

TO: Michael Harmon, P.E., CBS Municipal Engineer  
THROUGH: Aaron Christie, P.E., Sr. Project Manager  
FROM: Ben Mello, C.M., Aviation Project Manager  
DATE: January 31, 2024  
SUBJECT: Sitka SPB – 2024 Noise Study Revisions

This memorandum details the methodology and results for the fourth iteration of the noise analysis associated with the new Sitka Seaplane Base (SPB). Based on the previous reviews by the Federal Aviation Administration (FAA), the new Sitka Seaplane Base noise analysis was revised using the Aviation Environmental Design Tool (AEDT) Version 3e and applying non-standard AEDT substitutions that reflected the fleet mix, and use of hard ground attenuation in order to accurately model sound travelling over water. In addition, the FAA requested that the revised noise analysis include details about the methodology and data used for modeling and to indicate the necessary approvals that were received prior to conducting the modeling.

Originally, the first iteration of this noise model was submitted in January 2021 as an appendix to the Sitka SPB Draft EA. The second iteration was submitted in a memorandum on March 24<sup>th</sup>, 2021. The third iteration was submitted in a memorandum on January 17<sup>th</sup>, 2023. The two (2) memorandums submitted prior to this memo should be read to understand the full background of this noise study. To summarize them in short:

- 1) **1st Memorandum – 2<sup>nd</sup> iteration of noise study.** The first memo was submitted on March 24, 2021, under the subject “Sitka SPB – Noise Re-Evaluation”. This memo was a revision of the 1st noise study submitted with the 2021 Draft EA. The FAA rejected the study due to a non-standard substitution for the fleet mix and use of peak day operations. The FAA approved the non-standard substitution prior to DOWL submitting the 2<sup>nd</sup> memorandum. In addition, for the 2<sup>nd</sup> memo average daily operations were used instead of peak day.
- 2) **2nd Memorandum – 3<sup>rd</sup> iteration of the noise study.** The second memo was submitted on January 17<sup>th</sup>, 2023, under the subject “Sitka SPB – 2022 Noise Re-Evaluation”. Due to not receiving prior approval to run the study using the Hard Ground Attenuation option, The noise analysis was deemed insufficient to meet FAA obligations for environmental review under NEPA as detailed in FAA Order 1050.1F and the associated desk reference. Prior to submitting the 3<sup>rd</sup> and current memo, FAA formally gave approval for use of Hard Ground Attenuation, this is discussed on page 2 “AEDT 3e Noise Study Inputs – Operations.”

### **AEDT 3e Noise Study Inputs – Definitions**

**Receptors** - In order to capture a comprehensive picture of the long-term effects caused by moving the existing seaplane base, the Day-Night Average Sound Level (DNL) metric was run on both the existing and proposed water lanes. The receptors used are detailed in Table 1. These receptors were chosen due to proximity to the existing and proposed seaplane base and meeting the definition of noise sensitive per **CFR Sec. A150.101 Noise contours and land usages**<sup>1</sup>. In addition, a receptor grid covering a 0.8 mi by 0.8 mi area consisting of 6400 points was used to

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<sup>1</sup> Section A150.101, sub section e, paragraph 6 states: “...the noise exposure maps must also contain and identify: ... (6) Location of noise sensitive public buildings (such as schools, hospitals, and health care facilities), and properties on or eligible for inclusion in the National Register of Historic Places.”

draw sound contour lines that can be seen in Figures 1 and 2 (Attachment 1). Two identical receptor grids were used, each grid centered on the respective water lane. Straight-in and -out flight tracks were developed for the SPB (see Figures 1 and 2). Due to the SPB and Sitka Rocky Gutierrez Airport (SIT) being uncontrolled, straight-in and -out flight tracts for the water lanes is the most accurate representation of actual SPB traffic patterns for noise modelling purposes.

**Table 1: Noise receptors used for study.**

Sitka Noise Study Receptors				
Receptor	Receptor Name	Latitude	Longitude	Elevation MSL (ft)
1	Mt. Edgecumbe HS	57.05413	-135.35400	15
2	Mt. Edgecumbe Housing	57.05125	-135.35241	21
3	SEARHC Hospital - Exst	57.05196	-135.35546	21
4	SEARHC Hospital - New	57.05307	-135.35614	21
5	SEARHC Community Health Services	57.05406	-135.35926	20
6	Building 1200-1202 <sup>2</sup>	57.05512	-135.36280	11
7	Eliason Harbor 1 <sup>3</sup>	57.05539	-135.35166	0
8	Eliason Harbor 2 <sup>3</sup>	57.05771	-135.35592	0

### **AEDT 3e Noise Study Inputs – Operations**

**Fleet Mix** - The fleet mix used for this study required non-standard AEDT substitutions to represent aircraft not present in the program, and the use of hard ground attenuation. The FAA's Office of Environment and Energy (AEE) approved these substitutions July 12<sup>th</sup>, 2023. The approval letter conditionally stated that this fleet mix could only be used in AEDT 3e and with Hard Ground Attenuation enabled. The fleet mix and operations for each plane are detailed in Table 2. Operations were split in a 75% to 25% ratio based on prevailing wind direction. In general, wind currents in Sitka tend to blow from the south-southeast (SSE) to west-northwest (WNW) through fall, winter, and spring. In the summer, wind direction tends to be more erratic and can come from any direction though seldom from the northeast (see Figure 3). Operations data was collected by CBS in 2020 by asking stakeholders about their annual operations, as well as using their input on anticipated future operations to create a forecast.

**Operation Groups and Annualizations** – Identical approach and departure operations were used for both the proposed and existing water lane with the only difference being where the operations take place (proposed vs existing/no action). The operation groups were then assigned to their respective annualizations, again, one annualization for the proposed water lane and another for the existing water lane. Due to the existing seaplane base not having capacity for any new based aircraft, operations numbers have become stagnant and are not expected to change for the foreseeable future. Therefore, for the purposes of this study, the existing condition is the same as the future no action alternative.

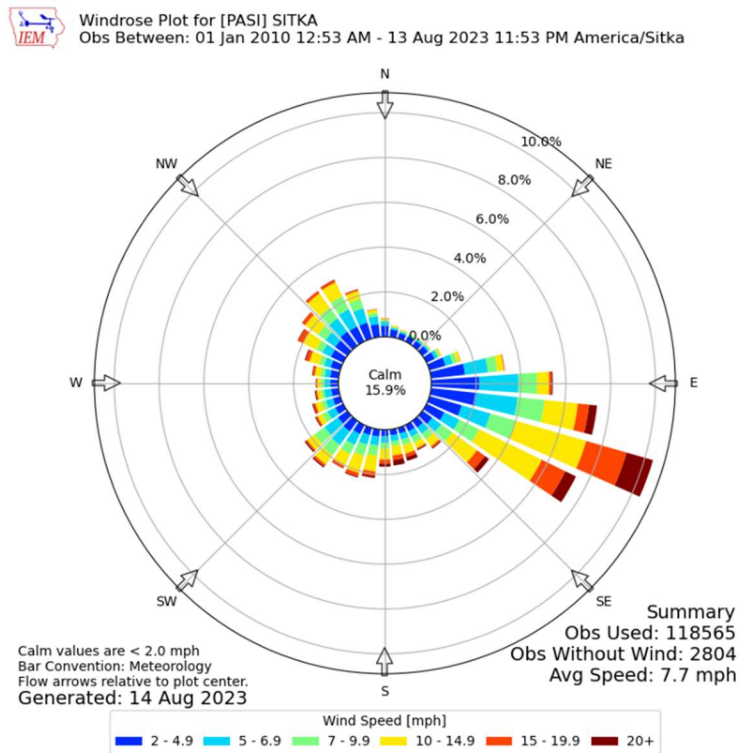
<sup>2</sup> 1200 Seward Ave. is owned by SEARHC, used by the Office of the Controller. 1202 Seward Ave. is owned by the State and used by the Mt. Edgecumbe Highschool's principal.

<sup>3</sup> The Sitka Tribe of Alaska requested that Eliason Harbor 1 and 2 be listed as receptors in the noise study and that these receptors be classified as noise sensitive locations due to their use by the Sitka Tribe of Alaska for education purposes during culture camps which involve school age children.

Table 2: Fleet mix used for the study.

SPB Noise Study - Fleet Mix Data				
Design Aircraft	AEDT EQUIP_ID	Representative AEDT Airframe	AEDT BADA_ID	No. of Daily Ops
Avid Flyer	6311	Piper J-3 Cub (FAS)	C172	2
Cessna 180	3972	Cessna 182 Float	C182	3
Cessna 185	3972	Cessna 182 Float	C182	3
Cessna 206	3973	DeHavilland DHC-2 Mk III Beaver Float	PAY3	2
Cessna 208	2106	Cessna 208 Caravan	TBM8	4
DeHavilland Beaver	3973	DeHavilland DHC-2 Mk III Beaver Float	PAY3	2
Husky A1	3972	Cessna 182 Float	C182	3
Piper Cub	6311	Piper J-3 Cub (FAS)	C172	2
<b>TOTAL:</b>				<b>21</b>

Figure 3 - Meteorological wind rose by Iowa State University, Iowa Environmental Mesonet



**AEDT 3e Noise Study Inputs – Operations Continued**

Although there are 21 operations in each operation group, AEDT 3e only counts the number of aircraft records. For example, this would mean a single aircraft record with 3 operations would only show up as 1 record. In the case of this noise study, there are 11 records representing 21 daily operations (see Table 4).

**Table 3: The operation groups used for the study.**

Operation Groups				
Name	Type	Start Time*	Duration	Number of Records
PROPOSED-21OPS	Aircraft	7/19/2023 0:00	1d 00h	11
EXISTING-21OPS	Aircraft	7/19/2023 0:00	1d 00h	11

\***Start Time** denotes when the operation group begins. Operations within the operation group occur at the time identified by the individual operations. In this case, if operations began at 1:00 AM, they would occur 1 hour after the operation group started (0:00). In the case of the new Sitka SPB noise study, all operations start after 7:00 AM.

**Table 4: Operation group by records and operations per record.**

PROPOSED-21OPS, Operation Group Breakdown			
Record	Airframe	Operation Type	Operation Count
1	Cessna 182 Float	Arrival	2
2	Piper J-3 Cub (FAS)	Departure	1
3	Cessna 182 Float	Departure	2
4	Piper J-3 Cub (FAS)	Departure	1
5	Cessna 182 Float	Departure	3
6	DeHavilland DHC-2 Mk III Beaver Float	Departure	2
7	Cessna 208 Caravan	Departure	2
8	Piper J-3 Cub (FAS)	Arrival	2
9	Cessna 182 Float	Arrival	2
10	DeHavilland DHC-2 Mk III Beaver Float	Arrival	2
11	Cessna 208 Caravan	Arrival	2

### **AEDT 3e Noise Study Inputs – Defined Metrics**

**DNL Metric** – This noise study modeled the Day-Night Average Sound Levels (DNL) of the existing/no action and proposed water lane. Several metric options were left to the default setting and can be viewed in the attached Study Report generated by AEDT (see Attachment 2).

**Hard Ground Attenuation** was enabled when running the DNL metric to simulate sound travelling over a hard surface described as concrete or water. FAA approval for Hard Ground Attenuation was received on July 12<sup>th</sup>, 2023.

**Use Terrain Data** was also enabled when running the DNL metric in order to include elevation data. A DEM derived from LiDAR point data was downloaded from the Alaska Department of Natural Resources, DGGS.

### **AEDT 3e Noise Study Outputs – Results**

There is a noticeable decrease in sensitive noise receptor DNL between the proposed water lane and the future no action/existing alternatives for receptors 1-5 and 7. This is mainly attributed to the movement of the water lane further into the Western Anchorage which puts a larger amount of space between the operations area and the receptors. It should be noted however that the chosen runway ends only represent the furthest extent from the water lane midpoint that operations can occur. As such, there is a slight variability in overall noise exposure. Runway 12W's threshold however is positioned in such a way that pilots taxiing in a straight line towards

Eliason Harbor will find themselves in line with Runway 12W's threshold, poising the new water lane to be in a relatively quieter location than prior. Receptor 8: Eliason Harbor 2, is the only location where the average sound level is higher (see Table 5); this is due to Eliason Harbor's proximity to the new water lane (see Attachment 1: Figure 1). Despite the increased noise level at receptor 8, all receptors remain below the 65 dB DNL putting the new Sitka Seaplane Base within the compatible land use guidelines from Table 1, Appendix A of Title 14 CFR Part 150.

**Table 5: Observed receptor noise level differences.**

Receptor Change in Sound				
ID	Receptor Name	Existing/No Action: Noise Level (dB)	Proposed: Noise Level (dB)	Delta Noise Level (dB)
1	Mt. Edgecumbe HS	61	58	-3
2	Mt. Edgecumbe Housing	53	51	-2
3	SEARHC Hospital - Exst	52	50	-2
4	SEARHC Hospital - New	55	52	-2
5	SEARHC Community Health Services	55	52	-2
6	Building 1200-1202	53	53	0
7	Eliason Harbor 1	60	59	-1
8	Eliason Harbor 2	54	63	+9

## **References**

CBS. (2020). "SPB Annual Operations Forecast." City and Borough of Sitka, Sitka.

DOWL. (2021a). "City & Borough of Sitka - DRAFT Environmental Assessment." *www.dowl.com*, City and Borough of Sitka, <<https://www.dowl.com/wp-content/uploads/2021/01/Sitka-SPB-Draft-EA-Report-and-Appendices.pdf>>.

DOWL. (2021b). "Seaplane Base Layout Plan, Sitka Seaplane Base (09Q)." City and Borough of Sitka, Sitka.

DOWL. (2021b). "City & Borough of Sitka - Final Environmental Assessment." *www.dowl.com*, City and Borough of Sitka, <<https://www.dowl.com/wp-content/uploads/2021/06/Sitka-SPB-FInal-EA-June-2021.pdf>>.

FAA. (2018). "AC 150/5395-1B - Seaplane Bases." *Federal Aviation Administration*, United State Government, <[https://www.faa.gov/documentLibrary/media/Advisory\\_Circular/150-5395-1B-Seaplane-Bases.pdf](https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5395-1B-Seaplane-Bases.pdf)>.

Faegre, A. (1995). "Seaplane Noise." *Aaron Faegre*, <<http://www.faegre.org/files/AF-seaplane-noise-2002.pdf>>. Revised September 10th, 2002

Holland, S. (2023). "Memorandum: Sitka SPB - 2022 Noise Re-Evaluation." DOWL, Anchorage.

Nichols, K. (2021). "Memorandum: Sitka SPB - Noise Re-Evaluation." DOWL, Anchorage.

**ATTACHMENT 1:**  
**NOISE STUDY FIGURES**

**Proposed Sitka SPB Noise Impacts  
Estimated Daily Average (AEDT 3e)**

New Sitka Seaplane Base, Sitka, Alaska



Date: October 06, 2023

**Figure 1**



**WESTERN ANCHORAGE**

**ELIASON HARBOR**

**PROPOSED  
RWY 12W  
LAT: 57.058106  
LONG: -135.358894**

**Proposed Seaplane Base**

**Tracks**

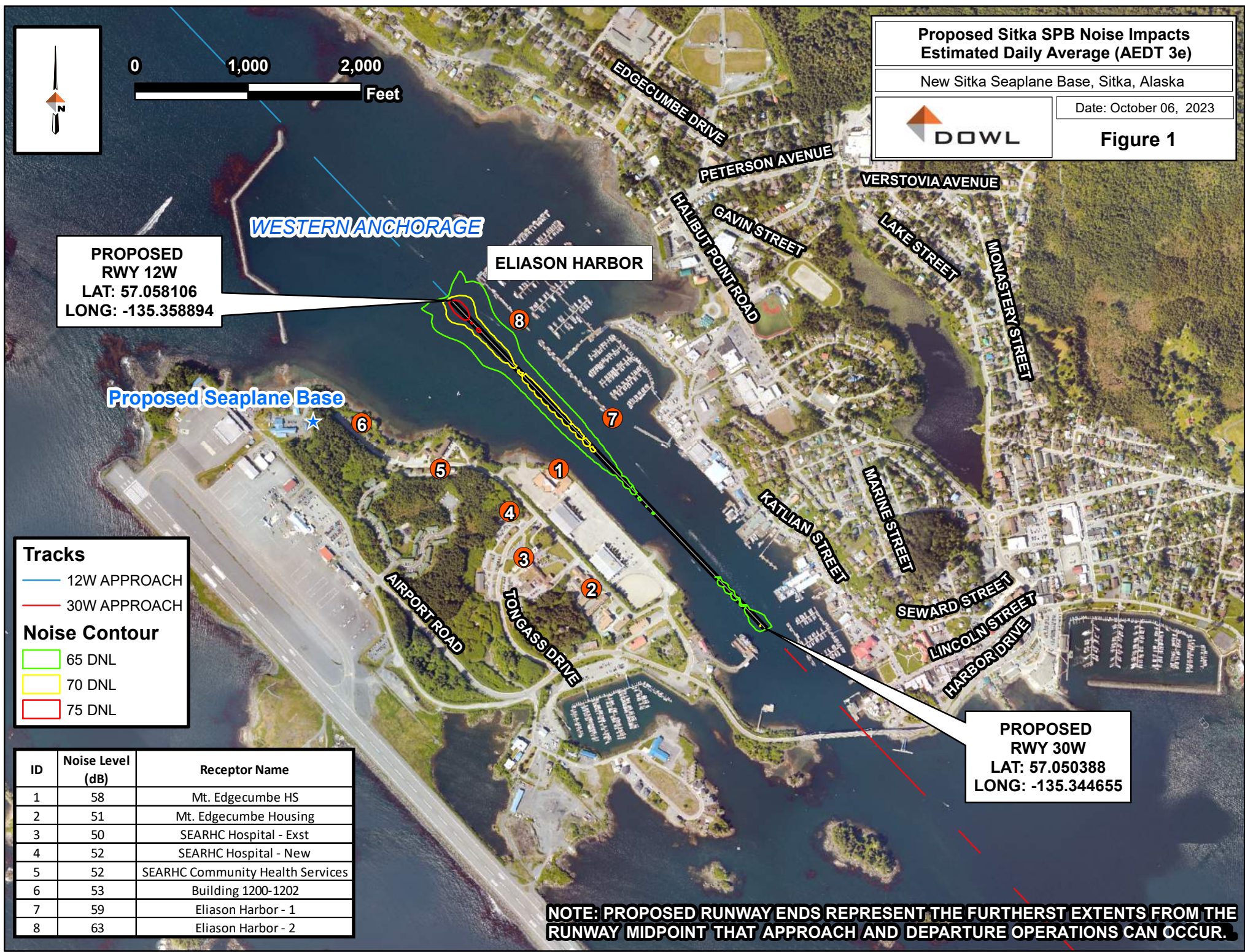
- 12W APPROACH (blue line)
- 30W APPROACH (red line)

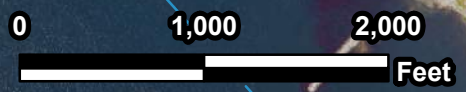
**Noise Contour**

- 65 DNL (green outline)
- 70 DNL (yellow outline)
- 75 DNL (red outline)

ID	Noise Level (dB)	Receptor Name
1	58	Mt. Edgecumbe HS
2	51	Mt. Edgecumbe Housing
3	50	SEARHC Hospital - Exst
4	52	SEARHC Hospital - New
5	52	SEARHC Community Health Services
6	53	Building 1200-1202
7	59	Eliason Harbor - 1
8	63	Eliason Harbor - 2

**NOTE: PROPOSED RUNWAY ENDS REPRESENT THE FURTHERST EXTENTS FROM THE RUNWAY MIDPOINT THAT APPROACH AND DEPARTURE OPERATIONS CAN OCCUR.**





**WESTERN ANCHORAGE**

**ELIASON HARBOR**

**EXISTING RWY 12W**  
 LAT: 57.056109  
 LONG: -135.355316

**Proposed Seaplane Base**

**Tracks**

- 12W APPROACH
- 30W APPROACH

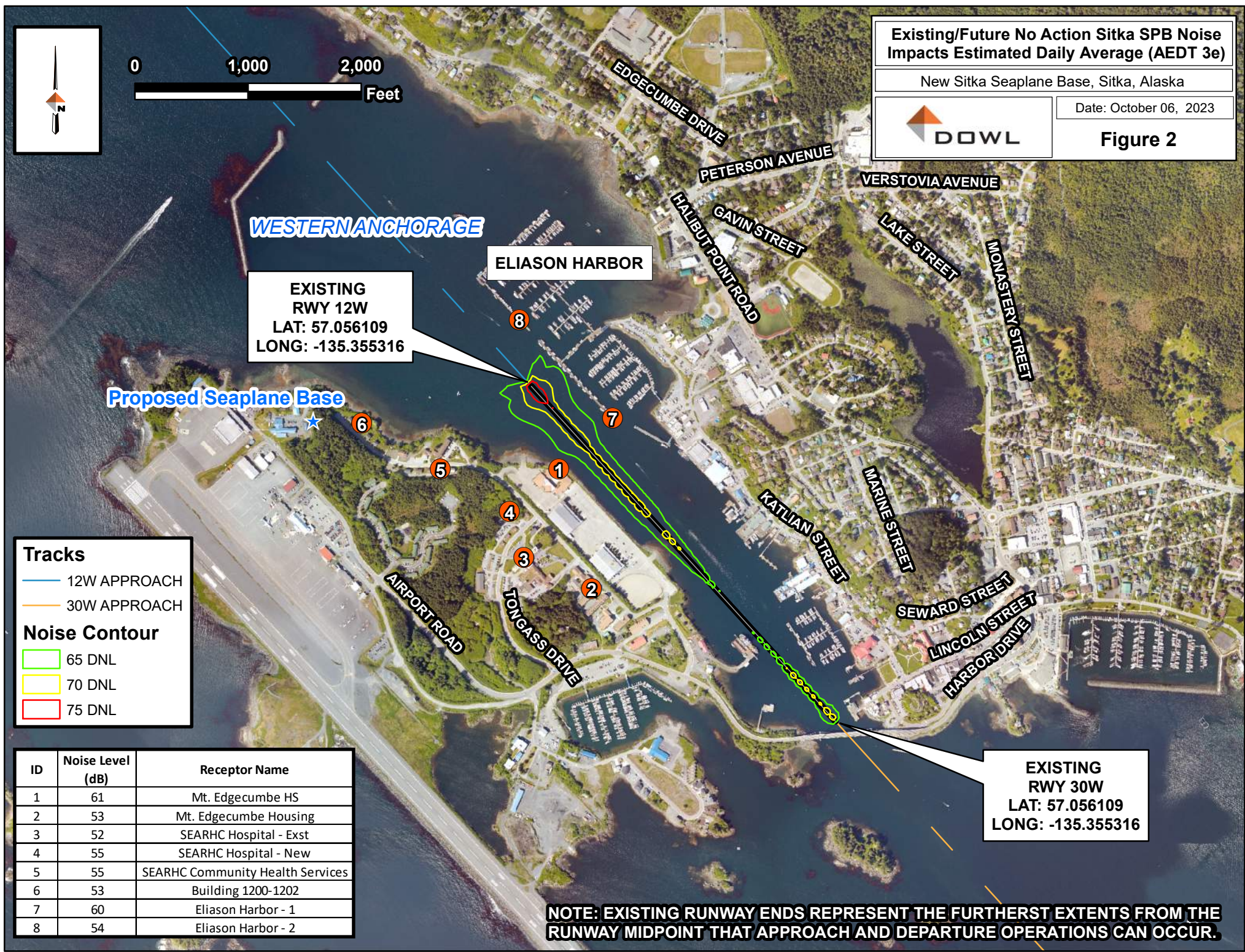
**Noise Contour**

- 65 DNL
- 70 DNL
- 75 DNL

ID	Noise Level (dB)	Receptor Name
1	61	Mt. Edgecumbe HS
2	53	Mt. Edgecumbe Housing
3	52	SEARHC Hospital - Exst
4	55	SEARHC Hospital - New
5	55	SEARHC Community Health Services
6	53	Building 1200-1202
7	60	Eliason Harbor - 1
8	54	Eliason Harbor - 2

**EXISTING RWY 30W**  
 LAT: 57.056109  
 LONG: -135.355316

**NOTE: EXISTING RUNWAY ENDS REPRESENT THE FURTHERST EXTENTS FROM THE RUNWAY MIDPOINT THAT APPROACH AND DEPARTURE OPERATIONS CAN OCCUR.**





**ATTACHMENT 2:**  
**AEDT 3E STUDY REPORT**

## Study Input Report

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### Study Information

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Report Date: 10/6/2023 5:04:51 PM

Study Name: Sitka\_SPB\_New

Description:

Study Type: NoiseAndEmissions

Mass Units: Kilograms

Use Metric Units: No

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### Study Database Information

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Study Database Version: 1.89.3

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### Airport Layouts

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Layout Name: EXISTING RUNWAY

Airport Name: SITKA SEAPLANE BASE

Airport Codes: 0Q9

Airport Description:

Country: US

State: ALASKA  
City: SITKA  
Latitude: 57.053269 degrees  
Longitude: -135.350389 degrees  
Elevation: 0.000000 feet  
Runway: 12W-NEW/30W-NEW  
Length: 3998 feet  
Width: 150 feet  
Runway End: 12W-NEW  
Latitude: 57.058106 degrees  
Longitude: -135.358894 degrees  
Elevation: 0.000000 feet  
Approach Displaced Threshold: 0 feet  
Departure Displaced Threshold: 0 feet  
Crossing Height: 50 feet  
Glide Slope: 3.000000 deg  
Change in Headwind: 0%  
Effective Date: 1/1/2023  
Expiration Date: 12/31/2025  
Runway End: 30W-NEW  
Latitude: 57.050388 degrees  
Longitude: -135.344655 degrees  
Elevation: 0.000000 feet  
Approach Displaced Threshold: 0 feet  
Departure Displaced Threshold: 0 feet  
Crossing Height: 50 feet

Glide Slope: 3.000000 deg

Change in Headwind: 0%

Effective Date: 1/1/2023

Expiration Date: 12/31/2025

Runway: 30W-EXT/12W-EXT

Length: 3999 feet

Width: 200 feet

Runway End: 30W-EXT

Latitude: 57.048189 degrees

Longitude: -135.341449 degrees

Elevation: 0.000000 feet

Approach Displaced Threshold: 0 feet

Departure Displaced Threshold: 0 feet

Crossing Height: 50 feet

Glide Slope: 3.000000 deg

Change in Headwind: 0%

Effective Date: 1/1/2023

Expiration Date: 12/31/2025

Runway End: 12W-EXT

Latitude: 57.056109 degrees

Longitude: -135.355316 degrees

Elevation: 0.000000 feet

Approach Displaced Threshold: 0 feet

Departure Displaced Threshold: 0 feet

Crossing Height: 50 feet

Glide Slope: 3.000000 deg

Change in Headwind: 0%

Effective Date: 1/1/2023

Expiration Date: 12/31/2025

Layout Name: PROPOSED RUNWAY

Airport Name: SITKA SEAPLANE BASE

Airport Codes: 0Q9

Airport Description:

Country: US

State: ALASKA

City: SITKA

Latitude: 57.053269 degrees

Longitude: -135.350389 degrees

Elevation: 0.000000 feet

Runway: 12W-NEW/30W-NEW

Length: 3998 feet

Width: 150 feet

Runway End: 12W-NEW

Latitude: 57.058106 degrees

Longitude: -135.358894 degrees

Elevation: 0.000000 feet

Approach Displaced Threshold: 0 feet

Departure Displaced Threshold: 0 feet

Crossing Height: 50 feet

Glide Slope: 3.000000 deg

Change in Headwind: 0%

Effective Date: 1/1/2023  
Expiration Date: 12/31/2025

Runway End: 30W-NEW

Latitude: 57.050388 degrees  
Longitude: -135.344655 degrees  
Elevation: 0.000000 feet  
Approach Displaced Threshold: 0 feet  
Departure Displaced Threshold: 0 feet  
Crossing Height: 50 feet  
Glide Slope: 3.000000 deg  
Change in Headwind: 0%  
Effective Date: 1/1/2023  
Expiration Date: 12/31/2025

Runway: 30W-EXT/12W-EXT

Length: 3999 feet  
Width: 200 feet  
Runway End: 30W-EXT  
Latitude: 57.048189 degrees  
Longitude: -135.341449 degrees  
Elevation: 0.000000 feet  
Approach Displaced Threshold: 0 feet  
Departure Displaced Threshold: 0 feet  
Crossing Height: 50 feet  
Glide Slope: 3.000000 deg  
Change in Headwind: 0%  
Effective Date: 1/1/2023

Expiration Date: 12/31/2025

Runway End: 12W-EXT

Latitude: 57.056109 degrees

Longitude: -135.355316 degrees

Elevation: 0.000000 feet

Approach Displaced Threshold: 0 feet

Departure Displaced Threshold: 0 feet

Crossing Height: 50 feet

Glide Slope: 3.000000 deg

Change in Headwind: 0%

Effective Date: 1/1/2023

Expiration Date: 12/31/2025

Gate: G-1

Latitude: 57.055462

Longitude: -135.365708

Elevation: 0.000000 feet

Aircraft Size: ANY

SigmaY0: 16

SigmaZ0: 3

Release Height: 4.921260 feet

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## Receptor Sets

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Receptor Set: 80^2 GRID

Description:

Number of receptors: 6400

Receptor Set Type: Receptor

Receptor Type: Grid

Latitude: 57.047448 degrees

Longitude: -135.361069 degrees

Elevation: 0.000000 feet

X Count: 80

Y Count: 80

X Spacing: 0.01

Y Spacing: 0.01

Receptor Set: 80^2 GRID-EXISTING

Description:

Number of receptors: 6400

Receptor Set Type: Receptor

Receptor Type: Grid

Latitude: 57.046616 degrees

Longitude: -135.359543 degrees

Elevation: 0.000000 feet

X Count: 80

Y Count: 80

X Spacing: 0.01

Y Spacing: 0.01

Receptor Set: Sitka-ALL

Description:

Number of receptors: 8

Receptor Set Type: Receptor



Receptor Type: Point

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Annualizations (Scenarios)

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Annualization (Scenario): Root

Description: Root

Start Time: Wednesday, July 19, 2023

Duration: 01 days 00 hours

Air Performance Model: SAE\_1845\_APM

Noise Altitude Cutoff MSL (ft): n/a

Mixing Height AFE (ft): 3000

Fuel Sulfur Content: 0.0006

Sulfur Conversion Rate: 0.024

Use Bank Angle: True

Taxi Model: UserTaxiModel

Airport Layouts: PROPOSED RUNWAY

Annualization: Root

Annualization (Scenario): EXISTING

Description: EXISTING

Start Time: Wednesday, July 19, 2023

Duration: 01 days 00 hours

Air Performance Model: SAE\_1845\_APM

Noise Altitude Cutoff MSL (ft): n/a

Mixing Height AFE (ft): 3000

Fuel Sulfur Content: 0.0006

Sulfur Conversion Rate: 0.024

Use Bank Angle: True

Taxi Model: UserTaxiModel

Airport Layouts: EXISTING RUNWAY

Annualization: EXISTING

Annualization (Scenario): Root1

Description: Root1

Start Time: Sunday, January 1, 2023

Duration: 365 days 00 hours

Air Performance Model: SAE\_1845\_APM

Noise Altitude Cutoff MSL (ft): n/a

Mixing Height AFE (ft): 3000

Fuel Sulfur Content: 0.0006

Sulfur Conversion Rate: 0.024

Use Bank Angle: True

Taxi Model: UserTaxiModel

Airport Layouts: PROPOSED RUNWAY

Annualization: Root1

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Annualization: Root

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Operation group: PROPOSED-21OPS

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Description: PROPOSED-21OPS  
Start time: 7/19/2023 12:00:00 AM  
Duration: 01 days 00 hours  
Number of aircraft operations: 11

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Annualization: EXISTING

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Operation group: EXISTING-21OPS

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Description: EXISTING-21OPS  
Start time: 7/19/2023 12:00:00 AM  
Duration: 01 days 00 hours  
Number of aircraft operations: 11

---

Annualization: Root1

---

---

Operation group: TEST-PROPOSED

---

Description: TEST-PROPOSED  
Start time: 1/1/2023 12:00:00 AM

Duration: 365 days 00 hours

Number of aircraft operations: 11

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User-Defined Aircraft Profiles

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User-Specified Aircraft Substitutions

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Metric Results

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Metric Result ID: 1

Metric Result Name: PROPOSED\_RUNWAY\_TEST

Metric Result Description:

Metric: DNL

Receptor Set: 80^2 GRID

Annualization: Root

Run Start Time: 10/6/2023 5:04:00 PM

Run End Time: 10/6/2023 5:04:09 PM

Run Status: Complete

Run Options: RunOptions\_DNL

Result Storage Options:

Dispersion Results: None

Emissions Results: Case

Noise Results: Case

Emissions/Performance Modeling Options:

Weather Fidelity: ISA Weather

Check Track Angle: False

Apply Delay & Sequencing Model: False

Calculate Aircraft Engine Startup Emissions: False

Analysis Year (VALE):

BADA 4 Modeling Options:

Use BADA Family 4: Use ANP/BADA 3 only

Use ANP and BADA 3 Fallback: False

Enable reduced thrust taper: False

Reduced thrust taper upper limit:

Noise Modeling Options:

Atmospheric Absorption: Unadjusted (SAE-AIR-1845 atmosphere)

Lateral Attenuation: DisableLateralAttenuationToPropsAndHelos

Type Of Ground: Hard

Use Terrain: True

Noise Line Of Sight Blockage: False

Fill Terrain: False

Terrain Fill In Value:

Do Number Above Noise Level: False

Metric Result ID: 2

Metric Result Name: EXISTING RUNWAY

Metric Result Description:

Metric: DNL

Receptor Set: 80^2 GRID-EXISTING

Annualization: EXISTING

Run Start Time: 8/14/2023 2:16:07 PM

Run End Time: 8/14/2023 2:16:09 PM

Run Status: Complete

Run Options: RunOptions\_DNL

Result Storage Options:

Dispersion Results: None

Emissions Results: Case

Noise Results: Case

Emissions/Performance Modeling Options:

Weather Fidelity: ISA Weather

Check Track Angle: False

Apply Delay & Sequencing Model: False

Calculate Aircraft Engine Startup Emissions: False

Analysis Year (VALE):

BADA 4 Modeling Options:

Use BADA Family 4: Use ANP/BADA 3 only

Use ANP and BADA 3 Fallback: False

Enable reduced thrust taper: False

Reduced thrust taper upper limit:

Noise Modeling Options:

Atmospheric Absorption: Unadjusted (SAE-AIR-1845 atmosphere)

Lateral Attenuation: DisableLateralAttenuationToPropsAndHelos

Type Of Ground: Hard

Use Terrain: True

Noise Line Of Sight Blockage: False

Fill Terrain: False

Terrain Fill In Value:

Do Number Above Noise Level: False

Metric Result ID: 3

Metric Result Name:

Metric Result Description:

Metric: DNL

Receptor Set: Sitka-ALL

Annualization: Root

Run Start Time: 10/6/2023 5:04:04 PM

Run End Time: 10/6/2023 5:04:09 PM

Run Status: Complete

Run Options: RunOptions\_DNL

Result Storage Options:

Dispersion Results: None

Emissions Results: Case

Noise Results: Case

Emissions/Performance Modeling Options:

Weather Fidelity: ISA Weather

Check Track Angle: False

Apply Delay & Sequencing Model: False

Calculate Aircraft Engine Startup Emissions: False

Analysis Year (VALE):

BADA 4 Modeling Options:

Use BADA Family 4: Use ANP/BADA 3 only

Use ANP and BADA 3 Fallback: False

Enable reduced thrust taper: False

Reduced thrust taper upper limit:

Noise Modeling Options:

Atmospheric Absorption: Unadjusted (SAE-AIR-1845 atmosphere)

Lateral Attenuation: DisableLateralAttenuationToPropsAndHelos

Type Of Ground: Hard

Use Terrain: True

Noise Line Of Sight Blockage: False

Fill Terrain: False

Terrain Fill In Value:

Do Number Above Noise Level: False

Metric Result ID: 4

Metric Result Name:

Metric Result Description:

Metric: DNL

Receptor Set: Sitka-ALL

Annualization: EXISTING

Run Start Time: 10/6/2023 5:04:06 PM

Run End Time: 10/6/2023 5:04:10 PM

Run Status: Complete

Run Options: RunOptions\_DNL

Result Storage Options:

Dispersion Results: None



Emissions Results: Case

Noise Results: Case

Emissions/Performance Modeling Options:

Weather Fidelity: ISA Weather

Check Track Angle: False

Apply Delay & Sequencing Model: False

Calculate Aircraft Engine Startup Emissions: False

Analysis Year (VALE):

BADA 4 Modeling Options:

Use BADA Family 4: Use ANP/BADA 3 only

Use ANP and BADA 3 Fallback: False

Enable reduced thrust taper: False

Reduced thrust taper upper limit:

Noise Modeling Options:

Atmospheric Absorption: Unadjusted (SAE-AIR-1845 atmosphere)

Lateral Attenuation: DisableLateralAttenuationToPropsAndHelos

Type Of Ground: Hard

Use Terrain: True

Noise Line Of Sight Blockage: False

Fill Terrain: False

Terrain Fill In Value:

Do Number Above Noise Level: False

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User-defined noise spectral class data for one-third octave bands between 50 Hertz and 10,000 Hertz for bands 17-40