXISTING	ULTIMATE
AIRPLANE DESIGN GROUP		A-I
TAXIWAY DESIGN GROUP		TDG-1
TAXIWAY SURFACE		ASPHALT
WIDTH X LENGTH		25 ft x 2750 ft
SHOULDER WIDTH		10 ft
SAFETY AREA (TSA) WIDTH		49 ft
EDGE SAFETY MARGIN (TESM)		5 ft
OBJECT FREE AREA (TOFA) WIDTH		89 ft
TAXIWAY LIGHTING		N/A, MITL
TAXIWAY MARKING		

			<b>STATE OF ALASKA</b> <b>DEPARTMENT OF TRANSPORTATION</b> <b>AND PUBLIC FACILITIES</b> <b>CENTRAL REGION</b>	
			<b>LAKE HOOD SEAPLANE BASE</b> ANCHORAGE, ALASKA AIRPORT LAYOUT PLAN	
			DATE: 06/30/2017	
			SHEET: <b>4</b> OF <b>19</b>	
BY	DATE	REVISION	AIRPORT DATA SHEET TAXWAYS	



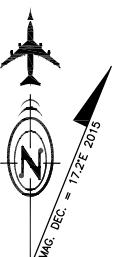
**NOTES:**

- EXISTING ARP COORDINATES: LATITUDE N61°10'53.9" LONGITUDE W149°57'59.4"
  - TDZE IS 79.3' FOR R/W 14-32 AND IS 76.0' FOR ALL WATERLANES.
  - WATERLANE S-N STA 610+00.96 = WATERLANE SE-NW STA 804+64.26, ELEV=76.0'  
WATERLANE NW-SE STA 397+42.61 = WATERLANE S-N STA 604+72.97, ELEV=76.0'  
WATERLANE E-W STA 405+58.48 = WATERLANE NW-SE STA 813+69.46, ELEV=76.0'
  - RPZ DIMENSIONS FOR R/W 14-32 AND ALL WATERLANES: 250'x450'X1000'
  - THERE ARE OFZ OBJECT PENETRATIONS, SEE SHEET 6 FOR DETAILS.
  - THERE ARE RVZ OBSTRUCTIONS FOR WATERLANES, SEE SHEET 13, 15, AND 16 FOR DETAILS.
  - NO LINE OF SIGHT OBSTRUCTIONS FOR RW 14-32.
  - RUNWAY 14-32 HIGH AND LOW POINTS: STA 169+00.15, ELEV=79.3  
STA 147+00.00, ELEV=74.6
  - THERE ARE NO HIGH AND LOW POINTS FOR WATERLANES. ELEVATION FOR ALL WATERLANE CENTERLINES IS 76.0'.
  - DOU TO EXISTING RESIDENTIAL PROPERTY EAST OF THE RUNWAY, BEYOND AIRPORT BOUNDARY, BRL IS LOCATED WHERE PART 77 SURFACES ARE 20' ABOVE AIRPORT ELEVATION (TYPICAL IS 35' ABOVE AIRPORT ELEVATION).

RUNWAY SEPARATIONS	
RUNWAY 14-32 CL TO:	SEPARATION (FEET)
BRL, EAST OF RW CL	265
BRL, WEST OF RW CL	500
HOLD LINE	120*
HOOD STRIP PARKING	175
E PARKING	352
TAXIWAY H (PAVED PORTION)	169
TAXIWAY H (UNPAVED PORTION)	155

\* NON-STANDARD, REQUIRED SEPARATION IS 125 FEET

APRON DATA TABLE	
APRON:	DIMENSIONS (SQUARE FEET)
A PARKING	480,000
B PARKING	220,000
D PARKING	80,000
E PARKING	540,000
HOOD STRIP PARKING	410,000

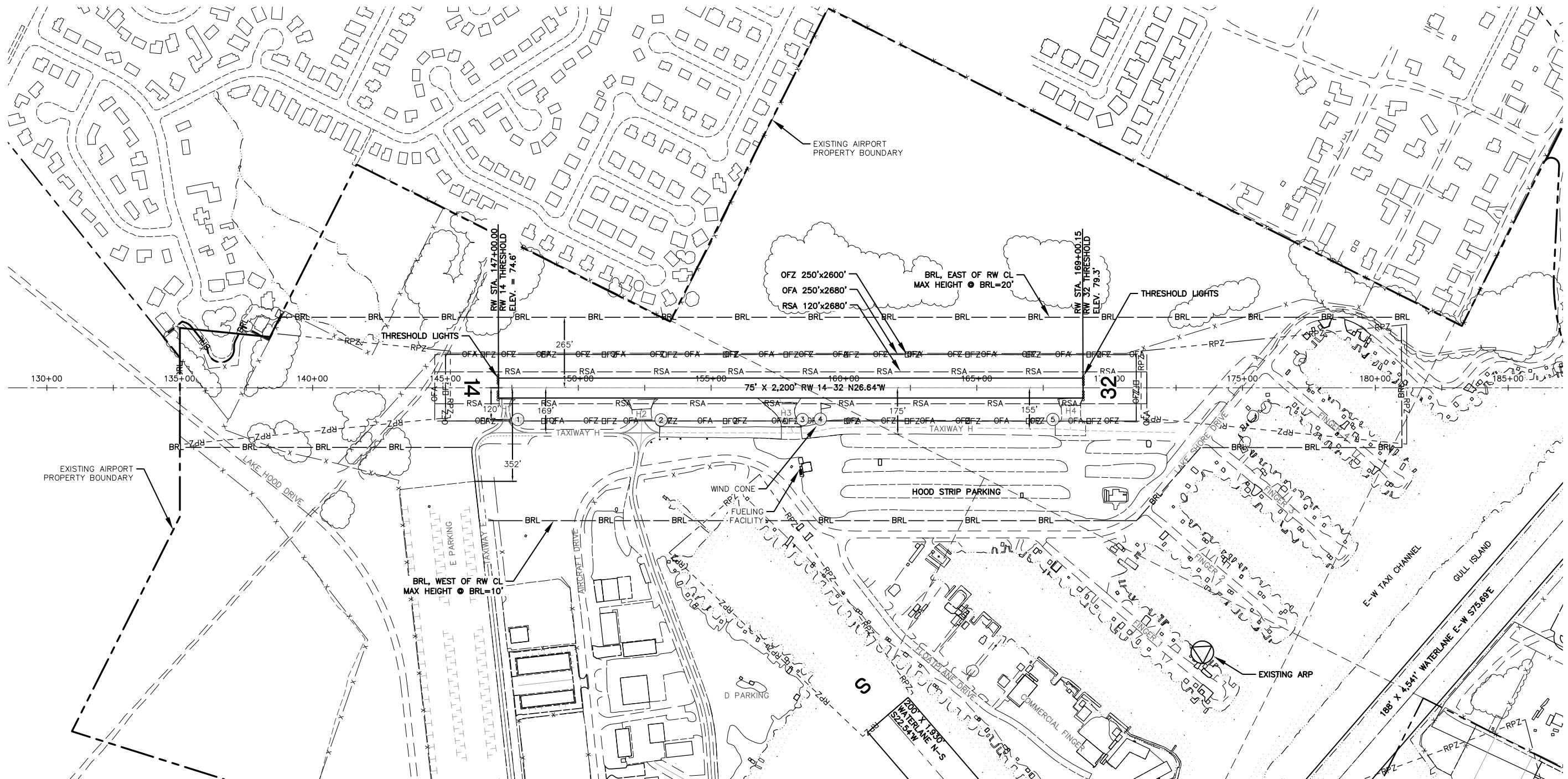


A horizontal scale bar with tick marks at 400, 0, 400, and 800. The text "SCALE IN FEET" is centered below the bar, and "HORIZONTAL GRAPHIC SCALE" is written below that.

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

# **LAKE HOOD SEAPLANE BASE**

	DATE: 06/30/2017
	SHEET: 5 OF 19

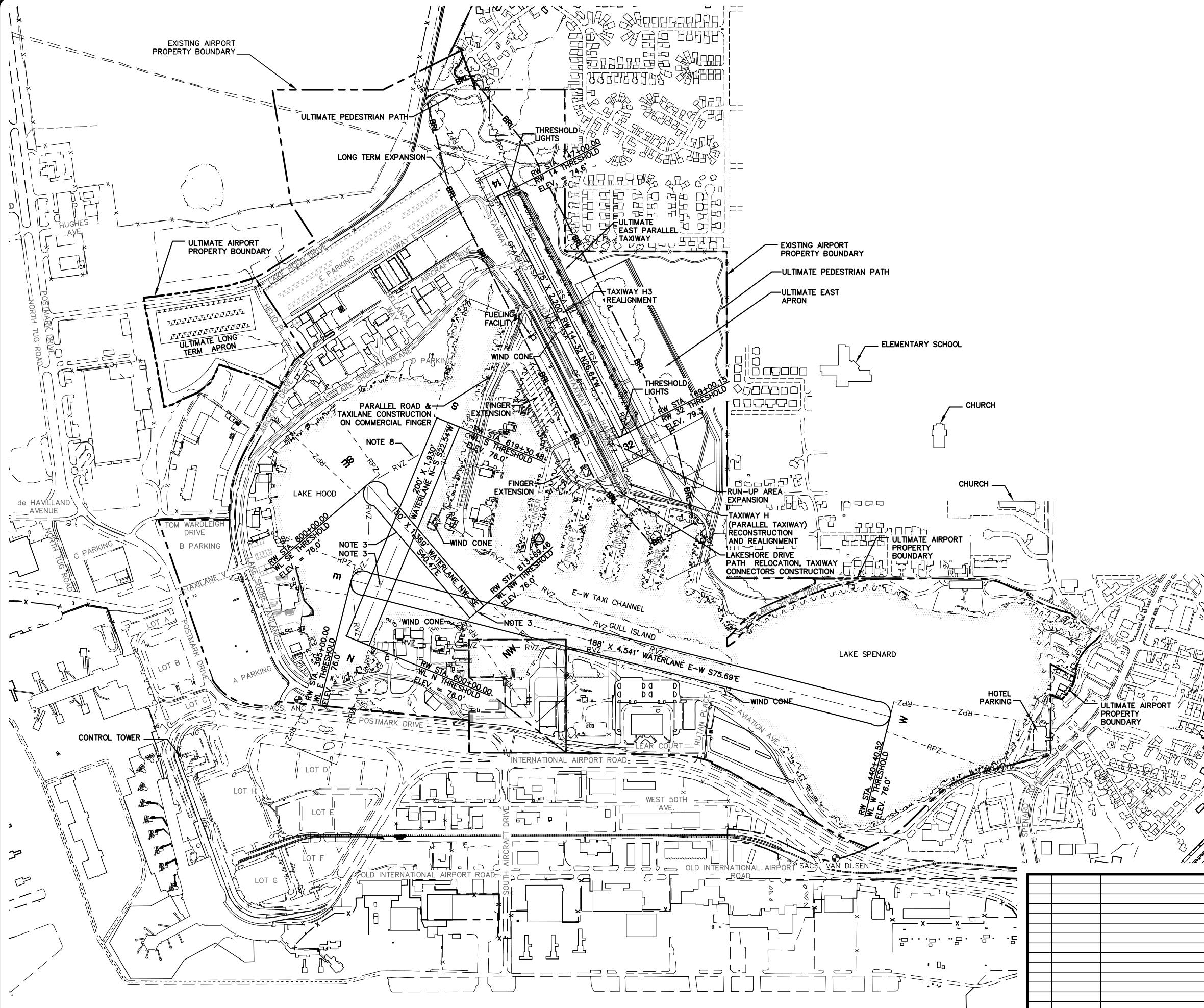


NOTES:

1. EXISTING ARP COORDINATES: LATITUDE N61°10'53.9" LONGITUDE W149°57'59.4".
2. TDZE IS 79.3' FOR R/W 14-32.
3. RPZ DIMENSIONS FOR R/W 14-32: 250x450'x1000'. RPZ LAND USE/BUILDING RESTRICTIONS TO BE BASED ON AC 150/5300-13A.
4. THERE ARE OFZ OBJECT PENETRATIONS (SAME AS PRIMARY SURFACE OBSTRUCTIONS #13, 16, 20, 21, 23, PART 77 OBSTRUCTION TABLE, SHEET 11).
5. NO LINE OF SIGHT OBSTRUCTIONS FOR RW 14-32.
6. RUNWAY 14-32 HIGH AND LOW POINTS: STA 169+00.15, ELEV=79.3  
STA 147+00.00, ELEV=74.6
7. DUE TO EXISTING RESIDENTIAL PROPERTY EAST OF THE RUNWAY, BEYOND AIRPORT BOUNDARY, BRL IS LOCATED WHERE PART 77 SURFACES ARE 20' ABOVE AIRPORT ELEVATION (TYPICAL IS 35' ABOVE AIRPORT ELEVATION).

OFZ SURFACE OBSTRUCTIONS											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
1	SIGN	147+74.6/120.2R	72.6'	3.6'	76.2'	OFZ SURFACE	75'	1'	AIP PROJECT	TO RELOCATE	LONG
2	SIGN	153+14.0/121.4R	74.6'	3.6'	78.2'	OFZ SURFACE	76'	2'	AIP PROJECT	TO RELOCATE	LONG
3	SIGN	158+46.2/119.9R	73.5'	4.9'	80.2'	OFZ SURFACE	77'	3'	AIP PROJECT	TO RELOCATE	LONG
4	WIND CONE	159+13.7/118.7R	75.2'	21.5'	96.7'	OFZ SURFACE	77'	20'	AIP PROJECT	TO RELOCATE	LONG
5	SIGN	167+88.6/119.8R	78.0'	3.6'	81.6'	OFZ SURFACE	79'	3'	AIP PROJECT	TO RELOCATE	LONG

STATE OF ALASKA	DEPARTMENT OF TRANSPORTATION	AND PUBLIC FACILITIES	CENTRAL REGION
LAKE HODD SEAPLANE BASE			DATE: 06/30/2017
ANCHORAGE, ALASKA			SHEET: 6 OF 19
AIRPORT LAYOUT PLAN			EXISTING RUNWAY 14-32
BY	DATE	REVISION	



RUNWAY SEPARATIONS	
RUNWAY 14-32 CL TO:	SEPARATION (FEET)
BRL, EAST OF RW CL	265
BRL, WEST OF RW CL	500
ULTIMATE HOLD LINE	125
ULTIMATE HOOD STRIP PARKING	280
E PARKING	237
ULTIMATE TAXIWAY H	169
ULTIMATE PARALLEL TAXIWAY	165
ULTIMATE EAST APRON	297

APRON DATA TABLE	
APRON:	DIMENSIONS (SQUARE FEET)
A PARKING	480,000
B PARKING	220,000
D PARKING	80,000
E PARKING	570,000
ULTIMATE EAST APRON	710,000
ULTIMATE LONG TERM APRON	720,000



A horizontal scale bar with tick marks at 0, 400, and 800. The text "SCALE IN FEET" is centered above the bar, and "HORIZONTAL GRAPHIC SCALE" is written below it.

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

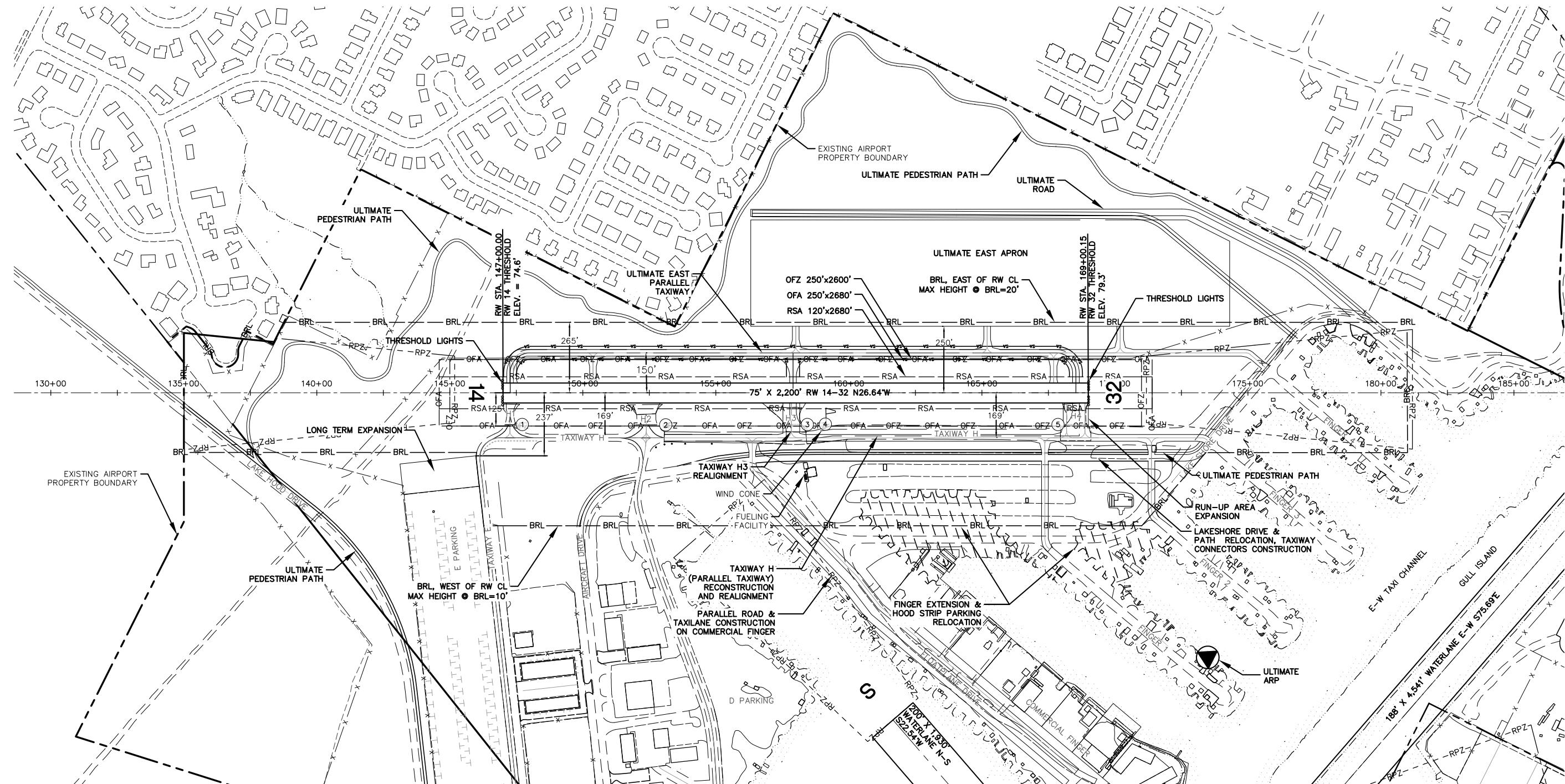
**LAKE HOD SEAPLANE BAS**  
**ANCHORAGE, ALASKA**  
**AIRPORT LAYOUT PLAN**

**AIRPORT LAYOUT PLAN**  
**ULTIMATE**

DATE:  
06/30/2017  
SHEET:  
7  
OF  
19

Designed By: C. SLATEN  
Drawn By: C. SLATEN  
Checked By: M. KARTEZHNIKOVA

Date Plotted: 7/11/2017 4:13 PM  
Layout Name: 8-Ultimate\_Runway\_14-32  
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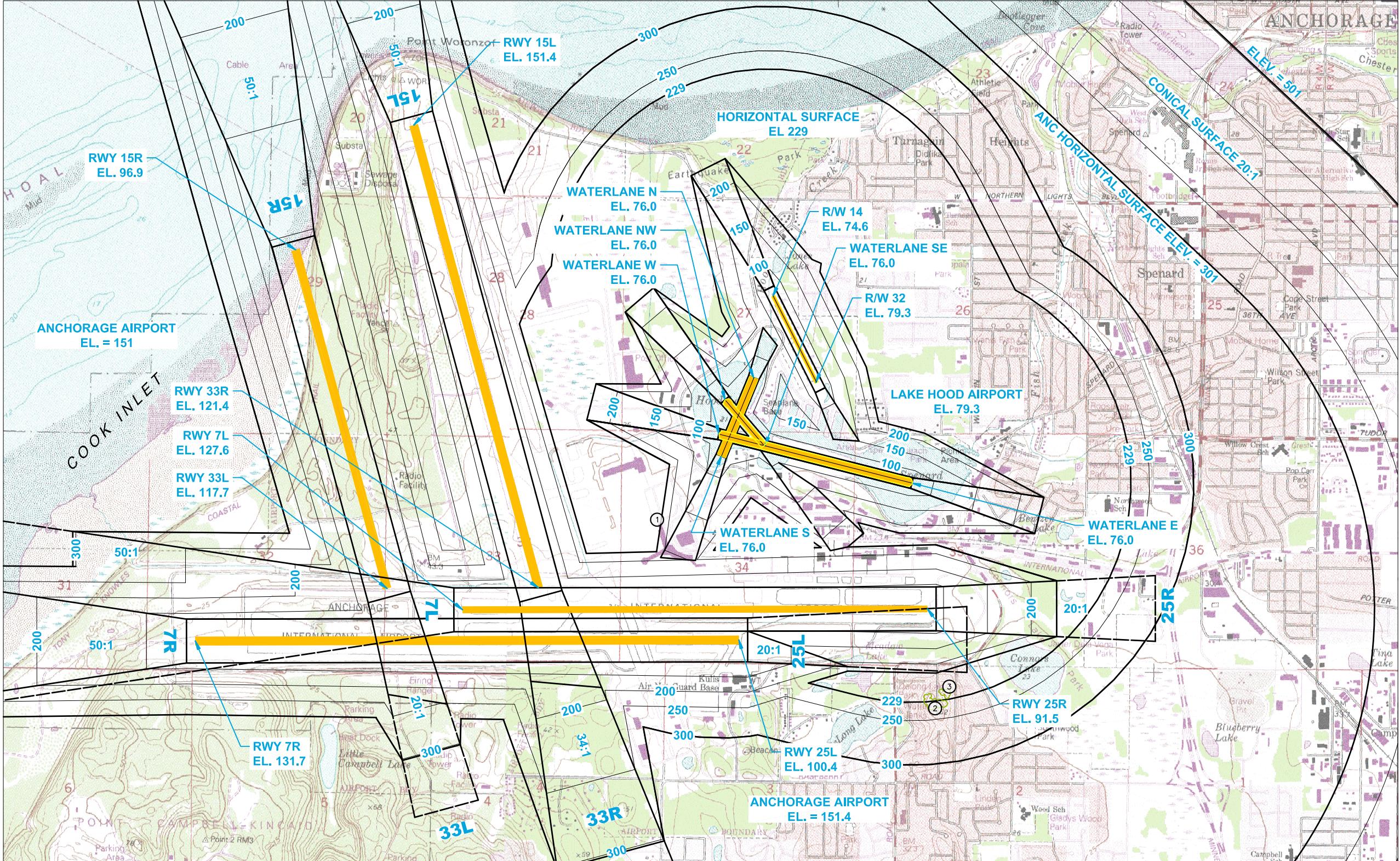


NOTES:

1. ULTIMATE ARP COORDINATES: LATITUDE N61°10'53.9" LONGITUDE W149°57'59.4"
2. TDZE IS 79.3' FOR R/W 14-32.
3. RPZ DIMENSIONS FOR R/W 14-32: 250'x450'x1000'. RPZ LAND USE/BUILDING RESTRICTIONS TO BE BASED ON AC 150/5300-13A.
4. THERE ARE OFZ OBJECT PENETRATIONS (SAME AS PRIMARY SURFACE OBSTRUCTIONS #13, 16, 20, 21, 23, PART 77 OBSTRUCTION TABLE, SHEET 11).
5. NO LINE OF SIGHT OBSTRUCTIONS FOR RW 14-32.
6. RUNWAY 14-32 HIGH AND LOW POINTS: STA 169+00.15, ELEV=79.3  
STA 147+00.00, ELEV=74.6
7. DUE TO EXISTING RESIDENTIAL PROPERTY EAST OF THE RUNWAY, BEYOND AIRPORT BOUNDARY, BRL IS LOCATED WHERE PART 77 SURFACES ARE 20' ABOVE AIRPORT ELEVATION (TYPICAL IS 35' ABOVE AIRPORT ELEVATION).

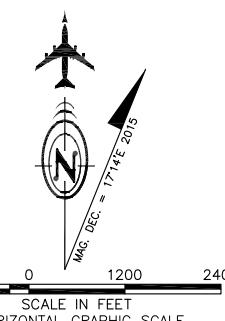
OFZ SURFACE OBSTRUCTIONS											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
1	SIGN	147+74.6/120.2R	72.6'	3.6'	76.2'	OFZ SURFACE	75'	1'	AIP PROJECT	TO RELOCATE	LONG
2	SIGN	153+14.0/121.4R	74.6'	3.6'	78.2'	OFZ SURFACE	76'	2'	AIP PROJECT	TO RELOCATE	LONG
3	SIGN	158+46.2/119.9R	73.5'	4.9'	80.2'	OFZ SURFACE	77"	3'	AIP PROJECT	TO RELOCATE	LONG
4	WIND CONE	159+13.7/118.7R	75.2'	21.5'	96.7'	OFZ SURFACE	77"	20'	AIP PROJECT	TO RELOCATE	LONG
5	SIGN	167+88.6/119.8R	78.0'	3.6'	81.6'	OFZ SURFACE	79'	3'	AIP PROJECT	TO RELOCATE	LONG

STATE OF ALASKA	DEPARTMENT OF TRANSPORTATION	AND PUBLIC FACILITIES	CENTRAL REGION
LAKE HOOD SEAPLANE BASE			DATE: 06/30/2017
ANCHORAGE, ALASKA			SHEET: 8 OF 19
AIRPORT LAYOUT PLAN			AIRPORT LAYOUT PLAN
ULTIMATE RUNWAY 14-32			ULTIMATE RUNWAY 14-32



## NOTES:

1. ESTABLISHED LAKE HOOD AIRPORT ELEVATION = 79.3' (NAVD88).
  2. ALL ELEVATIONS AND PART 77 CONTOUR ELEVATIONS BASED ON NAVD 88.
  3. BASE MAP DATA FROM USGS QUADRANGLE TYONEK (A-1) NE AND ANCHORAGE (A-8) NW, ALASKA.
  4. SEE SHEET 10 FOR CLOSE IN OBSTRUCTIONS TO HORIZONTAL AND CONICAL SURFACES INDICATED IN TABLE BELOW.
  5. SEE SHEETS 11-16 FOR OBSTRUCTION TABLES AND PENETRATIONS TO THE INNER PORTION OF THE APPROACH SURFACES.
  6. CLOSE IN OBSTRUCTIONS ARE SHOWN ON INNER APPROACH SURFACE SHEETS 11-16.
  7. PRIMARY SURFACE WIDTH FOR RUNWAY 14-32 AND ALL WATERLANES IS 250'.
  8. THERE ARE NO KNOWN HEIGHT RESTRICTIONS.



## PART 77 SURFACE OBSTRUCTIONS

PART A: SURFACE DESTRUCTIONS											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
1	CONTROL TOWER	385+23.9/1741.8R	94.5	171.7'	266.2'	HORIZONTAL	229'	37'	N/A	TO REMAIN	N/A
2	TREES	457+13.3/4853.0R	N/A	N/A	254.6'	CONICAL	233'	22'	N/A	TO REMAIN	N/A
3	TRFFS	460+8.1/4397.8R	N/A	N/A	250.1'	HORIZONTAL	229'	21'	N/A	TO REMAIN	N/A

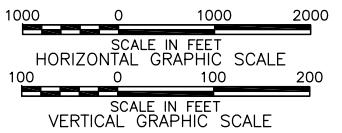
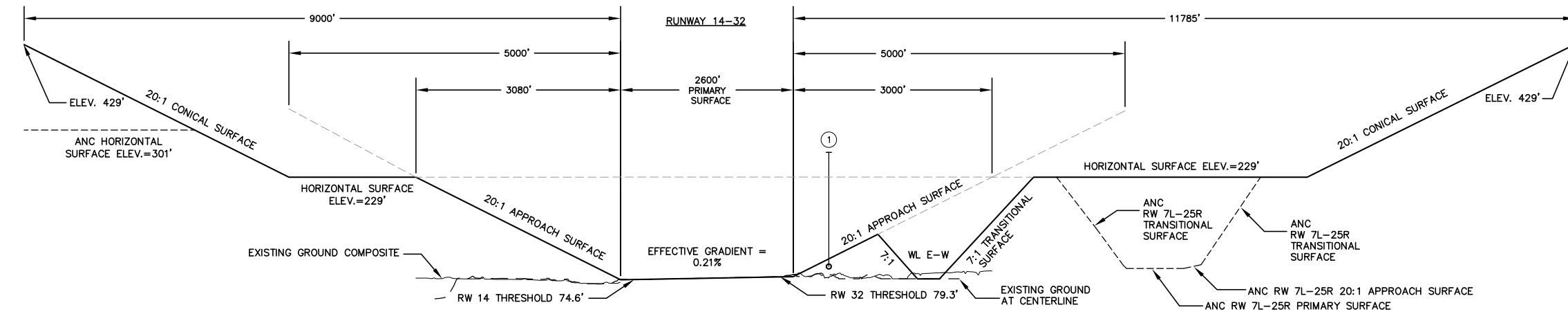
NOTE: STATIONS AND OFFSETS ARE REFERENCED TO WATERLANE E-W.  
CONTROL TOWER IS ALSO A HORIZONTAL SURFACE OBSTRUCTION FOR (STATION/OFFSET): RUNWAY 14-32 (176+36.4/4399.8L)  
WATERLANE NW-SE (807+16.6/2596.6L)  
WATERLANE N-S (595+71.6/1254.4L)

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

**LAKE HOOD SEAPLANE BASE**  
ANCHORAGE, ALASKA  
AIRPORT LAYOUT PLAN  
AIRPORT AIRSPACE DRAWING

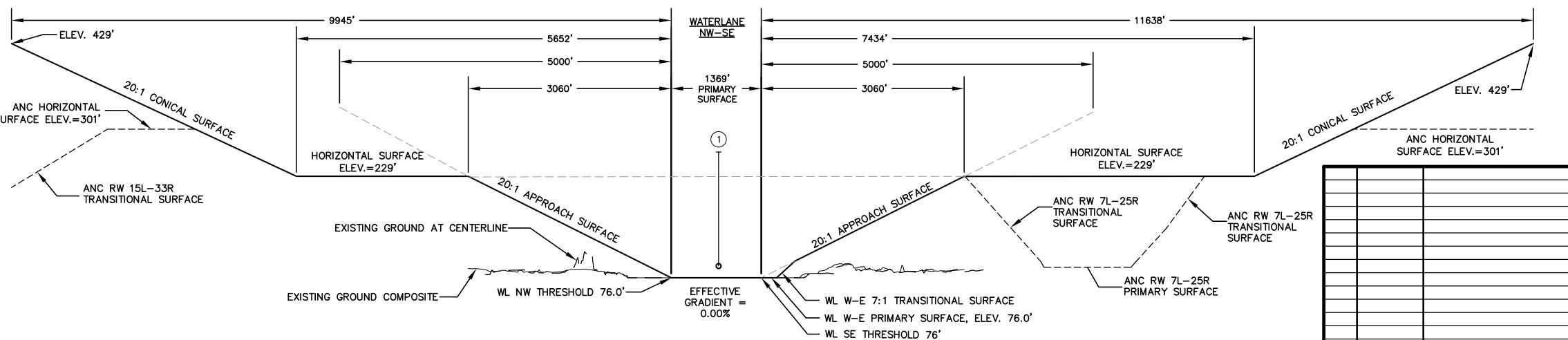
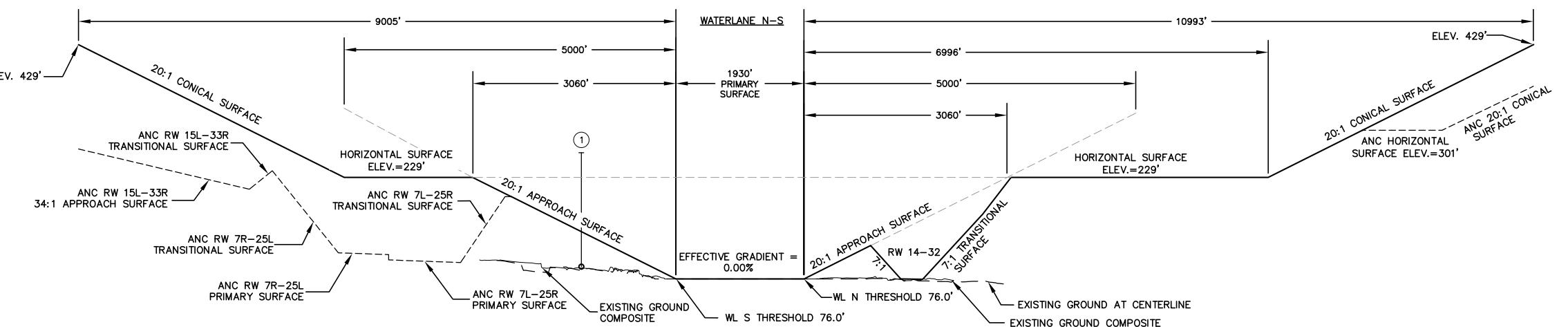
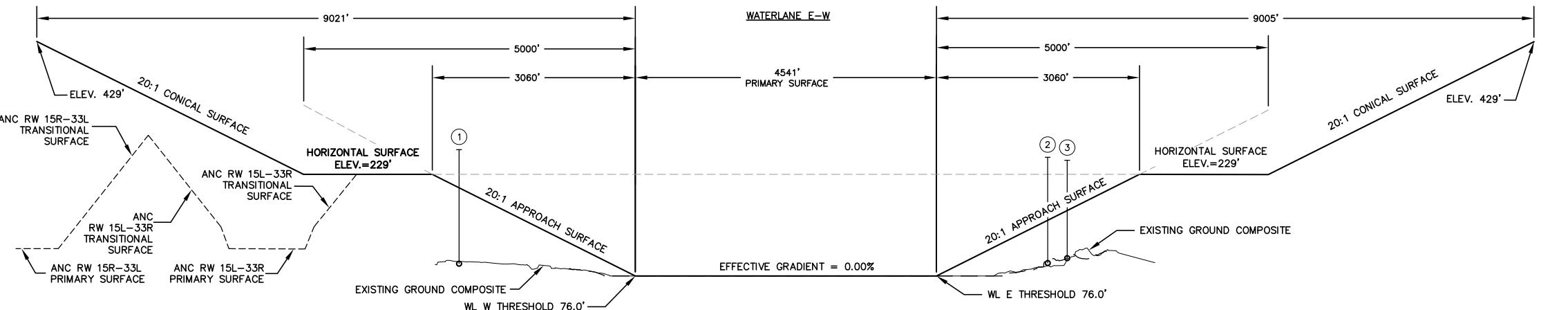
Designed By: C. SLATEN  
Directed By: C. SLATEN  
Checked By: M. KARTEZHNIKOVA

Date Plotted: 7/11/2017 4:00 PM  
Project Name: 10-16-SPCE PROJLES  
File Name: G:\Engineering\Engg-Libraries\Airport Layout Plans\UD-AFP-2016\Final\Aero\Aero.dwg



- LEGEND:
- LAKE HOOD SEAPLANE BASE (LHD) AIRSPACE
  - LAKE HOOD SEAPLANE BASE (LHD) FAR PART 77 IMAGINARY SURFACES
  - ANCHORAGE INTERNATIONAL AIRPORT (ANC) AIRSPACE
- # OBSTRUCTIONS ID #, SEE AIRPORT LAYOUT PLAN DRAWING FOR DETAILS

- NOTES:
- WATERLANE PROFILES ARE FUTURE CONDITIONS



BY	DATE	REVISION

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
CENTRAL REGION

LAKE HOOD SEAPLANE BASE

ANCHORAGE, ALASKA  
AIRPORT LAYOUT PLAN

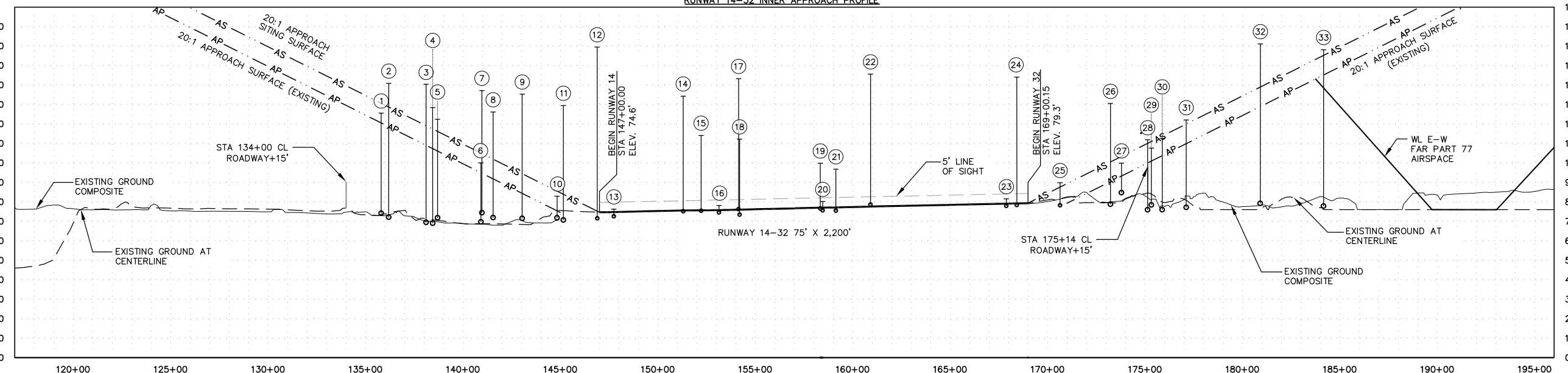
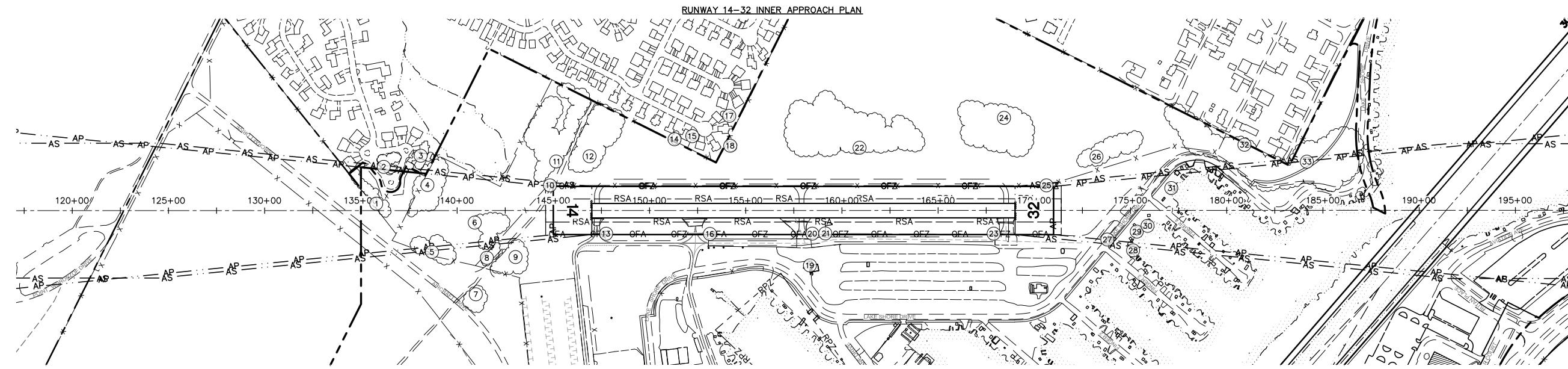
AIRPORT AIRSPACE PROFILES

DATE:  
06/30/2017

SHEET:  
10

OF  
19

Designed By: C. SLATEN  
Drawn By: C. SLATEN  
Checked By: M. KARTEZHNIKOVA



**NOTES:**

- TOUCHDOWN ZONE ELEVATION (NAVD 88): RW 14: 79.3 FEET RW 32: 79.3 FEET
- APPROACH SURFACE DIMENSIONS: RW 14: 5,000' x 1,250' x 250' RW 32: 5,000' x 1,250' x 250'
- THERE ARE NO CONTROLLING OBSTRUCTIONS FOR RW 14 AND RW 32.
- THERE ARE OBJECT PENETRATIONS TO THE 20:1 PART 77 APPROACH SURFACE FOR RW 14 AND RW 32.
- THERE ARE OBJECT PENETRATIONS TO THE THRESHOLD SITING SURFACE OF RW 14 AND RW 32, AS DEFINED IN FAA AC 150/5300-13A, CHANGE 1, CHAPTER 3, TABLE 3-2, LINE 2.
- ULTIMATE APPROACH SURFACE IS 100 FEET ABOVE THE THRESHOLD AT: RW 14: STA 127+00.00 RW 32: STA 189+00.15

Date Plotted: 7/11/2017 3:57 PM  
Layout Name: 11-UNIQUE\_ELEVATION\_OF\_THE\_APPROACH\_SURFACE\_RUNWAY\_14-32.dwg  
File Name: G:\Engineering\Eng Libraries\Airport Layout Plans\11-AFP-2016\Final\Wet Sheet\dwg

PART 77 SURFACE OBSTRUCTIONS											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	trigger EVENT	DISPOSITION	STAGE TO CORRECT
1	TREE	135+80.0/35.7L	74.2'	51.3'	125.5'	APPROACH	121'	5'	MAINTENANCE	TO BE REMOVED	NEAR
2	TREE	136+18.9/227.0L	72.1'	68.7'	140.9'	TRANSITION	121'	20'	N/A	TO REMAIN	N/A
3	TREE	138+10.9/284.8L	69.5'	70.9'	140.4'	TRANSITION	122'	18'	N/A	TO REMAIN	N/A
4	TREE	138+45.9/132.6L	69.0'	59.4'	128.4'	APPROACH	107'	21'	MAINTENANCE	TO BE REMOVED	NEAR
5	TREE	138+69.4/214.7R	71.8'	50.6'	122.4'	TRANSITION	110'	12'	N/A	TO REMAIN	N/A
6	TREE	140+92.0/62.1R	69.7'	30.3'	100.0'	APPROACH	95'	5'	MAINTENANCE	TO BE REMOVED	NEAR
7	TREE	140+97.2/434.7R	74.5'	62.7'	137.2'	TRANSITION	133'	4'	N/A	TO REMAIN	N/A
8	TREE	141+54.6/245.3R	71.9'	54.1'	126.0'	TRANSITION	104'	22'	N/A	TO REMAIN	N/A
9	TREE	143+3.7/241.2R	71.5'	63.7'	135.3'	TRANSITION	98'	37'	N/A	TO REMAIN	N/A
10	FENCE	144+82.9/130.8L	71.8'	11.1'	82.9'	TRANSITION	76'	7'	N/A	TO REMAIN	N/A
11	TREE	145+15.3/254.6L	70.7'	58.8'	129.5'	TRANSITION	93'	37'	N/A	TO REMAIN	N/A
12	TREE	146+88.9/281.5L	71.5'	88.0'	159.5'	TRANSITION	96'	64'	N/A	TO REMAIN	N/A
13*	SIGN	147+74.6/120.2R	72.6'	3.6'	76.2'	PRIMARY	75'	1'	AIP PROJECT	TO RELOCATE	LONG
14	TREE	151+30.3/370.2L	75.2'	59.1'	134.3'	TRANSITION	110'	24'	N/A	TO REMAIN	N/A
15	TREE	152+22.2/386.0L	75.5'	38.7'	114.2'	TRANSITION	113'	1'	N/A	TO REMAIN	N/A
16*	SIGN	153+14.0/121.4R	74.6'	3.6'	78.2'	PRIMARY	76'	2'	AIP PROJECT	TO RELOCATE	LONG
17	TREE	154+14.6/491.4L	76.3'	67.1'	143.4'	TRANSITION	128'	15'	N/A	TO REMAIN	N/A
18	TREE	154+19.8/336.6L	73.5'	38.8'	112.3'	TRANSITION	106'	6'	N/A	TO REMAIN	N/A
19	BUILDING	158+33.5/285.1R	76.5'	23.3'	99.8'	TRANSITION	100'	0'	N/A	TO REMAIN	N/A
20*	SIGN	158+46.2/119.9R	73.5'	4.9'	80.2'	PRIMARY	77"	3'	AIP PROJECT	TO RELOCATE	LONG
21*	WIND CONE	159+13.7/118.7R	75.2'	21.5'	96.7'	PRIMARY	77"	20'	AIP PROJECT	TO RELOCATE	LONG
22	TREE	160+91.4/325.9L	78.6'	67.0'	145.6'	TRANSITION	107'	39'	N/A	TO REMAIN	N/A

PART 77 SURFACE OBSTRUCTIONS											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	trigger EVENT	DISPOSITION	STAGE TO CORRECT
23*	SIGN	167+88.6/119.8R	78.0'	3.6'	81.6'	PRIMARY	79'	3'	AIP PROJECT	TO RELOCATE	LONG
24	TREE	168+42.6/480.9L	78.4'	65.7'	144.1'	TRANSITION	130'	14'	N/A	TO REMAIN	N/A
25	FENCE	170+63.2/130.5L	78.2'	11.6'	89.8'	TRANSITION	80'	10'	N/A	TO REMAIN	N/A
26	TREE	173+22.9/279.2L	78.8'	51.7'	130.5'	TRANSITION	109'	22'	N/A	TO REMAIN	N/A
27	ROAD	173+79.6/150.6R	84.8'	15.0'	99.8'	APPROACH	93'	7'	N/A	TO REMAIN	N/A
28	TREE	175+13.6/207.1R	76.0'	36.6'	112.0'	TRANSITION	106'	6'	N/A	TO REMAIN	N/A
29	TREE	175+32.6/109.8R	77.8'	29.9'	107.7'	APPROACH	101'	7'	MAINTENANCE	TO BE REMOVED	NEAR
30	TREE	175+88.7/79.7R	76.0'	36.6'	112.6'	APPROACH	104'	9'	MAINTENANCE	TO BE REMOVED	NEAR
31	TREE	177+11.8/116.3L	77.2'	44.9'	122.1'	APPROACH	110'	12'	MAINTENANCE	TO BE REMOVED	NEAR
32	TREE	180+91.9/341.2L	79.3'	81.9'	161.1'	TRANSITION	145'	16'	N/A	TO REMAIN	N/A
33	TREE	184+16.5/253.2L	77.8'	80.3'	158.1'	APPROACH	145'	13'	MAINTENANCE	TO BE REMOVED	NEAR

\*NOTE:  
PRIMARY SURFACE OBSTRUCTIONS #13,  
16, 20, 21, 23 ARE ALSO OFZ  
OBSTRUCTIONS.

STATE OF ALASKA	DEPARTMENT OF TRANSPORTATION	CENTRAL REGION
LAKE HOOD SEAPLANE BASE		
ANCHORAGE, ALASKA		
AIRPORT LAYOUT PLAN		
DATE: 06/30/2017		
SHEET: 11 OF 19		
INNER PORTION OF THE APPROACH SURFACE RUNWAY 14-32		
BY DATE	REVISION	

APPROACH SITING SURFACE OBSTACLES (RUNWAY 14)											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
2	TREE	136+18.9/227.0L	72.1'	68.7'	140.9'	LINE 2 APPROACH	131'	10'	N/A	TO REMAIN	N/A
4	TREE	138+45.9/132.6L	69.0'	59.4'	128.4'	LINE 2 APPROACH	119'	9'	MAINTENANCE	TO BE REMOVED	NEAR

APPROACH SITING SURFACE OBSTACLES (RUNWAY 32)											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
25	FENCE	170+63.2/130.5L	78.2'	11.6'	89.8'	LINE 2 APPROACH	85'	5'	N/A	TO REMAIN	N/A
31	TREE	177+11.8/116.1L	77.2'	44.9'	122.1'	LINE 2 APPROACH	117'	5'	MAINTENANCE	TO BE REMOVED	NEAR
33	TREE	184+16.5/253.2L	77.8'	80.3'	158.1'	LINE 2 APPROACH	152'	6'	MAINTENANCE	TO BE REMOVED	NEAR

Date Plotted: 7/11/2017, 3:55 PM  
Layout Name: 12/INNER PORTION OF THE APPROACH SURFACE RUNWAY 14-32  
File Name: C:\Engineering\AEG\Bartons Airport Layout Plans\UD->AL->2016\Final\_spreadsheets

Designed By: C. SLATEN  
Drawn By: M. KARTEHNICKOVA  
Checked By:

Date Printed: 7/11/2017 - 3:55 PM  
Layout Name: 12-INNER PORTION OF THE APPROACH SURFACE RUNWAY 14-32  
File Name: G:\Engineering\Eng-Libraries\Airport Layout Plans\NHD-ALP\2016\Final\Most sheets.dwg

			<b>STATE OF ALASKA</b> <b>DEPARTMENT OF TRANSPORTATION</b> <b>AND PUBLIC FACILITIES</b> <b>CENTRAL REGION</b>	
			<b>LAKE HOOD SEAPLANE BASE</b>	DATE: 06/30/2017
			ANCHORAGE, ALASKA AIRPORT LAYOUT PLAN	SHEET: 12 OF 19
BY	DATE	REVISION	INNER PORTION OF THE APPROACH SURFACE RUNWAY 14-32	

PART 77 SURFACE OBSTRUCTIONS											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
38	POLE	425+71.9/407.9R	87.0'	34.0'	121.0'	TRANSITION	116'	5'	N/A	TO REMAIN	N/A
39	TREE	426+1.1/379.6R	79.2'	47.5'	126.7'	TRANSITION	115'	12'	N/A	TO REMAIN	N/A
40	SIGN	426+5.8/247.2L	83.6'	11.2'	94.8'	TRANSITION	94'	1'	N/A	TO REMAIN	N/A
41	GROUND	426+19.6/111.4R	80.1'	0'	80.1'	PRIMARY	76'	4'	N/A	TO REMAIN	N/A
42	SIGN	426+38.3/268.8L	83.4'	6.8'	90.2'	TRANSITION	81'	9'	N/A	TO REMAIN	N/A
43	TREE	426+84.4/524.7L	80.7'	69.3'	150.0'	TRANSITION	133'	17'	N/A	TO REMAIN	N/A
44	WIND CONE	426+88.0/149.2R	78.9'	21.0'	99.9'	TRANSITION	80'	20'	N/A	TO REMAIN	N/A
45	BUILDING	427+47.4/184.6L	84.1'	7.3'	91.4'	TRANSITION	84'	7'	N/A	TO REMAIN	N/A
46	TREE	427+50.6/444.7R	78.8'	59.2'	138.0'	TRANSITION	122'	16'	N/A	TO REMAIN	N/A
47	TREE	427+96.7/531.6R	80.5'	62.2'	142.7'	TRANSITION	134'	9'	N/A	TO REMAIN	N/A
48	TREE	447+92.0/326.8R	80.5'	56.8'	137.3'	TRANSITION	131'	6'	N/A	TO REMAIN	N/A
49	TREE	450+15.0/196.6R	79.8'	58.9'	138.7'	APPROACH	125'	14'	W/L MRKG	TO BE REMOVED	LONG
50	TREE	452+52.8/246.3L	82.0'	70.2'	152.1'	TRANSITION	136'	16'	N/A	TO REMAIN	N/A
51	TREE	453+28.4/25.3L	83.2'	73.3'	156.4'	APPROACH	140'	16'	W/L MRKG	TO BE REMOVED	LONG
52	TREE	457+54.8/60.2L	102.8'	71.4'	174.2'	APPROACH	162'	12'	N/A	TO REMAIN	N/A
53	TREE	457+67.1/48.8L	102.5'	63.9'	166.5'	APPROACH	165'	2'	N/A	TO REMAIN	N/A
54	TREE	459+54.1/45.9L	98.3'	78.2'	176.5'	APPROACH	175'	2'	N/A	TO REMAIN	N/A
55	TREE	460+3.2/164.4R	101.8'	85.9'	187.7'	APPROACH	172'	16'	N/A	TO REMAIN	N/A
56	TREE	461+78.9/121.4L	96.0'	98.2'	194.3'	APPROACH	183'	11'	N/A	TO REMAIN	N/A
57	TREE	462+34.3/226.2L	121.5'	66.1'	187.6'	APPROACH	186'	2'	N/A	TO REMAIN	N/A
58	TREE	462+38.0/70.3L	106.8'	84.3'	191.1'	APPROACH	186'	5'	N/A	TO REMAIN	N/A
59	TREE	462+88.4/350.8L	117.7'	76.9'	194.6'	TRANSITION	189'	6'	N/A	TO REMAIN	N/A

APPROACH SITING SURFACE OBSTACLES (WATERLANE E)											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
1	TREE	386+19.9/93.5L	85.4'	36.3'	121.7'	LINE 2 APPROACH	120'	2'	W/L MRKG	TO BE REMOVED	LONG
3	BUILDING	390+76.1/154.8R	77.8'	28.1'	105.9'	LINE 2 APPROACH	97'	9'	N/A	TO REMAIN	N/A

APPROACH SITING SURFACE OBSTACLES (WATERLANE W)											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
49	TREE	450+15.0/196.6R	79.8'	58.9'	138.7'	LINE 2 APPROACH	125'	14'	W/L MRKG	TO BE REMOVED	LONG
50	TREE	452+52.8/246.3L	82.0'	70.2'	152.1'	LINE 2 APPROACH	137'	15'	W/L MRKG	TO BE REMOVED	LONG
51	TREE	453+28.4/25.3L	83.2'	73.3'	156.4'	LINE 2 APPROACH	140'	16'	W/L MRKG	TO BE REMOVED	LONG
52	TREE	457+54.8/60.2L	102.8'	71.4'	174.2'	LINE 2 APPROACH	162'	12'	N/A	TO REMAIN	N/A
53	TREE	457+67.1/48.8L	102.5'	63.9'	166.5'	LINE 2 APPROACH	162'	5'	N/A	TO REMAIN	N/A
54	TREE	459+54.1/45.9L	98.3'	78.2'	176.5'	LINE 2 APPROACH	172'	5'	N/A	TO REMAIN	N/A
55	TREE	460+3.2/164.4R	101.8'	85.9'	187.7'	LINE 2 APPROACH	174'	14'	N/A	TO REMAIN	N/A
56	TREE	461+78.9/121.4L	96.0'	98.2'	194.3'	LINE 2 APPROACH	183'	11'	N/A	TO REMAIN	N/A
57	TREE	462+34.3/226.2L	121.5'	66.1'	187.6'	LINE 2 APPROACH	186'	2'	N/A	TO REMAIN	N/A
58	TREE	462+38.0/70.3L	106.8'	84.3'	191.1'	LINE 2 APPROACH	186'	5'	N/A	TO REMAIN	N/A
59	TREE	462+88.4/350.7L	117.7'	76.9'	194.6'	LINE 2 APPROACH	188'	7'	N/A	TO REMAIN	N/A

Designed By:	
Drawn By:	C SLATTEN
Checked By:	M KARTEZHNIKOVA

Date Plotted: 7/1/2017, 3:52 PM  
Title Name: 14 INNER PORTION OF THE APPROACH SURFACE WATERLANE E-W  
File Name: G:\Engineering\Eng-Libraries\Airport Layout Plans LHD-ALP-2016\Final\Most streets.dwg

## PART 77 SURFACE OBSTRUCTIONS

ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
38	POLE	425+71.9/407.9R	87.0'	34.0'	121.0'	TRANSITION	116'	5'	N/A	TO REMAIN	N/A
39	TREE	426+1.1/379.6R	79.2'	47.5'	126.7'	TRANSITION	115'	12'	N/A	TO REMAIN	N/A
40	SIGN	426+5.8/247.2L	83.6'	11.2'	94.8'	TRANSITION	94'	1'	N/A	TO REMAIN	N/A
41	GROUND	426+19.6/111.4R	80.1'	0'	80.1'	PRIMARY	76'	4'	N/A	TO REMAIN	N/A
42	SIGN	426+38.3/268.8L	83.4'	6.8'	90.2'	TRANSITION	81'	9'	N/A	TO REMAIN	N/A
43	TREE	426+84.4/524.7L	80.7'	69.3'	150.0'	TRANSITION	133'	17'	N/A	TO REMAIN	N/A
44	WIND CONE	426+88.0/149.2R	78.9'	21.0'	99.9'	TRANSITION	80'	20'	N/A	TO REMAIN	N/A
45	BUILDING	427+47.4/184.6L	84.1'	7.3'	91.4'	TRANSITION	84'	7'	N/A	TO REMAIN	N/A
46	TREE	427+50.6/444.7R	78.8'	59.2'	138.0'	TRANSITION	122'	16'	N/A	TO REMAIN	N/A
47	TREE	427+96.7/531.6R	80.5'	62.2'	142.7'	TRANSITION	134'	9'	N/A	TO REMAIN	N/A
48	TREE	447+92.0/326.8R	80.5'	56.8'	137.3'	TRANSITION	131'	6'	N/A	TO REMAIN	N/A
49	TREE	450+15.0/196.6R	79.8'	58.9'	138.7'	APPROACH	125'	14'	W/L MRKG	TO BE REMOVED	LONG
50	TREE	452+52.8/246.3L	82.0'	70.2'	152.1'	TRANSITION	136'	16'	N/A	TO REMAIN	N/A
51	TREE	453+28.4/25.3L	83.2'	73.3'	156.4'	APPROACH	140'	16'	W/L MRKG	TO BE REMOVED	LONG
52	TREE	457+54.8/60.2L	102.8'	71.4'	174.2'	APPROACH	162'	12'	N/A	TO REMAIN	N/A
53	TREE	457+67.1/48.8L	102.5'	63.9'	166.5'	APPROACH	165'	2'	N/A	TO REMAIN	N/A
54	TREE	459+54.1/45.9L	98.3'	78.2'	176.5'	APPROACH	175'	2'	N/A	TO REMAIN	N/A
55	TREE	460+3.2/164.4R	101.8'	85.9'	187.7'	APPROACH	172'	16'	N/A	TO REMAIN	N/A
56	TREE	461+78.9/121.4L	96.0'	98.2'	194.3'	APPROACH	183'	11'	N/A	TO REMAIN	N/A
57	TREE	462+34.3/226.2L	121.5'	66.1'	187.6'	APPROACH	186'	2'	N/A	TO REMAIN	N/A
58	TREE	462+38.0/70.3L	106.8'	84.3'	191.1'	APPROACH	186'	5'	N/A	TO REMAIN	N/A
59	TREE	462+88.4/350.8L	117.7'	76.9'	194.6'	TRANSITION	189'	6'	N/A	TO REMAIN	N/A

## APPROACH SITING SURFACE OBSTACLES (WATERLANE E)

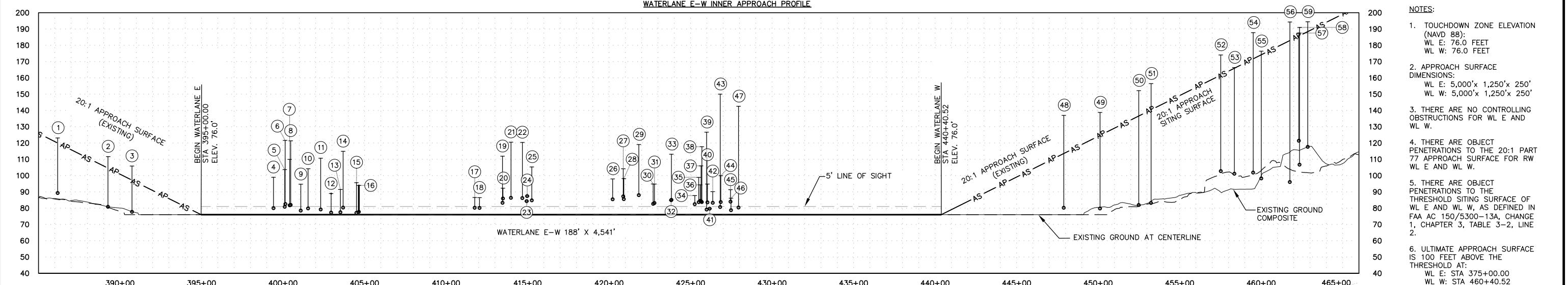
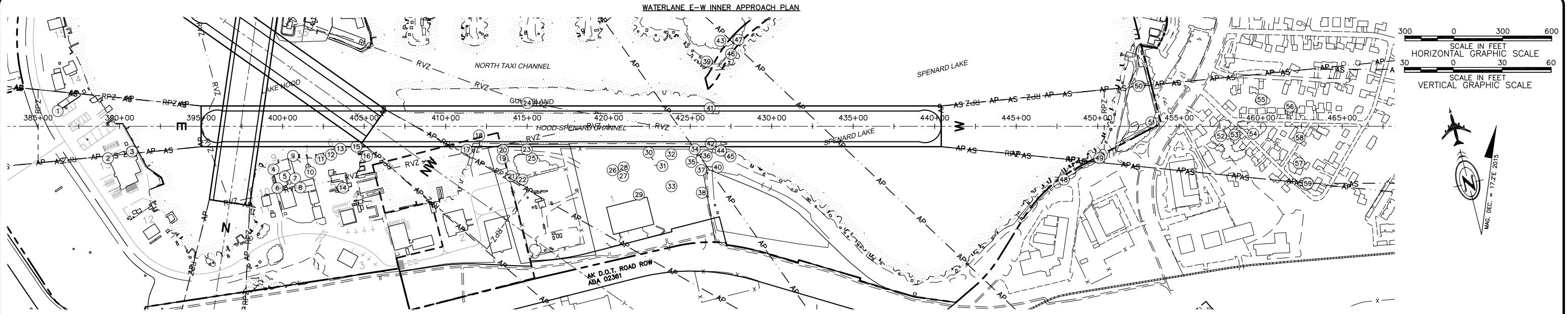
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
1	TREE	386+19.9/93.5L	85.4'	36.3'	121.7'	LINE 2 APPROACH	120'	2'	W/L MRKG	TO BE REMOVED	LONG
3	BUILDING	390+76.1/154.8R	77.8'	28.1'	105.9'	LINE 2 APPROACH	97'	9'	N/A	TO REMAIN	N/A

## APPROACH SITING SURFACE OBSTACLES (WATERLANE W)

ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
49	TREE	450+15.0/196.6R	79.8'	58.9'	138.7'	LINE 2 APPROACH	125'	14'	W/L MRKG	TO BE REMOVED	LONG
50	TREE	452+52.8/246.3L	82.0'	70.2'	152.1'	LINE 2 APPROACH	137'	15'	W/L MRKG	TO BE REMOVED	LONG
51	TREE	453+28.4/25.3L	83.2'	73.3'	156.4'	LINE 2 APPROACH	140'	16'	W/L MRKG	TO BE REMOVED	LONG
52	TREE	457+54.8/60.2L	102.8'	71.4'	174.2'	LINE 2 APPROACH	162'	12'	N/A	TO REMAIN	N/A
53	TREE	457+67.1/48.8L	102.5'	63.9'	166.5'	LINE 2 APPROACH	162'	5'	N/A	TO REMAIN	N/A
54	TREE	459+54.1/45.9L	98.3'	78.2'	176.5'	LINE 2 APPROACH	172'	5'	N/A	TO REMAIN	N/A
55	TREE	460+3.2/164.4R	101.8'	85.9'	187.7'	LINE 2 APPROACH	174'	14'	N/A	TO REMAIN	N/A
56	TREE	461+78.9/121.4L	96.0'	98.2'	194.3'	LINE 2 APPROACH	183'	11'	N/A	TO REMAIN	N/A
57	TREE	462+34.3/226.2L	121.5'	66.1'	187.6'	LINE 2 APPROACH	186'	2'	N/A	TO REMAIN	N/A
58	TREE	462+38.0/70.3L	106.8'	84.3'	191.1'	LINE 2 APPROACH	186'	5'	N/A	TO REMAIN	N/A
59	TREE	462+88.4/350.7L	117.7'	76.9'	194.6'	LINE 2 APPROACH	188'	7'	N/A	TO REMAIN	N/A

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

Designed By: C. SLATEN  
Drawn By: M. KARTEZHNIKOVA



Date Plotted: 7/11/2017 5:53 PM  
15-LINEAR Elevation of the APPROACH SURFACE WATERLANE E-W  
Layout Name: G\_Engineering\_Eng\_Libraries\_Verport\_Layout\_Plots (Vd-AFD-2016\Eng\Verport\sheeted.dwg)

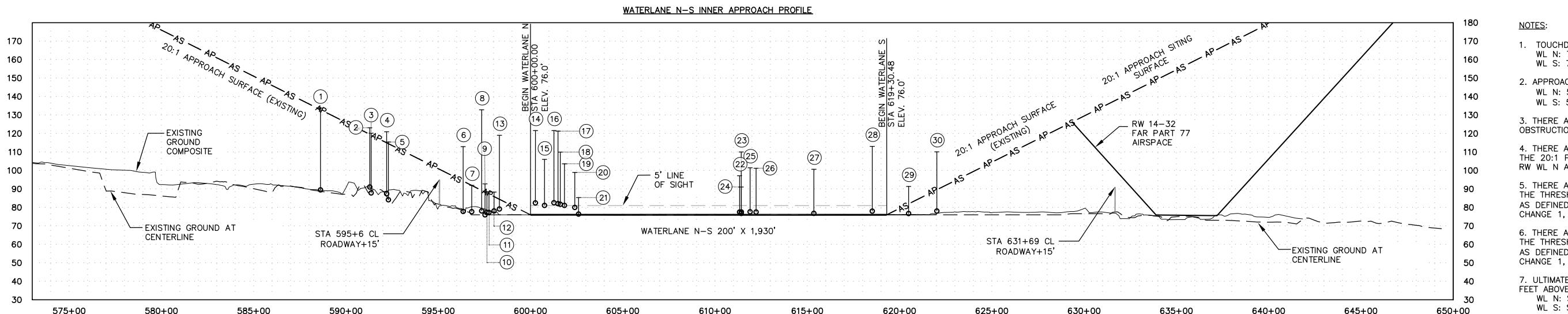
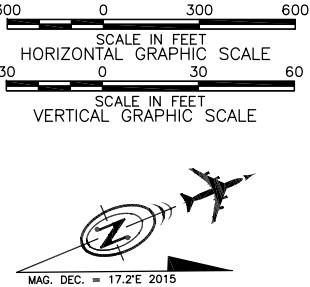
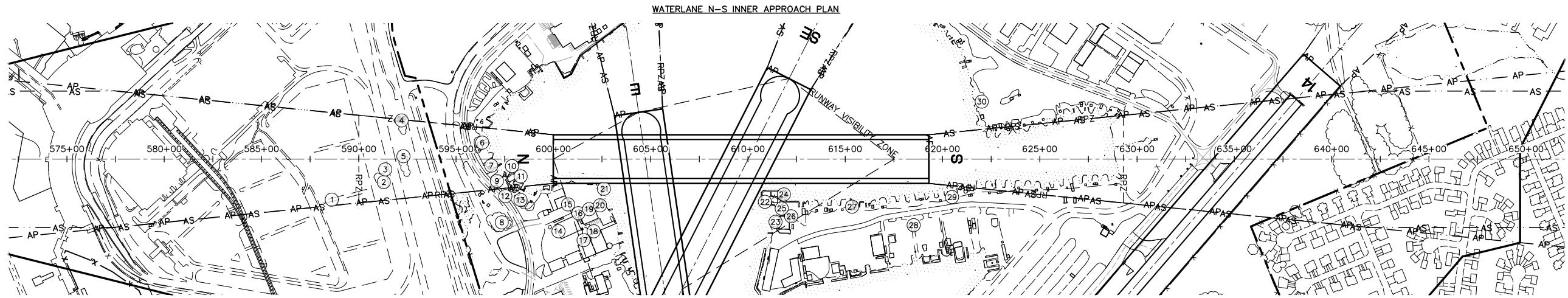
PART 77 SURFACE OBSTRUCTIONS											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	trigger EVENT	DISPOSITION	STAGE TO CORRECT
1	TREE	386+19.9/93.5L	85.4'	36.3'	121.7'	APPROACH	120'	2'	W/L MRKG	TO BE REMOVED	LONG
2	BUILDING	389+28.6/195.7R	80.9'	30.8'	111.6'	TRANSITION	107'	5'	N/A	TO REMAIN	N/A
3	BUILDING	390+76.1/154.8R	77.8'	28.1'	105.9'	APPROACH	97'	9'	N/A	TO REMAIN	N/A
4*	TREE	399+44.1/264.8R	80.0'	19.0'	99.0'	TRANSITION	96'	3'	N/A	TO REMAIN	N/A
5*	HANGAR	400+12.9/306.9R	80.9'	22.8'	103.7'	TRANSITION	102'	2'	N/A	TO REMAIN	N/A
6*	HANGAR	400+15.5/389.3R	82.5'	39.1'	121.6'	TRANSITION	114'	8'	N/A	TO REMAIN	N/A
7*	POLE	400+42.9/358.7R	81.8'	28.3'	110.0'	TRANSITION	109'	1'	N/A	TO REMAIN	N/A
8*	WINDMILL	400+49.6/372.1R	82.1'	39.3'	121.4'	TRANSITION	111'	10'	N/A	TO REMAIN	N/A
9*	AIRCRAFT	401+11.5/220.9R	79.2'	31.5'	110.7'	TRANSITION	87'	24'	N/A	TO REMAIN	N/A
10*	BUILDING	401+55.9/234.2R	79.8'	24.3'	104.2'	TRANSITION	91'	13'	N/A	TO REMAIN	N/A
11*	TREE	402+33.7/200.8R	79.2'	31.5'	110.7'	TRANSITION	87'	24'	N/A	TO REMAIN	N/A
12*	BUILDING	402+97.5/174.5R	77.4'	11.6'	89.0'	TRANSITION	83'	6'	N/A	TO REMAIN	N/A
13*	TREE	403+54.3/137.4R	77.5'	14.0'	91.5'	TRANSITION	78'	14'	N/A	TO REMAIN	N/A
14	ANTENNA	403+71.2/377.6R	80.0'	35.0'	115.0'	TRANSITION	112'	3'	N/A	TO REMAIN	N/A
15*	TREE	404+53.2/124.3R	77.1'	18.6'	95.6'	PRIMARY	76'	20'	W/L MRKG	TO BE REMOVED	LONG
16*	WIND CONE	404+67.7/167.7R	77.7'	16.2'	93.9'	TRANSITION	82'	12'	N/A	TO REMAIN	N/A
17*	FENCE	411+78.4/143.7R	80.2'	6.3'	86.5'	TRANSITION	79'	8'	N/A	TO REMAIN	N/A
18*	FENCE	412+7.9/124.7R	80.2'	6.3'	86.5'	PRIMARY	76'	11'	W/L MRKG	TO RELOCATE	LONG
19	POLE	413+49.0/197.6R	83.4'	28.6'	112.0'	TRANSITION	86'	26'	N/A	TO REMAIN	N/A
20	FENCE	413+51.7/145.5R	85.9'	6.6'	92.5'	TRANSITION	79'	14'	N/A	TO REMAIN	N/A
21	ANTENNA	414+1.1/305.8R	86.4'	32.8'	119.1'	TRANSITION	102'	17'	N/A	TO REMAIN	N/A
22	POLE	414+70.9/327.1R	86.3'	34.0'	120.4'	TRANSITION	105'	15'	N/A	TO REMAIN	N/A
23	GROUND	414+97.2/141.6L	86.1'	0.0'	86.1'	TRANSITION	78'	8'	N/A	TO REMAIN	N/A
24*	GROUND	415+0.6/142.9R	87.4'	0.0'	87.4'	TRANSITION	79'	9'	N/A	TO REMAIN	N/A

PART 77 SURFACE OBSTRUCTIONS											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	trigger EVENT	DISPOSITION	STAGE TO CORRECT
25	TREE	415+28.5/196.3L	84.9'	20.5'	105.4'	TRANSITION	86'	19'	W/L MRKG	TO REMOVE	LONG
26	POLE	420+24.5/269.5L	85.5'	12.5'	98.0'	TRANSITION	97'	1'	N/A	TO REMAIN	N/A
27	TREE	420+89.7/304.6R	87.2'	16.9'	104.2'	TRANSITION	102'	2'	W/L MRKG	TO REMOVE	LONG
28	POLE	420+93.2/252.0L	85.6'	12.6'	98.3'	TRANSITION	94'	4'	N/A	TO REMAIN	N/A
29	TREE	421+85.2/419.3L	88.3'	31.1'	119.4'	TRANSITION	118'	1'	N/A	TO REMAIN	N/A
30	POLE	422+73.1/206.8L	82.5'	12.4'	94.9'	TRANSITION	88'	7'	N/A	TO REMAIN	N/A
31	POLE	422+81.1/238.3L	83.2'	11.7'	94.9'	TRANSITION	92'	3'	N/A	TO REMAIN	N/A
32	GROUND	423+83.3/170.7L	84.9'	0.0'	85.0'	TRANSITION	83'	2'	N/A	TO REMAIN	N/A
33	POLE	423+85.2/368.4L	85.1'	28.0'	113.2'	TRANSITION	111'	2'	N/A	TO REMAIN	N/A
34	FENCE	425+28.6/140.2R	82.4'	5.3'	87.7'	TRANSITION	78'	10'	N/A	TO REMAIN	N/A
35	ROAD	425+52.7/223.3R	84.0'	15.0'	99.0'	TRANSITION	90'	9'	N/A	TO REMAIN	N/A
36	SIGN	425+61.5/223.3L	84.5'	9.8'	94.3'	TRANSITION	85'	10'	N/A	TO REMAIN	N/A
37	POLE	425+66.8/192.6L	83.7'	22.3'	106.0'	TRANSITION	97'	9'	N/A	TO REMAIN	N/A

\*NOTE:  
OBSTRUCTIONS #4-13, 15-18, AND 24  
ARE ALSO RVZ OBSTRUCTIONS WITH TOP  
ELEVATIONS 5 FEET OR MORE ABOVE THE  
WATERLANE CENTERLINES (ELEV. 76.0').

STATE OF ALASKA	DEPARTMENT OF TRANSPORTATION	AND PUBLIC FACILITIES
CENTRAL REGION	LAKE HOOD SEAPLANE BASE	DATE: 06/30/2017
	ANCHORAGE, ALASKA	SHEET: 13
	AIRPORT LAYOUT PLAN	OF: 19
INNER PORTION OF THE APPROACH SURFACE WATERLANE E-W		

Designed By: C. SLATEN  
Drawn By: C. SLATEN  
Checked By: M. KARTEZHNIKOVA



**NOTES:**

- TOUCHDOWN ZONE ELEVATION (NAVD 88): WL N: 76.0 FEET WL S: 76.0 FEET
- APPROACH SURFACE DIMENSIONS: WL N: 5,000' x 1,250' x 250' WL S: 5,000' x 1,250' x 250'
- THERE ARE NO CONTROLLING OBSTRUCTIONS FOR WL N AND WL S.
- THERE ARE OBJECT PENETRATIONS TO THE 20:1 PART 77 APPROACH SURFACE FOR RW WL N AND WL S.
- THERE ARE OBJECT PENETRATIONS TO THE THRESHOLD SITING SURFACE OF WL N, AS DEFINED IN FAA AC 150/5300-13A, CHANGE 1, CHAPTER 3, TABLE 3-2, LINE 2.
- THERE ARE NO OBJECT PENETRATIONS TO THE THRESHOLD SITING SURFACE OF WL S, AS DEFINED IN FAA AC 150/5300-13A, CHANGE 1, CHAPTER 3, TABLE 3-2, LINE 2.
- ULTIMATE APPROACH SURFACE IS 100 FEET ABOVE THE THRESHOLD AT:  
WL N: STA 580+00.00  
WL S: STA 639+30.48

PART 77 SURFACE OBSTRUCTIONS											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	trigger EVENT	DISPOSITION	STAGE TO CORRECT
1	POLE	588+61.9/208.5R	89.5'	44.3'	133.8'	APPROACH	133'	1'	N/A	TO REMAIN	N/A
2	TREE	591+28.8/118.6R	91.0'	32.0'	123.1'	APPROACH	119'	4'	W/L MRKG	TO BE REMOVED	LONG
3	POLE	591+36.3/53.2R	87.8'	32.4'	120.2'	APPROACH	119'	1'	N/A	TO REMAIN	N/A
4	TREE	592+20.5/198.3L	87.4'	33.5'	120.9'	APPROACH	115'	6'	W/L MRKG	TO BE REMOVED	LONG
5	TREE	592+29.7/14.5L	84.2'	31.2'	115.4'	APPROACH	114'	1'	W/L MRKG	TO BE REMOVED	LONG
6	TREE	596+34.8/84.6L	77.8'	35.1'	112.9'	APPROACH	94'	19'	W/L MRKG	TO BE REMOVED	LONG
7	BUILDING	596+81.3/33.5R	77.7'	14.3'	92.0'	APPROACH	92'	0'	N/A	TO REMAIN	N/A
8	TREE	597+35.1/324.9R	78.1'	54.7'	132.8'	TRANSITION	114'	19'	N/A	TO REMAIN	N/A
9	TREE	597+53.3/78.1R	76.1'	16.7'	92.8'	APPROACH	89'	4'	W/L MRKG	TO BE REMOVED	LONG
10	BUILDING	597+63.4/99.8R	77.3'	11.3'	88.6'	APPROACH	87'	2'	N/A	TO REMAIN	N/A
11	BUILDING	597+74.9/117.5R	77.3'	11.0'	88.4'	APPROACH	87'	1'	N/A	TO REMAIN	N/A
12	BUSH	597+74.9/157.4R	78.1'	10.2'	88.4'	TRANSITION	87'	1'	N/A	TO REMAIN	N/A
13	TREE	598+31.5/209.8R	79.1'	39.9'	119.0'	TRANSITION	94'	25'	N/A	TO REMAIN	N/A
14	HANGAR	600+26.6/370.6R	82.2'	39.5'	121.6'	TRANSITION	111'	11'	N/A	TO REMAIN	N/A
15	HANGAR	600+76.0/233.0R	80.1'	26.0'	106.1'	TRANSITION	91'	15'	N/A	TO REMAIN	N/A
16*	HANGAR	601+27.0/326.1R	82.5'	39.1'	121.6'	TRANSITION	105'	17'	N/A	TO REMAIN	N/A
17*	WINDMILL	601+48.9/357.4R	82.1'	39.3'	121.4'	TRANSITION	109'	12'	N/A	TO REMAIN	N/A
18*	POLE	601+61.2/348.8R	81.8'	28.3'	110.0'	TRANSITION	108'	2'	N/A	TO REMAIN	N/A
19*	HANGAR	601+84.0/257.2R	80.6'	23.0'	103.7'	TRANSITION	95'	9'	N/A	TO REMAIN	N/A
20*	TREE	602+40.0/237.6R	80.0'	19.0'	99.0'	TRANSITION	92'	7'	N/A	TO REMAIN	N/A
21*	BUSH	602+60.3/152.5R	76.5'	8.9'	85.3'	TRANSITION	80'	5'	N/A	TO REMAIN	N/A
22*	WIND CONE	611+33.0/192.9R	77.5'	19.6'	97.1'	TRANSITION	86'	11'	N/A	TO REMAIN	N/A
23*	TREE	611+41.9/322.3R	76.7'	33.3'	110.0'	TRANSITION	104'	6'	N/A	TO REMAIN	N/A
24*	BUILDING	611+42.2/192.8R	77.6'	13.5'	91.1'	TRANSITION	86'	5'	N/A	TO REMAIN	N/A
25*	BUILDING	611+90.2/293.0R	77.6'	23.8'	101.4'	TRANSITION	100'	1'	N/A	TO REMAIN	N/A
26*	TREE	612+22.3/294.3R	77.6'	23.7'	101.3'	TRANSITION	100'	1'	N/A	TO REMAIN	N/A
27	TREE	615+35.4/244.6R	76.9'	23.9'	100.8'	TRANSITION	93'	8'	N/A	TO REMAIN	N/A
28	TREE	618+51.9/339.5R	78.0'	35.1'	113.1'	TRANSITION	107'	6'	N/A	TO REMAIN	N/A
29	BUILDING	620+49.6/195.0R	76.7'	14.6'	91.3'	TRANSITION	90'	1'	N/A	TO REMAIN	N/A
30	POLE	622+1.7/295.3L	77.7	32.4'	110.1'	TRANSITION	110'	0'	N/A	TO REMAIN	N/A

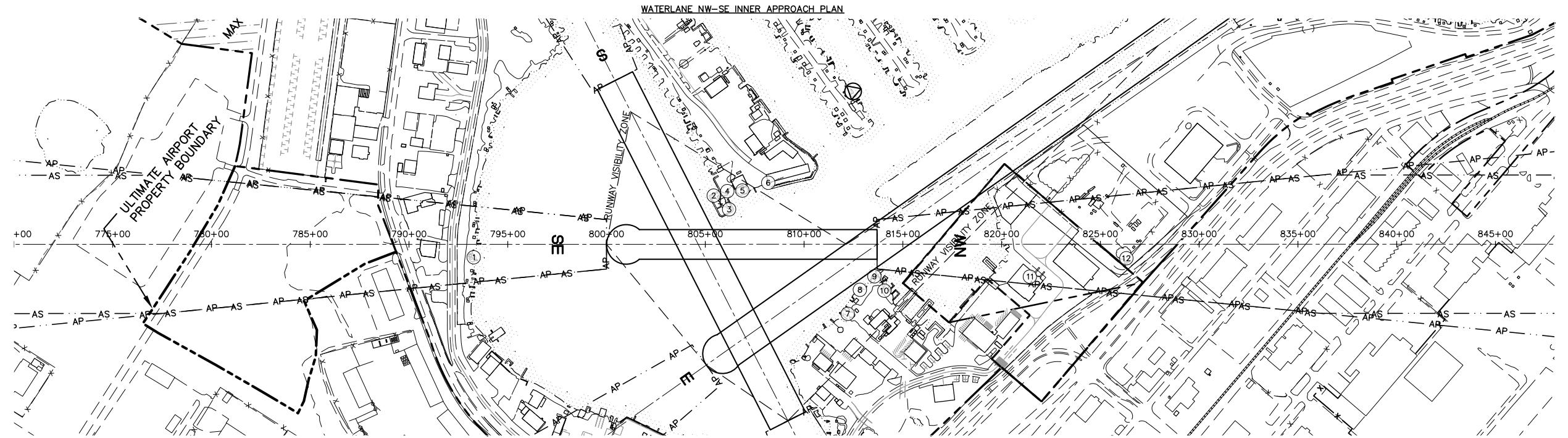
APPROACH SITING SURFACE OBSTACLES (WATERLANE N)											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	trigger EVENT	DISPOSITION	STAGE TO CORRECT
1	POLE	588+61.9/208.5R	89.5'	44.3'	133.8'	LINE 2 APPROACH	133'	1'	N/A	TO REMAIN	N/A
2	TREE	591+28.8/118.6R	91.0'	32.0'	123.1'	LINE 2 APPROACH	120'	3'	W/L MRKG	TO BE REMOVED	LONG
3	POLE	591+36.3/53.2R	87.8'	32.4'	120.2'	LINE 2 APPROACH	119'	1'	N/A	TO REMAIN	N/A
4	TREE	592+20.5/198.3L	87.4'	33.5'	120.9'	LINE 2 APPROACH	115'	6'	W/L MRKG	TO BE REMOVED	LONG
5	TREE	592+29.7/14.5L	84.2'	31.2'	115.4'	LINE 2 APPROACH	115'	0'	W/L MRKG	TO BE REMOVED	LONG
6	TREE	596+34.8/84.6L	77.8'	35.1'	112.9'	LINE 2 APPROACH	94'	19'	W/L MRKG	TO BE REMOVED	LONG
7	BUILDING	596+81.3/33.5R	77.7'	14.3'	92.0'	LINE 2 APPROACH	92'	0'	N/A	TO REMAIN	N/A
9	TREE	597+53.3/78.1R	76.1'	16.7'	92.8'	LINE 2 APPROACH	88'	3'	W/L MRKG	TO BE REMOVED	LONG
10	BUILDING	597+63.4/99.8R	77.3'	11.3'	88.6'	LINE 2 APPROACH	88'	1'	N/A	TO REMAIN	N/A
11	BUILDING	597+74.9/117.5R	77.3'	11.0'	88.4'	LINE 2 APPROACH	87'	1'	N/A	TO REMAIN	N/A

APPROACH SITING SURFACE OBSTACLES (WATERLANE S)											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	trigger EVENT	DISPOSITION	STAGE TO CORRECT
	NONE										

\*NOTE:  
OBSTRUCTIONS #16-26 ARE ALSO RVZ OBSTRUCTIONS WITH TOP ELEVATIONS 5 FEET OR MORE ABOVE THE WATERLANE CENTERLINES (ELEV. 76.0').

STATE OF ALASKA	DEPARTMENT OF TRANSPORTATION	AND PUBLIC FACILITIES
CENTRAL REGION	LAKE HOOD SEAPLANE BASE	DATE: 06/30/2017
ANCHORAGE, ALASKA	AIRPORT LAYOUT PLAN	SHEET: 15 OF 19
INNER PORTION OF THE APPROACH SURFACE WATERLANE N-S		

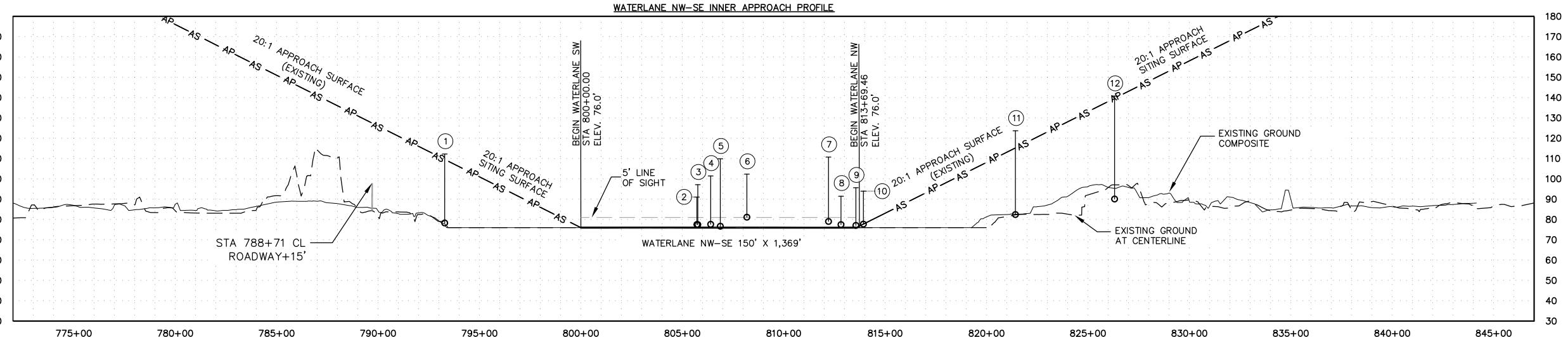
Designed By: C. SLATEN  
Drawn By: C. SLATEN  
Checked By: M. KARTEZHNIKOVA



300 0 300 600  
SCALE IN FEET  
HORIZONTAL GRAPHIC SCALE  
0 30 60  
SCALE IN FEET  
VERTICAL GRAPHIC SCALE



- NOTES:**
- TOUCHDOWN ZONE ELEVATION (NAVD 88):  
WL SE: 76.0 FEET  
WL NW: 76.0 FEET
  - APPROACH SURFACE DIMENSIONS:  
WL SE: 5,000' x 1,250' x 250'  
WL NW: 5,000' x 1,250' x 250'
  - THERE ARE NO CONTROLLING OBSTRUCTIONS FOR WL SE AND WL NW.
  - THERE ARE OBJECT PENETRATIONS TO THE 20:1 PART 77 APPROACH SURFACE FOR RW WL SE AND WL NW.
  - THERE ARE OBJECT PENETRATIONS TO THE THRESHOLD SITING SURFACE OF WL SE AND WL NW, AS DEFINED IN FAA AC 150/5300-13A, CHANGE 1, CHAPTER 3, TABLE 3-2, LINE 2.
  - ULTIMATE APPROACH SURFACE IS 100 FEET ABOVE THE THRESHOLD AT:  
WL SE: STA 780+00.00  
WL NW: STA 833+69.46



Date Plotted: 7/11/2017 3:41 PM  
Plot Name: 16-JUNIPER EDITION OF THE APPROACH SURFACE WATERLANE NW-SE  
Layout Name: G\_Engineering\_EngLibraries\_Vortex\_Portrait\_Plot.dwg  
File Name: V:\D\AG\2016\EngLibraries\Airport\Plots\16-JUNIPER.dwg

PART 77 SURFACE OBSTRUCTIONS											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
1	TREE	793+27.4/65.7R	78.8'	33.4'	112.3'	APPROACH	110'	2'	W/L MRKG	TO BE REMOVED	LONG
2*	BUILDING	805+72.0/213.1L	77.6'	13.5	91.1'	TRANSITION	88'	3'	N/A	TO REMAIN	N/A
3*	WIND CONE	805+76.2/204.9L	77.5'	19.6'	97.1'	TRANSITION	87'	10'	N/A	TO REMAIN	N/A
4**	BUILDING	806+39.6/301.3L	77.6'	23.8'	101.4'	TRANSITION	101'	0'	N/A	TO REMAIN	N/A
5**	TREE	806+87.5/257.6L	76.7	33.3'	110.0'	TRANSITION	97'	13'	N/A	TO REMAIN	N/A
6*	BUILDING	808+18.3/311.1L	81.1'	21.2'	102.3'	TRANSITION	102	0'	N/A	TO REMAIN	N/A
7*	TREE	812+20.5/351.6R	79.0'	31.7'	110.7'	TRANSITION	109'	2'	N/A	TO REMAIN	N/A
8*	TREE	812+82.4/230.2R	77.5'	14.0'	91.5'	TRANSITION	91'	1'	N/A	TO REMAIN	N/A
9**	TREE	813+55.5/162.5R	77.1'	18.6'	95.6'	TRANSITION	82'	14'	N/A	TO REMAIN	N/A
10*	WIND CONE	813+92.6/189.5R	77.7'	16.2'	93.9'	TRANSITION	86'	8'	N/A	TO REMAIN	N/A
11	BUILDING	821+42.5/163.9R	82.5'	41.2'	123.7'	APPROACH	115'	9'	N/A	TO REMAIN	N/A
12	TREE	826+31.3/71.2R	90.1'	50.7'	140.8'	APPROACH	139'	2'	W/L MRKG	TO BE REMOVED	LONG

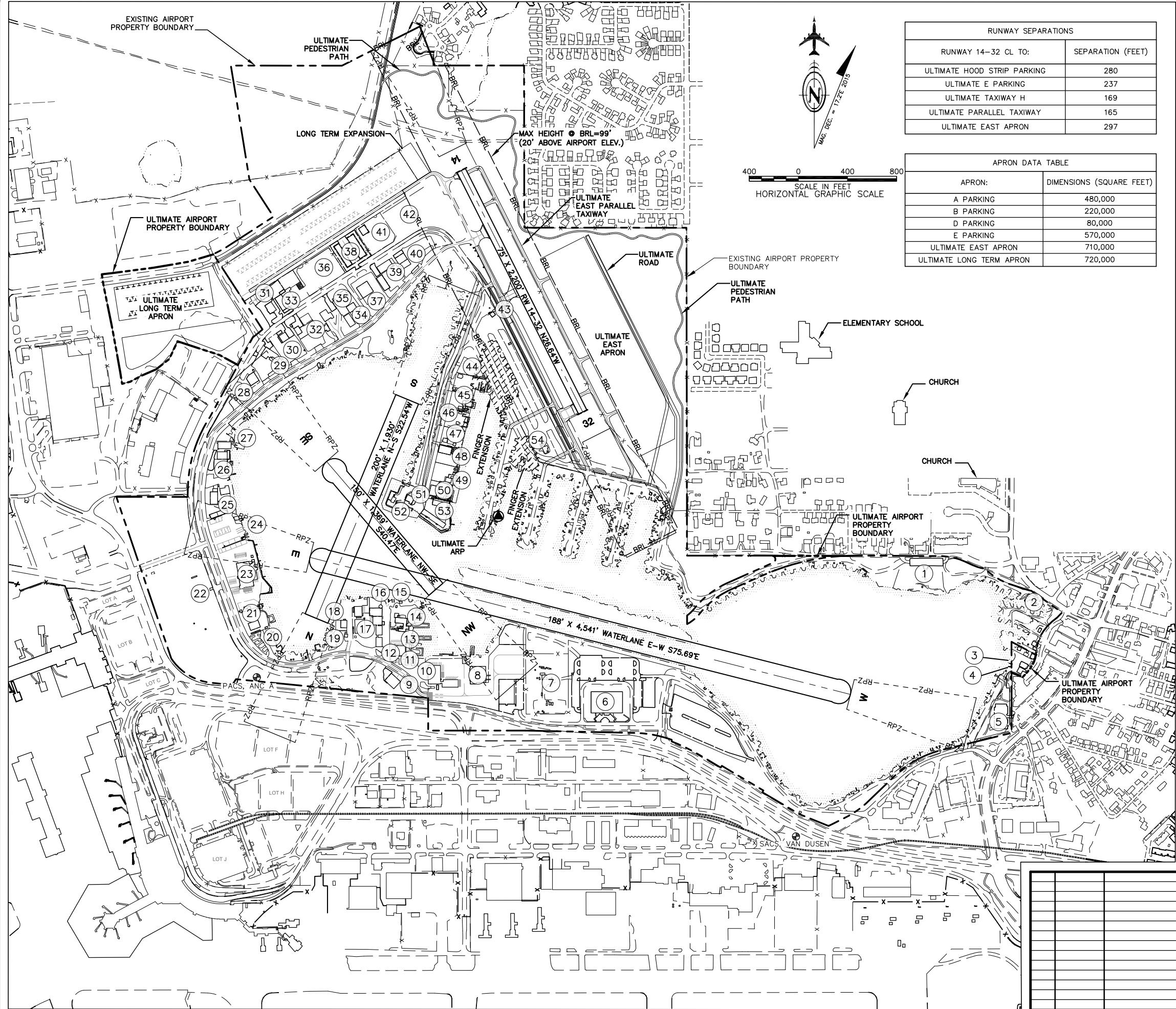
\*NOTE:  
OBSTRUCTIONS #2-10 ARE ALSO RVZ OBSTRUCTIONS WITH TOP ELEVATIONS 5 FEET OR MORE ABOVE THE WATERLANE CENTERLINES (ELEV. 76.0').

APPROACH SITING SURFACE OBSTACLES (WATERLANE SE)											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
1	TREE	793+27.4/65.6R	78.8'	33.4'	112.3'	LINE 2 APPROACH	110'	2'	W/L MRKG	TO BE REMOVED	LONG

APPROACH SITING SURFACE OBSTACLES (WATERLANE NW)											
ID #	DESCRIPTION	STATION/ OFFSET	GRD ELEV	AGL	TOP ELEV	SURFACE PENETRATED	SURFACE ELEV	AMOUNT PENETRATION	TRIGGER EVENT	DISPOSITION	STAGE TO CORRECT
11	BUILDING	821+42.5/163.9R	82.5'	41.2'	123.7'	LINE 2 APPROACH	115'	9'	N/A	TO REMAIN	N/A
12	TREE	826+31.3/71.2R	90.1'	50.7'	140.8'	LINE 2 APPROACH	139'	2'	W/L MRKG	TO BE REMOVED	LONG

STATE OF ALASKA	DEPARTMENT OF TRANSPORTATION	AND PUBLIC FACILITIES	CENTRAL REGION
LAKE HOOD SEAPLANE BASE			
ANCHORAGE, ALASKA			
AIRPORT LAYOUT PLAN			
DATE: 06/30/2017	SHEET: 16	OF 19	INNER PORTION OF THE APPROACH SURFACE WATERLANE NW-SE
BY DATE	REVISION		

Date Plotted: 7/11/2017 3:40 PM DRAWING  
Layout Name: 17 - FACILITIES AREA DRAWING  
File Name: G\_Engineering\_Eng\_Engineering\_Eng.dwg



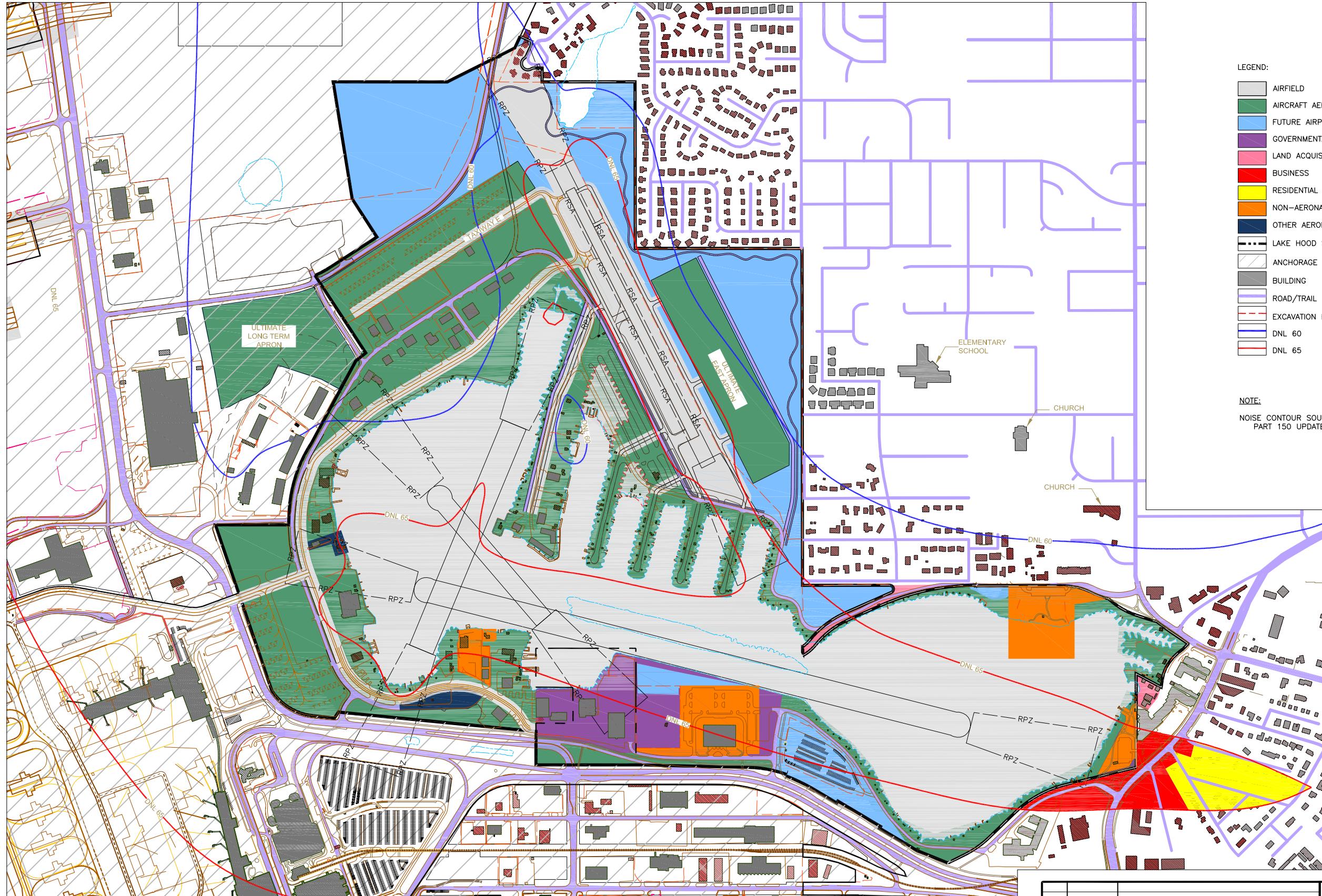
FACILITIES IDENTIFICATION KEY			
BLDG. NO. <b>#</b>	LESSOR	EXP. DATE	ELEV.
1	MUNICIPALITY OF ANCHORAGE (SPENARD BEACH PARK)	03/01/92	-
2	ALASKA APPRAISAL AND CONSULTING	04/30/20	-
3	FLOYD, WILLIAM W.	06/24/16	-
4	ERHART, LEW AND DOROTHY	11/30/16	-
5	RHM ANCHORAGE, LLC	07/31/40	-
6	DOT&PF	-	121
7	FAA	-	108
8	OAS	-	123
9	ALASKA WING CIVIL AIR PATROL	10/14/17	102
10	ALASKA DPS	06/30/65	117
11	ALASKA WING CIVIL AIR PATROL	11/30/15	-
12	BIG HANGAR, LLC	05/20/33	115
13	RUST'S FLYING SERVICE, INC	07/31/20	91
14	ENSTROM ENTERPRISES, LLC	10/31/28	96
15	OPPORTUNITY FLYING CLUB, INC	11/30/15	89
16	ALASKA AVIATION HERITAGE MUSEUM	09/30/17	104
17	ALASKA AVIATION HERITAGE MUSEUM	07/01/15	121
18, 19	BWANA, INC	03/03/18	106
20	DAVIDSON, DAN & GAROUTTE, KIRK	07/31/12	94
21	ALASKA AIR TAXI, LLC	06/30/17	97
22	LAKE-AIRE ALASKA, LLC	05/17/50	-
23	LAKE-AIRE ALASKA, LLC	12/31/60	111
24	ACE HANGARS/FUELS, LLC	07/06/09	92
25	LAKE HOOD AIR HARBOR, INC	12/31/67	101
26	KATMAI LODGE, LLC	03/31/37	110
27	TRINITY INVESTMENTS, LLC	06/30/62	105
28	MC LEASING, LLC	01/31/51	106
29	WULIK-DELONG	06/30/26	108
30	rita n. sholton, inc	06/30/25	98
31	SRAMEK AVIATION SERVICES, LLC	05/31/12	110
32	HATELY, WILLIAM	08/21/31	107
33	AIRPLANE HANGARS INC	08/14/19	106
34	BLUE SKY HANGARS, LLC	05/31/64	105
35	HANGARS 907, LLC	03/31/66	105
36	AIRPLANE HANGARS, INC	06/14/15	-
37	INVESTMENT GROUP, INC	04/06/37	95
38	LAKE HOOD AIR PARK ASSOCIATION	08/31/61	102
39	GREATLAND HANGARS ASSOCIATION	04/30/67	-
40	HATELY, WILLIAM	10/14/52	106
41	MILLER, C.G.	03/31/58	107
42	LAKE SPENARD AIRPARK LLC	10/14/49	-
43	ACE HANGARS/FUELS, LLC	04/30/17	99
44	MC LEASING, LLC	05/31/48	103
45	JENSON, JAMES AND LOREE	06/14/17	85
46	EULE, JAMES M.	08/24/32	85
47	LAKE HOOD ASSOCIATES	01/31/36	95
48	ALASKA AIRCRAFT SALES, INC.	08/14/24	112
49	JOSEPH AND TERRY FERGESSON REVOCABLE TRUST	09/30/23	87
50	SILVERTIP, LLC	04/05/59	109
51	HANGAR GROUP, INC	09/30/17	101
52	ALASKA AIRMEN'S ASSOCIATION, INC	09/30/38	97
53	THE POINT ASSOCIATION, INC	05/31/59	102
54	GEE BEE, INC	03/31/32	102

Designed By: C. SLATEN

Drawn By: C. SLATEN

Checked By: M. KARTEZHNIKOVA

Date Plotted: 7/11/2017 3:10 PM  
Layout Name: 18-LAND USE PLAN  
File Name: G:\Engineering\Eng-Libraries\Airport Layout Plans\UID-AFP-2016\Final\Sheet 18.dwg



LEGEND:

- AIRFIELD
- AIRCRAFT AERONAUTICAL
- FUTURE AIRPORT DEVELOPMENT
- GOVERNMENTAL
- LAND ACQUISITION
- BUSINESS
- RESIDENTIAL
- NON-AERONAUTICAL
- OTHER AERONAUTICAL
- LAKE HOOD SEAPLANE BASE (LHD) BOUNDARY
- ANCHORAGE INTERNATIONAL AIRPORT (ANC)
- BUILDING
- ROAD/TRAIL
- EXCAVATION BOUNDARY
- DNL 60
- DNL 65

NOTE:

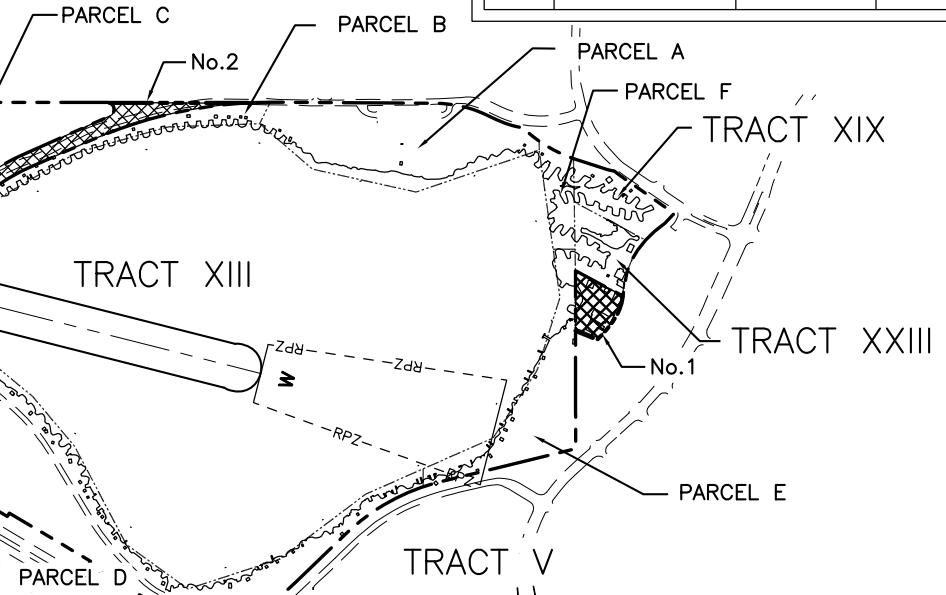
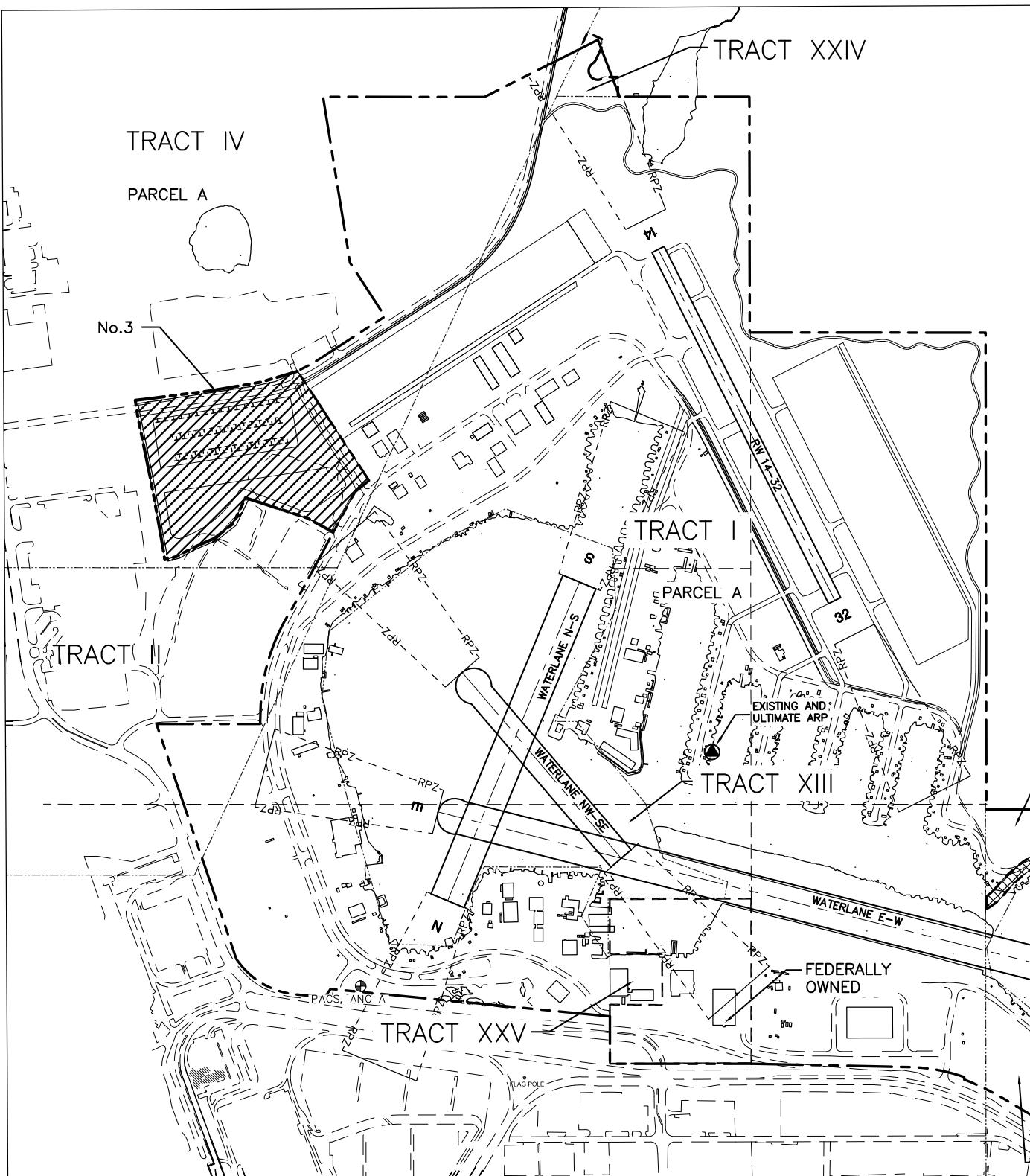
NOISE CONTOUR SOURCE: ANCHORAGE INTERNATIONAL AIRPORT F.A.R. PART 150 UPDATE - 2020 NOISE EXPOSURE MAP (FIGURE 11)



400 0 400 800  
SCALE IN FEET  
HORIZONTAL GRAPHIC SCALE

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES CENTRAL REGION		
LAKE HOOD SEAPLANE BASE		DATE: 6/30/2017
ANCHORAGE, ALASKA AIRPORT LAYOUT PLAN		SHEET: 18
LAND USE PLAN		OF 19

BY DATE REVISION



PROPERTY TABLE								
REF. No.	PART OF (TRACT, PARCEL):	APPROXIMATE ACREAGE	AIP FAA FUNDED	GRANTOR	GRANTEE	INTEREST	DATE ACQUIRED	RECORDED DOC INFO
-	TRACT I PARCEL A	315.62	NO	USA	SOA	FEE	6/27/1959	0191/0159
-	TRACT II	8.15	NO	USA	SOA	FEE	2/9/1967	0340/0204
-	TRACT IV (PARCEL A)	37.96	NO	USA	SOA (DNR)	FEE	08/30/1961	0229/0366
				SOA (DNR)	SOA	ILMT (1)	1/28/1964	1090/0839
-	TRACT V PARCEL A	6.87	NO	CITY OF ANCHORAGE	SOA	FEE (2)	2/28/1975	0004/0067
-	TRACT V PARCEL B	2.22	NO	CITY OF ANCHORAGE	SOA	FEE	7/27/1973	0457/0888
-	TRACT V PARCEL C	3.76	NO	CITY OF ANCHORAGE	SOA	FEE	7/27/1973	0457/0888
-	TRACT V PARCEL D	20.54	NO	CITY OF ANCHORAGE	SOA	FEE	2/3/1975	L-62/0393
-	TRACT V PARCEL E	3.94	NO	CITY OF ANCHORAGE	SOA	FEE	7/27/1975	0457/0888
-	TRACT V PARCEL F	1.04	NO	USA	SOA	FEE	7/27/1975	0457/0888
-	TRACT XIII	146.85	NO	USA	SOA (STATEHOOD ACT)	FEE	01/03/1959	-
				SOA (DNR)	SOA (DOA)	ILMT	01/31/1975	0234/0338
-	TRACT XIX	1.62	NO	BARTLETT, LYNN & CLARK,SUSAN	SOA (DOT & PF)	FEE	9/3/2002	2002-060116-0
							9/3/2002	2002-060117-0
							9/3/2002	2002-060118-0
-	TRACT XXIII	1.51	YES	EBS, LLC	SOA (DOT & PF)	FEE	5/14/2010	2010-022491-0
-	TRACT XXIV	1.39	YES	6 PROPERTIES/6 OWNERS(3)			2011	
-	TRACT XXV	1.90	NO	USA	SOA	FEE	12/5/1994	297/0201
No. 1	N/A	0.81		TO BE ACQUIRED				
No. 2	N/A	1.65		PUBLIC ROW				
No. 3	IV	19.27		LHD PROPERTY BOUNDARY TO BE CHANGED WHEN THE ULTIMATE LONG TERM APRON IS DEVELOPED.				

## NOTES:

1. TRACT III & IV, ILMT LACKED A FULL DESCRIPTION WHICH WAS ADDRESSED IN AN UNRECORDED CORRECTED ILMT.
  2. TRACT V, PARCEL A WAS ORIGINALLY ACQUIRED AS LOT L-1 OF PLAT NO. 73-145 AND WAS LATER REPLATTED BY THE SOA AS TR. L-2 OF PLAT NO. 85-349
  3. TRACT XXIV, SEE CURRENT TITLE OPINION FOR DETAILS.
  4. SEE CURRENT TITLE OPINION FOR FULL PROPERTY HISTORY ON EACH TRACT.



A horizontal graphic scale bar with markings at 400, 0, 400, and 800 feet. The bar is divided into four equal segments by these markings. Below the bar, the text "SCALE IN FEET" is centered above the first segment, and "HORIZONTAL GRAPHIC SCALE" is centered below the entire bar.

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

## **LAKE HOOD SEAPLANE BASE**

DATE:  
22/02/2011

SHEET:

19

OF  
19

1

## LEGEND:

——— LHD AIRPORT PROPERTY LINE  
 - - - - - PARCEL LINE  
 PROPERTY TO BE ACQUIRED  
 ULTIMATE DEVELOPMENT  
 RPZ RUNWAY PROTECTION ZONE





