# **State of Alaska**

Department of Transportation and Public Facilities **Southcoast Region** 

## **PORT LIONS, ALASKA** PORT LIONS AIRPORT LAYOUT PLAN (ALP)

	INDEX OF SHEETS			
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#### LIST OF ACRONYMS:

ARC	AIRPORT REFERENCE CODE
ALP	AIRPORT LAYOUT PLAN
ARP	AIRPORT REFERENCE POINT
ASDA	ACCELERATE STOP DISTANCE AVAILABLE
BRL	BUILDING RESTRICTION LINE
DOT&PF	ALASKA DEPARTMENT OF TRANSPORTATION
	AND PUBLIC FACILITIES
ELEV	ELEVATION
FAA	FEDERAL AVIATION ADMINISTRATION
GA	GENERAL AVIATION
LDA	LANDING DISTANCE AVAILABLE
MIRL	MEDIUM INTENSITY RUNWAY LIGHTS
MITL	MEDIUM INTENSITY TAXIWAY LIGHTS
MSL	MEAN SEA LEVEL
NAD 83	NORTH AMERICAN DATUM OF '83
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF '88
NPIAS	NATIONAL PLAN OF INTEGRATED AIRPORT
111 1/10	SYSTEMS
NPI	NON-PRECISION INSTRUMENT
	HOIT THEORIGI, HOTHOMENT

NVGS OFA OFZ OHF	NON-VERTICALLY GUIDED SURVEY RUNWAY OBJECT FREE AREA OBSTACLE FREE ZONE OVERHEAD FLECTRIC
ORI	PORT LIONS AIRPORT
PAPI	PRECISION APPROACH PATH INDICATOR
RDC	RUNWAY DESIGN CODE
ROFA	RUNWAY OBJECT FREE AREA
RPZ	RUNWAY PROTECTION ZONE
RSA	RUNWAY SAFETY AREA
RW	RUNWAY
SRE	SNOW REMOVAL EQUIPMENT
TESM	TAXIWAY SAFETY EDGE MARGIN
TODA	TAKE OFF DISTANCE AVAILABLE
TOFA	TAXIWAY OBJECT FREE AREA
TORA	TAKE OFF RUN AVAILABLE
TSA	TAXIWAY SAFETY AREA
TSS	THRESHOLD SITING SURFACE
VIS	VISUAL

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VICINITY MAP



REVIOUS REVISION DATE: MARCH 24, 2003	FAA AIRSPACE REVIEW NO:
PPROVED:	FAA APPROVAL DATE:
	RV.
DATE:	FAA AIRPORT DIVISION, ALASKA REGION, AAL-600
ERNE SKAGERBERG, DOT&PF SOUTHCOAST REGION,	SUBJECT TO CONDITIONS IN LETTER DATED:
HIEF OF PLANNING	PREVIOUS ALP FAA APPROVAL DATE:

REVISION

PORT LIONS, ALASKA AIRPORT LAYOUT PLAN

**DEPARTMENT OF TRANSPORTATION** AND PUBLIC FACILITIES SOUTHCOAST REGION

**PORT LIONS AIRPORT** 

TITLE, LOCATION AND VICINITY MAPS

STATE OF ALASKA

PORT LIONS AIRPORT

TION MAP

TO SCALE

SOUTHCOAST REGION

12-19 HEET 1 OF 14

	AIRPORT DATA				
ITEM	EXISTING	NEAR TERM	ULTIMATE		
AIRPORT REFERENCE CODE (ARC)	A-II	A-II-VIS	A-11-5000		
MEAN MAXIMUM TEMPERATURE, HOTTEST MONTH	62°F	62 <b>°</b> F	62 <b>°</b> F		
AIRPORT ELEVATION	49.4'	53.0'	53.0'		
AIRPORT NAVIGATIONAL AIDS	NONE	NONE	NONE		
AIRPORT REFERENCE POINT (ARP)	LAT: N57°53'05" LONG: W152°50'51"	LAT: N57°53'08" LONG: W152°50'40"	LAT: N57°53'08" LONG: W152°50'40"		
MISCELLANEOUS FACILITIES	WIND CONE, MIRL, BEACON, FAA CAMERA	WIND CONE, MIRL, BEACON, FAA CAMERA	WIND CONE, MIRL, BEACON, FAA CAMER/		
CRITICAL AIRCRAFT	PIPER CHEROKEE / BRITTEN-NORMAN ISLANDER	PIPER CHEROKEE / BRITTEN-NORMAN ISLANDER	PIPER CHEROKEE / BRITTEN-NORMAN ISLANDER		
AIRPORT MAGNETIC VARIATION, DATE/SOURCE	NOAA MAG DEC = 14°28'E	CHANGE 0°16'W PER YR	CHANGE 0°16'W PER YR		
NPIAS SERVICE LEVEL	GA	GA	GA		
STATE EQUIVALENT SERVICE ROLE	COMMUNITY CLASS	COMMUNITY CLASS	COMMUNITY CLASS		

RUNWAY DATA			
ITEM	EXISTING	NEAR TERM	ULTIMATE
RUNWAY IDENTIFIER	06 / 24	05 / 23	05 / 23
RUNWAY TYPE	UTILITY	UTILITY	UTILITY
RUNWAY DESIGN CODE (RDC)	A-II-VIS	B-II-VIS	B-II-5000
MATERIAL TYPE	GRAVEL	GRAVEL	GRAVEL
EFFECTIVE RUNWAY GRADIENT (%)	1.32%	2.00%	2.00%
PERCENT WIND COVERAGE	99.2%	99.2%	99.2%
RUNWAY DIMENSIONS	2200' X 75'	3300' X 75'	3300'X 75'
DISPLACED THRESHOLD	NO/NO	YES/NO	NO/NO
RUNWAY SAFETY AREA (RSA)	2600'X 150'	3900'X 150'	3900'X 150'
RUNWAY END COORDINATES	N57*53'03.54" W152*51'11.32" / N57*53'07.73" W152*50'31.40"	N57*53'01.90" W152*51'08.48" / N57*53'14.23" W152*50'12.00"	N57*53'01.90" W152*51'08.48" / N57*53'14.23" W152*50'12.00"
RUNWAY END ELEVATIONS	49.4' / 20.3'	47.0' / 53.0'	47.0' / 53.0'
RUNWAY LIGHTING TYPE	MIRL	MIRL	MIRL
RUNWAY PROTECTION ZONE (RPZ)	1000'X 250'X 450'/ 1000'X 250'X 450'	1000'X 500'X 700'/ 1000'X 500'X 700'	1000' X 500' X 700' / 1000' X 500' X 700'
RUNWAY MARKING TYPE	NONE	NONE	NONE
14 CFR PART 77 APPROACH CATEGORY	20:1 / 20:1	20:1 / 20:1	20:1 / 20:1
APPROACH TYPE	VISUAL / VISUAL	VISUAL / VISUAL	NPI / NPI
VISIBILITY MINIMUMS	VISUAL / VISUAL	VISUAL / VISUAL	1 MILE / 1 MILE
TYPE OF AERONAUTICAL SURVEY REQUIRED FOR APPROACH	NVGS	NVGS	NVGS
RUNWAY DEPARTURE SURFACE	N/A	N/A	N/A
RUNWAY OBJECT FREE AREA (OFA)	2600' X 500'	3900' X 500'	3900' X 500'
OBSTACLE FREE ZONE (OFZ)	2600' X 250'	3700' X 250'	3700' X 250'
THRESHOLD SITING SURFACE (TSS)	20:1 / 20:1	20:1 / 20:1	20:1 / 20:1
VISUAL AND INSTRUMENT NAVAIDS	NONE	NONE	PAPI / PAPI
TOUCHDOWN ZONE ELEVATION	49.4' / 49.4'	47.0' / 53.0'	47.0' / 53.0'

	TAXIWAY DA	ТА	
ITEM	EXISTING	NEAR TERM	ULTIMATE
TAXIWAY WIDTH	25'	35'	35'
TAXIWAY SAFETY AREA (TSA)	49'	79'	79'
TAXIWAY OBJECT FREE AREA (TOFA)	89'	131'	131'
TAXIWAY SEPARATION	195'	105'	105'
TAXIWAY LIGHTING	MITL	MITL	MITL



	WIND	DATA 1	ABLE	
RUNWAY	A-I/B-I	A-II/B-II	A-III/B-III	A-IV-B-IV
	10.5 KT	13.0 KT	16.0 KT	20.0 KT
05 / 23	98.20%	99.22%	99.87%	99.98%

WIND DATA

SOURCE: PORT LIONS AIRPORT (ORI) WIND CONE LATITUDE: N 57°53'03.54" LONGITUDE: W 152° 51'11.32"

PERIOD: 06/2007 TO 04/2018

LOCAL POPULACE REVEALED WIND CONE DATA MAY BE UNRELIABLE. REPORTED WIND IS NOT ALWAYS REPRESENTATIVE OF WHAT IS EXPERIENCED BY PILOTS DURING OPERATIONS. THE DATA, HOWEVER, CLOSELY MATCHES THE OUZINKIE NOTE: WIND TOWER LOCATED 14 MILES N 73°14.4' E (MAINTAINED BY HDR ALASKA, INC).

	MODI	FICATION TO	С	STANDARDS
APPROVAL DATE	AIRSPACE CASE NO.	STANDARD TO BE MODIFIED		DESCRIPTION

	DECLARED	DISTANCES	ò
	NEAR-	-TERM	
IIEM	RW05	RW23	RW05
TAKE OFF RUN AVAILABLE (TORA)	3300'		
TAKE OFF DISTANCE AVAILABLE (TODA)	3300'		
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	3300'	THRESHOLD	THRESHOL
LANDING DISTANCE AVAILABLE (LDA)	2650'		

TABLE REQUIRED PER ALP CHECKLIST. SEE NOTE 4.



	LEGEND	
ITEM	EXISTING	ULTIMATE
AIRPORT BOUNDARY		
IRPORT REFERENCE POINT (ARP)	۲	۵
BRUSH LINE	·	·uuuuuuuu
BUILDINGS		
BUILDING RESTRICTION LINE (BRL)	— — BRL — —	— — BRL — —
CARS (ABANDONED)		
OBJECT FREE AREA (OFA)	OFA	OFA
OBSTACLE FREE ZONE (OFZ)	OFZ	OFZ
PAPI		0000
ROADWAY		
RUNWAY PROTECTION ZONE (RPZ)		
RUNWAY SAFETY AREA (RSA)	RSA	
NON-DIRECTIONAL ROTATING BEACON	>€€	≥0€
SHORELINE		
STREAM		
STREAM (FISH)		
SURVEY MONUMENT	•	0
THRESHOLD MARKERS/LIGHTS	••••	
TOPOGRAPHIC CONTOURS	200-	200-
TREELINE	·uuuuu	·
WINDCONE	1	1
WINDCONE AND SEGMENTED CIRCLE	rᠿ᠇	г⊕л

- NOTES: 1. NAD 83 WAS USED AS THE HORIZONTAL CONTROL DATUM FOR ALL COORDINATES. 2. NAVD 88 WAS USED AS THE VERTICAL CONTROL DATUM FOR ALL FOR ATTOMS ELEVATIONS.
- 3. EXISTING TAXIWAY WIDTH, TSA, TOFA, AND SEPARATION IS BASED ON AC 150/5300-13A TABLE 4-1 AND TABLE 4-2.
- 4. DECLARED DISTANCES ARE ONLY TO BE USED WITH TURBINE-POWERED AIRCRAFT. THE TORA, TODA, ASDA, AND LDA WILL BE EQUAL TO THE RUNWAY LENGTH IN CASES WHERE A RUNWAY DOES NOT HAVE DISPLACED THRESHOLDS, STOPWAYS, OR CLEARWAYS, AND HAVE A STANDARD RSA, ROFA, RPZ, AND TSS. REFERENCE AC 150/5300-13A, PARAGRAPH 323











RUNWAY 5/23 PART 77 SURFACE OBSTRUCTION PROFILE



PART 77 A PART 77 PRIMARY SURFACE WIDTH APPROACH SURFACE INNER WID APPROACH SURFACE LENGTH APPROACH SURFACE OUTER WIDT HORIZONTAL SURFACE RADIUS CONICAL SURFACE DISTANCE FROM HOP APPROACH SURFACE SLOPE

#### NOTES:

NAD 83 WAS USED AS THE HORIZONTAL CONTROL DATUM FOR ALL COORDINATES. NAVD 88 WAS USED AS THE VERTICAL CONTROL DATUM FOR ALL ELEVATIONS. AIRPORT ELEVATION: 53.0' ABOVE MSL OBSTRUCTION SURVEY: LIDAR DATA WAS COLLECTED MAY/JUNE 2018. NO SEWAGE LAGOONS WITHIN 10,000' OF THE AIRPORT. 5 PORT LIONS LANDFILL IS APPROXIMATELY 4000' FROM RUNWAY 05. TOPOGRAPHIC IMAGERY HAS BEEN SCALED TO BEST FIT CURRENT SURVEY DATA. THE IMAGE IS NOPOGRAPHIC IMAGERY HAS BEEN SCALED TO BEST FIT CORRENT SURVET DATA. THE IMAGE IS NOT TO SCALE AND IS FOR INFORMATIONAL PURPOSES ONLY
 SEE INNER PORTION OF APPROACH PLAN VIEW FOR CLOSE OBSTRUCTION DETAIL, SHEET 6
 PER FAA ENGINEERING BRIEF #91 SECTION 2.2.1 & 2.3.1 AN ANNUAL NORMALIZED GROWTH RATE OF 2.5 FT/YR WAS USED TO DETERMINE 20 YEAR TREE GROWTH WITHIN THE TSS..
 SEE SHEET 7–9 FOR OBSTRUCTION TABLES.

AIRSPACE DIMENSIONS (FT)					
	NEAR TERM	ULTIMATE			
	250	500			
ΓH	250	500			
	5000	5000			
ТН	1250	2000			
	5000	5000			
RIZONTAL	4000	4000			
	20:1	20:1			

STATE OF ALASKA **DEPARTMENT OF TRANSPORTATION** AND PUBLIC FACILITIES SOUTHCOAST REGION **PORT LIONS AIRPORT** 12-19 PORT LIONS, ALASKA HEET: AIRPORT LAYOUT PLAN 5 OF

REVISION

AIRPORT AIRSPACE DRAWING

14



Designed By: PJ INNER APPROACH 90 EN\ALP-Plotted: APKIL 11, Name: Q:\Kdk\52 Inc 2.dwg Date Pl Layout File Nar

		AIRPC	RT LA	YOUT P	'LAN STRU	ICTURES, BUILDINGS,	, ROADS	, AND FACIL	ITIES
				GROUND			SURFACE		
ID#	DESCRIPTION	STATION	OFFSET	ELEV	TOP ELEV	PART 77 SURFACE	ELEV	PENETRATION	DISPOSITION
101	OVERHEAD ELECTRIC	23+36	436 RT	73	108	TRANSITIONAL	94	14	RELOCATE
102	ROAD (+15')	24+46	310 RT	51	66	APPROACH	78	NONE	N/A
103	REGULATOR BUILDING	29+58	30 RT	47	60	APPROACH	52	8	RELOCATE
104	TELEPHONE BOOTH	29+56	21 RT	48	58*	APPROACH	52	6	RELOCATE
105	TELEPHONE PEDESTAL	29+51	17 RT	48	52	APPROACH	52	NONE	RELOCATE
106	BUILDING	29+67	10 RT	48	62	APPROACH	51	11	RELOCATE
107	AIRPORT BEACON	29+59	1 RT	50	76	APPROACH	52	24	RELOCATE
108	OVERHEAD ELECTRIC	28+64	37 RT	37	72	APPROACH	52	20	RELOCATE
109	OVERHEAD ELECTRIC	29+50	23 RT	43	78	APPROACH	57	21	RELOCATE
110	SATELITE DISH	34+23	72 RT	45	57	PRIMARY	44	13	RELOCATE
111	WINDCONE & SEGMENTED CIRCLE	35+20	79 RT	42	62	PRIMARY	42	20	REMOVE
112	ROAD (+15')	31+83	452 LT	53	68	TRANSITIONAL	67	1	REALIGN
113	MATERIAL PIT	34+62	730 LT	70	70	TRANSITIONAL	111	NONE	REMAIN
114	ROAD (+15')	55+14	323 RT	20	35	TRANSITIONAL	46	NONE	REALIGN
115	ROAD (+15')	57+77	301 RT	16	31	TRANSITIONAL	46	NONE	REALIGN
116	ROAD (+15')	58+94	161 RT	23	38	PRIMARY	40	NONE	REALIGN
117	JUNK VEHICLES	66+93	22 LT	69	VARIES	PRIMARY	53	16	REMOVE
118	TRAIL	71+03	418 LT	91	N/A	TRANSITIONAL	87	4	MAINTAIN ACCESS
119	DRIVEWAY	71+58	156 LT	62	77	APPROACH	74	3	REALIGN
120	TRAIL	34+33	1394 RT	166	N/A	HORIZONTAL	203	NONE	MAINTAIN ACCESS
121	OVERHEAD ELECTRIC	26+89	170 RT	42	77	APPROACH	65	12	RELOCATE

	AIRPORT LAYOUT PLAN FEATURES									
				GROUND			SURFACE			
ID#	DESCRIPTION	STATION	OFFSET	ELEV	TOP ELEV	PART 77 SURFACE	ELEV	PENETRATION	DISPOSITION	STAGE
201	FISH STREAM	N/A	N/A	VARIES	N/A	NONE	N/A	N/A	NONE	N/A
202	STREAM	N/A	N/A	VARIES	N/A	NONE	N/A	N/A	NONE	N/A
203	FISH STREAM	N/A	N/A	VARIES	N/A	NONE	N/A	N/A	NONE	N/A
204	CUT TREES LEFT LAYING	27+30	250 LT	VARIES	N/A	NONE	N/A	N/A	EMOVE W/IN APT BOUNDAR	NEAR TERM/ ULTIMATE
205	FISH STREAM	N/A	N/A	VARIES	N/A	NONE	N/A	N/A	NONE	N/A
206	STREAM	N/A	N/A	VARIES	N/A	NONE	N/A	N/A	NONE	N/A
207	CUT TREES LEFT LAYING	61+00	250 RT	VARIES	N/A	NONE	N/A	N/A	REMOVE W/IN APT BOUNDAR'	NEAR TERM

## OUTER PART 77 SURFACE OBSTRUCTION TABLE

				GROUND			SURFACE		
ID#	DESCRIPTION	STATION	OFFSET	ELEV	TOP ELEV	PART 77 SURFACE	ELEV	PENETRATION	DISPOSITION
301	TERRAIN HIGH POINT	-31+50	382 RT	365	465	CONICAL	265	100	REMAIN
302	TERRAIN HIGH POINT	-29+28	312 LT	425	425	CONICAL	254	171	REMAIN
303	TERRAIN HIGH POINT	-22+75	1420 RT	270	375	CONICAL	224	151	REMAIN
304	TERRAIN HIGH POINT	51+09	1972 LT	275	434	HORIZONTAL	203	231	REMAIN
305	TERRAIN HIGH POINT	52+41	1093 LT	235	401	TRANSITIONAL	155	246	REMAIN
306	TERRAIN HIGH POINT	71+76	796 LT	205	295	TRANSITIONAL	143	152	REMAIN
307	TERRAIN HIGH POINT	92+09	2222 LT	275	381	HORIZONTAL	203	178	REMAIN
308	TERRAIN HIGH POINT	99+92	695 LT	235	354	HORIZONTAL	203	151	REMAIN
309	TERRAIN HIGH POINT	117+87	1457 LT	285	285	CONICAL	213	72	REMAIN
310	TERRAIN HIGH POINT	129+78	4076 LT	650	650	CONICAL	319	331	REMAIN
311	TERRAIN HIGH POINT	134+19	4507 LT	685	685	CONICAL	348	337	REMAIN
312	TERRAIN HIGH POINT	122+34	4952 LT	650	650	CONICAL	313	337	REMAIN

\* ULTIMATE PENETRATION ONLY

NOTE:

ALL OFFSETS, ELEVATIONS, AND PENETRATIONS ARE IN FEET.
 NO PENETRATIONS OF THE TSS AFTER NEAR TERM AND THE PAPI OBSTACLE CLEARANCE SURFACE AFTER ULTIMATE CONSTRUCTION STAGES.
 NO PENETRATIONS OF PART 77 SURFACES WITHIN THE PROPOSED AIRPORT BOUNDARY AFTER NEAR TERM AND ULTIMATE CONSTRUCTION STAGES.



12		
317	AGE	
NEAR	TERM	
REM	1AIN	
NEAR	TERM	
N,	/A	
NEAR	TERM	

STAGE	
N/A	
N/A	_
N/A	_
N/A	_
N/A	
N/A	_



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES SOUTHCOAST REGION

**PORT LIONS AIRPORT** PORT LIONS, ALASKA AIRPORT LAYOUT PLAN

OBSTRUCTION TABLES



REVISION

		OUTER	PART	77 SURFA	ACE OBSTRUCTION	TABLE (C	CONTINUED)			
			GROUND			SURFACE				
D# DESCRIPTION	STATION	OFFSET	ELEV	TOP ELEV	PART 77 SURFACE	ELEV	PENETRATION	DISPOSITION	STAGE	
313 TERRAIN HIGH POINT	81+62	5707 LT	630	630	CONICAL	224	406	REMAIN	N/A	
14 TERRAIN HIGH POINT	108+09	8041 LT	635	635	CONICAL	385	250	REMAIN	N/A	
15 TERRAIN HIGH POINT	88+55	7550 LT	710	710	CONICAL	371	339	REMAIN	N/A	
316 TERRAIN HIGH POINT	99+16	8058 LT	630	630	CONICAL	329	301	REMAIN	N/A	
17 TERRAIN HIGH POINT	25+66	8453 LT	2265	2265	CONICAL	365	1900	REMAIN	N/A	
SMALL TREE CLUSTER/ BRUSH	-54+82	2067 LT	388	485	CONICAL	389	96	REMAIN	N/A	
SMALL TREE CLUSTER	-56+47	1328 LT	339	444	CONICAL	391	53	REMAIN	N/A	
18 SMALL TREE CLUSTER/ BRUSH	-51+23	450 LT	342	458	CONICAL	362	96	REMAIN	N/A	
SMALL TREE CLUSTER	-56+76	925 LT	335	426	CONICAL	391	35	REMAIN	N/A	
SMALL TREE CLUSTER	-56+95	626 LT	322	427	CONICAL	391	36	REMAIN	N/A	
SMALL TREE CLUSTER	-56+54	225 LT	315	419	CONICAL	388	31	REMAIN	N/A	
SMALL TREE CLUSTER	-53+13	277 LT	322	439	CONICAL	371	68	REMAIN	N/A	
SMALL TREE CLUSTER	-50+51	276 LT	325	431	CONICAL	358	73	REMAIN	N/A	
SINGLE TREE	-48+18	268 LT	319	380	CONICAL	346	34	REMAIN	N/A	
SMALL TREE CLUSTER	-50+46	495 RT	278	374	CONICAL	358	16	REMAIN	N/A	
LARGE TREE CLUSTER	-42+26	539 RT	308	424	CONICAL	317	107	REMAIN	N/A	
SMALL TREE CLUSTER	-50+72	710 RT	272	384	CONICAL	360	24	REMAIN	N/A	
SMALL TREE CLUSTER	-46+52	937 RT	270	368	CONICAL	340	28	REMAIN	N/A	
SMALL TREE CLUSTER	-42+99	901 RT	266	330	CONICAL	322	8	REMAIN	N/A	
SMALL TREE CLUSTER	-32+71	1374 RT	236	316	CONICAL	274	42	REMAIN	N/A	
SMALL TREE CLUSTER	-34+11	1955 RT	187	294	CONICAL	287	7	REMAIN	N/A	
SMALL TREE CLUSTER	-18+45	1924 RT	172	297	CONICAL	212	85	REMAIN	N/A	
SMALL TREE CLUSTER	-22+10	2206 RT	148	267	CONICAL	233	34	REMAIN	N/A	
SMALL TREE CLUSTER	-16+55	2054 RT	108	219	CONICAL/ HORIZONTAL	205	14	REMAIN	N/A	
21 LARGE TREE CLUSTER	-33+51	1181 RT	267	369	CONICAL	276	93	REMAIN	N/A	
22 LARGE TREE CLUSTER	-24+00	1786 RT	225	328	CONICAL/HORIZONTAL	236	92	REMAIN	N/A	
SMALL TREE CLUSTER	-13+72	2196 RT	94	210	HORIZONTAL	203	7	REMAIN	N/A	
SMALL TREE CLUSTER	-11+64	2103 RT	106	211	HORIZONTAL	203	8	REMAIN	N/A	
24 LARGE TREE CLUSTER	-14+38	1195 RT	201	307	HORIZONTAL	203	104	REMAIN	N/A	
25 LARGE TREE CLUSTER	-08+45	531 RT	182	293	HORIZONTAL/ APPROACH	203/241	90/52	TREE REMOVAL WITHIN TSS	NEAR TERM/ ULTIMATE	
26 LARGE TREE CLUSTER	06+62	665 RT	114	175	APPROACH/ TRANSITIONAL	125	50	REMAIN	N/A	
HIGH TERRAIN	-16+41	716 LT	358	430	HORIZONTAL/ APPROACH	203/281	227/149	TREE REMOVAL WITHIN TSS	NEAR TERM/ ULTIMATE	
HIGH TERRAIN	06+06	675 LT	184	197	TRANSITIONAL	177	20	REMAIN	N/A	
HIGH TERRAIN	08+13	616 LT	167	180	TRANSITIONAL*	163	17	REMAIN	N/A	
HIGH TERRAIN	12+59	646 LT	156	170	TRANSITIONAL*	155	15	REMAIN	N/A	
SMALL TREE CLUSTER/ BRUSH	11+93	1163 LT	199	299	HORIZONTAL	203	96	REMAIN	N/A	
28 SMALL TREE CLUSTER	17+10	738 LT	142	269	TRANSITIONAL/ HORIZONTAL	203	66	REMAIN	N/A	
SMALL TREE CLUSTER	16+02	1146 LT	181	276	HORIZONTAL	203	73	REMAIN	N/A	
SMALL TREE CLUSTER	20+16	1164 LT	168	274	HORIZONTAL	203	71	REMAIN	N/A	
29 SMALL TREE CLUSTER	22+79	944 LT	139	213	TRANSITIONAL	168	45	REMAIN	N/A	
SMALL TREE CLUSTER	23+66	1245 LT	156	239	TRANSITIONAL/ HORIZONTAL	203	36	REMAIN	N/A	
SMALL TREE CLUSTER/ BRUSH	24+53	1602 LT	199	274	HORIZONTAL	203	71	REMAIN	N/A	
SMALL TREE CLUSTER	23+87	699 LT	105	211	TRANSITIONAL/ HORIZONTAL	130	81	REMAIN	N/A	
SMALL TREE CLUSTER	26+53	1228 LT	151	247	TRANSITIONAL	198	49	REMAIN	N/A	
SMALL TREE CLUSTER	29+43	1019 LT	128	238	TRANSITIONAL	160	78	REMAIN	N/A	
SMALL TREE CLUSTER	30+49	1204 LT	143	244	HORIZONTAL	184	60	REMAIN	N/A	
SINGLE TREE	31+82	1415 LT	157	221	HORIZONTAL	203	18	REMAIN	N/A	
31 SMALL TREE CLUSTER	33+41	1445 LT	156	243	HORIZONTAL	203	40	REMAIN	N/A	
SMALL TREE CLUSTER	34+65	1277 LT	153	236	TRANSITIONAL	190	46	REMAIN	N/A	
SINGLE TREE	36+37	1319 LT	167	250	TRANSITIONAL	192	58	REMAIN	N/A	
32 LARGE TREE CLUSTER	37+82	1131 LT	161	244	TRANSITIONAL	163	81	REMAIN	N/A	
BRUSH	49+16	14 LT	19	55	PRIMARY	35	20	REMOVE	NEAR TERM	
54 BRUSH	55+09	83 LT	17	49	PRIMARY	35	14	REMOVE	NEAR TERM	
35 LARGE TREE CLUSTER	102+48	15 LT	145	268	APPROACH/ HORIZONTAL	205	63	REMOVE	NEAR TERM/ ULTIMATE	STATE OF AL
BRUSH 335 LARGE TREE CLUSTER	55+09 102+48	83 LT 15 LT	17 145 NOTE:	49 268	PRIMARY APPROACH/ HORIZONTAL	35 205	14 63	REMOVE REMOVE	NEAR TERM NEAR TERM/ ULTIMATE	STATE OF AL
* ULIMATE PENETRATION UNLY			1. ALL OF 2. NO PEN ULTIMAT 3. NO PEN TERM A	FSETS, ELEVATIONS, AI IETRATIONS OF THE TS E CONSTRUCTION STAY IETRATIONS OF PART ND ULTIMATE CONSTRI	ND PENETRATIONS ARE IN FEET. SS AFTER NEAR TERM AND THE PAPI OE GES. 77 SURFACES WITHIN THE PROPOSED AII JCTION STAGES.	STACLE CLEARANC	E SURFACE AFTER AFTER NEAR		RAY	PORT LIONS AIRPOI PORT LIONS, ALASKA AIRPORT LAYOUT PLAN



DATE: 12-19 SHEET: 8 0F 14

				GROUND			SURFACE			
ID#	DESCRIPTION	STATION	OFFSET	ELEV	TOP ELEV	PART 77 SURFACE	ELEV	PENETRATION	DISPOSITION	STAGE
401	HIGH TERRAIN	10+45	603 LT	157	169	APPROACH/ TRANSITIONAL	155	14	REMAIN	N/A
402	LARGE TREE CLUSTER/ BRUSH	16+67	347 RT	101	215	APPROACH	116	99	TREE REMOVAL WITHIN TSS	NEAR TERM / ULTIMATE
403	LARGE TREE CLUSTER	16+66	495 RT	103	193	TRANSITIONAL	122	71	REMAIN	N/A
404	HIGH TERRAIN	16+30	453 LT	119	125	APPROACH	118	7	REMAIN	N/A
405	TERRAIN HIGH POINT	17+28	458 LT	120	136	APPROACH/ TRANSITIONAL	114	22	REMAIN	N/A
406	HIGH TERRAIN	20+23	483 LT	111	115	TRANSITIONAL	110	5	REMAIN	N/A
407	HIGH TERRAIN	20+68	403 LT	99	106	APPROACH/ TRANSITIONAL	97	9	REMAIN	N/A
408	TERRAIN HIGH POINT	20+85	126 LT	97	203	APPROACH	95	108	REMOVE	NEAR TERM
409	HIGH TERRAIN	22+06	403 LT	94	100	TRANSITIONAL*	93	7	REMAIN	N/A
410	HIGH TERRAIN	21+19	485 LT	108	112	TRANSITIONAL*	107	5	REMAIN	N/A
411	HIGH TERRAIN	23+07	420 LT	94	102	TRANSITIONAL*	93	9	REMAIN	N/A
412	HIGH TERRAIN	26+54	305 LT	69	75	APPROACH/ TRANSITIONAL	68	7	REMOVE	ULTIMATE
413	TERRAIN HIGH POINT	25+24	194 LT	90	101	APPROACH	73	28	REMOVE	NEAR TERM
414	HIGH TERRAIN	25+64	586 LT	81	165	TRANSITIONAL	109	56	REMAIN	N/A
415	HIGH TERRAIN	29+43	593 LT	100	179	TRANSITIONAL	99	80	REMAIN	N/A
416	HIGH TERRAIN	27+87	596 LT	99	152	TRANSITIONAL	98	54	REMAIN	N/A
417	HIGH TERRAIN	30+40	558 LT	94	114	TRANSITIONAL	92	22	REMAIN	N/A
418	LARGE TREE CLUSTER/ BRUSH	27+85	241 RT	52	132	PRIMARY/ APPROACH/ TRANSITIONAL	60	72	REMOVE	N/A
419	TREES/BRUSH	31+22	547 LT	75	149	TRANSITIONAL	89	60	REMAIN	N/A
420	EXISTING APRON	30+87	71 LT	49	49	PRIMARY*	47	2	REMOVE	ULTIMATE
421	EXISTING RUNWAY	33+51	200 LT	46	46	PRIMARY*	45	1	REMOVE	ULTIMATE
422	SMALL TREE CLUSTERS/ BRUSH	38+06	476 LT	48	129	TRANSITIONAL	69	60	REMAIN	N/A
423	HIGH TERRAIN	36+42	245 LT	41	55	PRIMARY*	40	15	REMOVE	ULTIMATE
424	HIGH TERRAIN	38+84	95 LT	41	55	PRIMARY	36	19	REMOVE	NEAR TERM
425	HIGH TERRAIN	37+46	235 LT	39	60	PRIMARY	38	22	REMOVE	NEAR TERM
426	SMALL TREE CLUSTERS/ BRUSH	39+43	464 LT	48	143	TRANSITIONAL	66	77	REMAIN	N/A
427	SMALL TREE CLUSTERS/ BRUSH	61+98	431 LT	59	168	PRIMARY/ TRANSITIONAL	72	96	REMOVE	NEAR TERM/ ULTIMATE
428	HIGH TERRAIN	67+93	371 LT	76	188	PRIMARY/ APPROACH/ TRANSITIONAL	72	116	REMOVE	NEAR TERM/ ULTIMATE
429	LARGE TREE CLUSTER	74+69	430 LT	81	202	APPROACH/ TRANSITIONAL	99	103	REMOVE	NEAR TERM/ ULTIMATE
430	LARGE TREE CLUSTER	80+77	568 LT	56	175	APPROACH/ TRANSITIONAL	136	39	REMAIN	N/A
431	LARGE TREE CLUSTER	87+64	589 LT	75	205	APPROACH/ TRANSITIONAL*	159	46	REMAIN	N/A
432	LARGE TREE CLUSTER	24+73	366 LT	62	154	APPROACH/ TRANSITIONAL*	80	74	REMAIN	N/A

\* ULTIMATE PENETRATION ONLY

NOTE:
 ALL OFFSETS, ELEVATIONS, AND PENETRATIONS ARE IN FEET.
 NO PENETRATIONS OF THE TSS AFTER NEAR TERM AND THE PAPI OBSTACLE CLEARANCE SURFACE AFTER ULTIMATE CONSTRUCTION STAGES.
 NO PENETRATIONS OF PART 77 SURFACES WITHIN THE PROPOSED AIRPORT BOUNDARY AFTER NEAR TERM AND ULTIMATE CONSTRUCTION STAGES.

Drawn By: WMC,RLG Checked Bv: XXX

FS dwo





**PORT LIONS AIRPORT** PORT LIONS, ALASKA AIRPORT LAYOUT PLAN

OBSTRUCTION TABLES



REVISION

					/	
			PROPERTY	STATUS		
TRACT	A.I.P. NUMBER	AREA	INTEREST ACQUIRED	RECORDING INFO	ACQ. DATE	
(TRACT I)	A.D.A. 11457	84.81 Ac.	FEE SIMPLE TITLE TO SURFACE ESTATE FROM AFOGNAK NATIVE CORPORATION – 14(C)(4) ANCSA	BOOK 61, PAGE 66, KODIAK RECORDING DISTRICT	13 APRIL 1983	DEI "DE REC SUI BY MAI 43
<u>TRACT I-A</u> TRACT I-B	A.D.A. 11457	0.91 Ac. 0.02 Ac.	FEE SIMPLE TITLE TO SURFACE ESTATE FROM AFOGNAK NATIVE CORPORATION – 14(C)(4) ANCSA	BOOK 61, PAGE 66, KODIAK RECORDING DISTRICT	5 JULY 2006	ARI BU SU DE 20 DIS
(TRACT II)	A.D.A. 11464	33.80 Ac.	PERMIT, AVIGATION AND HAZARD EASEMENT AND RIGHT-OF-WAY FROM STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES, ADL 217275	BOOK 107, PAGE 975, RE-RECORDED AS DOCUMENT 2019-000184, KODIAK RECORDING DISTRICT	18 JUNE 1991	
(TRACT III)	x-xx-xxxx-xxx	2.06 Ac.	PERMIT, AVIGATION AND HAZARD EASEMENT AND RIGHT-OF-WAY FROM STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES, AMENDMENT TO ADL 217275(?)	TO BE ACQUIRED		
TRACT IV-A TRACT IV-B	x-xx-xxxx-xxx-xxxx	0.16 Ac. 1.96 Ac.	FEE SIMPLE TITLE TO SURFACE ESTATE FROM NATIVE VILLAGE OF PORT LIONS	TO BE ACQUIRED		
(E IV-C)	x-xx-xxxx-xxx-xxxx	0.49 Ac.	AVIGATION EASEMENT FROM NATIVE VILLAGE OF PORT LIONS	TO BE ACQUIRED		
TRACT V-A TRACT V-B	x-xx-xxxx-xxx	0.16 Ac. 1.96 Ac.	FEE SIMPLE TITLE TO SURFACE ESTATE FROM NATIVE VILLAGE OF PORT LIONS	TO BE ACQUIRED		
E V-C E V-D E V-E	X-XX-XXXX-XXX-XXXX X-XX-XXXX-XXX-XXXX X-XX-X	40.71 Ac. 38.43 Ac. 0.66 Ac.	AVIGATION EASEMENTS FROM NATIVE VILLAGE OF PORT LIONS	TO BE ACQUIRED		AVI AC UP
(TRACT VI)	x-xx-xxxx-xxx-xxxx	28.50 Ac.	FEE SIMPLE TITLE TO SURFACE ESTATE FROM AFOGNAK NATIVE CORPORATION – 14(C)(4) ANCSA	TO BE ACQUIRED		
TRACT VI	x-xx-xxxx-xxx	16.96 Ac.	FEE SIMPLE TITLE TO SURFACE ESTATE FROM AFOGNAK NATIVE	TO BE ACQUIRED		PA <sup>-</sup>
E VII-A1	x-xx-xxxx-xxx-xxxx	0.30 Ac.	CORPORATION = 14(C)(4) ANCSA			PO:
(E VII-A2) $(E VII-B1)$	x-xx-xxxx-xxx-xxx x-xx-xxxx-xxx-xxxx	33.08 Ac. 29.94 Ac.	AVIGATION EASEMENTS FROM NATIVE VILLAGE OF PORT LIONS	TO BE ACQUIRED		B2 UP
E VII-B2	x-xx-xxxx-xxx-xxxx	11.15 Ac.				NA
TRACT VIII	x-xx-xxxx-xxx-xxxx	8.94 Ac.	PERMIT, AVIGATION AND HAZARD EASEMENT AND RIGHT-OF-WAY FROM STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES, AMENDMENT TO ADL 217275(?)	TO BE ACQUIRED		
	T.	RACT	EXISTING AIRPORT BOU	JNDARY E IV-C	TRACT IV-B RACT V-B	
	E V-D		ALBERORET ROAD TRACT 6 TRACT		PROPOS	ED / BO



![](_page_10_Figure_0.jpeg)

![](_page_11_Figure_0.jpeg)

![](_page_12_Figure_0.jpeg)

BY DATE

![](_page_13_Figure_0.jpeg)

## PORT LIONS AIRPORT ORI

## AIRPORT LAYOUT PLAN NARRATIVE REPORT

**IRIS No. 52796** 

![](_page_14_Picture_3.jpeg)

Prepared by:

Alaska Department of Transportation and Public Facilities

6260 Glacier Avenue

Juneau, Alaska

January 2020

### A. EXECUTIVE SUMMARY

Port Lions is a town on Kodiak Island. The community is located approximately 19 miles northwest of the City of Kodiak along Settler Cove situated in the Kizhuyak Bay. The Port Lion airport is positioned at the base of Mount Ellison approximately 1.5 miles northwest of town.

Port Lions Airport's current runways are marked with reflective cones and lights, but have been overgrown with grass and alders. Runway 06 obstructions include trees on a hill approximately 200 feet above the threshold and less than 1,000 feet from the runway end. The runway is subject to downdrafts during NE winds. The airport is not monitored and it is recommended that pilots visually inspect before using. Vehicles cross the runway near the runway 06 threshold, and use the runway safety area to access a roadway near threshold 24.

The Port Lions Airport Layout Plan (ALP) presents near term and ultimate layouts to upgrade the airport to current community class standards, optimize the airspace surrounding the airport, and reduce runway incursions. The improved runway will accommodate general aviation, commuter, and air taxi type aircraft. The near term plan will bring the airport up to current standards by lengthening the runway, constructing a new runway safety area, apron, taxiway, access road and bypass road, installing new edge lighting, and constructing a new Snow Removal Equipment Building (SREB). Ultimate development includes FAA installation and maintenance of a Precision Approach Path Indicator (PAPI) system.

#### 1. Description and timeline for proposed projects

#### **Proposed projects:**

Near term (\$13.4 Million); Begin construction summer 2021

- 75ft by 3300ft Primary Runway (RW 05/23)
- 300ft by 300ft Apron
- 100ft by 100ft Maintenance Pad
- Snow Removal Equipment Building (SREB)
- Runway and Taxiway Lights

<u>Ultimate (TBD)</u>; timeline contingent upon demand, funding, and ownership

- Precision Approach Path Indicators (PAPI)
- Lighting / Markings

#### Milestones / Triggering events:

The near term airport project will begin construction after environmental approval, right-of-way acquisition, and design documents are complete.

Milestones include Airport Layout Plan (ALP) approval, Environmental Assessment completion, and final design document completion.

The ultimate airport project's construction is contingent on demand, funding, and ownership/maintenance of the PAPI system. Milestones include authorized funding, update of the environmental document, additional property acquisition, and design document completion.

#### Action items / Next steps:

Upon approval of the ALP, DOT&PF will resume development of the environmental document, plans, specifications, and estimates for construction of the near term airport layout.

#### Funding plan:

Funding for the ALP and near term layout is eligible for the Airport Improvement Program (AIP).

### **B. BASIC AERONAUTICAL FORECAST** (0-5, 6-10, 11-20 years)

#### 1. Total annual operations

Air traffic at the Port Lions airport is estimated with the Terminal Area Forecast (TAF), the official projection of aviation activity for U.S. airports. These forecasts are prepared annually for active airports in the National Plan of Integrated Airport Systems (NPIAS), and information is compiled for major users of the National Airspace System including air carrier, air taxi and commuter, general aviation, and military. Additionally, operations are divided into the categories of itinerant and local. In the case of the Port Lions Airport, all TAF projected operations are itinerant.

Year	<u>Air Carrier</u>	<u>Commuter</u>	GA	<u>Military</u>	<u>Total</u>
2002	3000	1800	500	0	5300
2003	0	4800	500	0	5300
2004	0	4800	500	0	5300
2005	0	4800	500	0	5300
2006	0	4800	500	0	5300
2007	0	4800	500	0	5300
2008	0	4800	500	0	5300
2009	0	4800	500	0	5300
2010	0	4800	500	0	5300
2011	0	4800	500	0	5300

Table 1. Estimated Aircraft Operations, 2002-2018, Port Lions Airport.

Port Lions Air	port (ORI)				
Airport Layout	t Plan Narrative Re			January 2020	
2012	0	4800	500	0	5300
2013	0	4800	500	0	5300
2014	0	4800	500	0	5300
2015	0	4800	500	0	5300
2016	0	4800	500	0	5300
2017	0	4800	500	0	5300
2018	0	4800	500	0	5300

Source: FAA APO Terminal Area Forecast Detail Report - Forecast Issued February 2019 https://taf.faa.gov/Home/RunReport

#### 2. Annual itinerant operations by all aircraft

In the case of the Port Lions Airport, all TAF projected operations are itinerant, see Table 1.

#### 3. Annual itinerant operations by current critical aircraft

TAF, ACAIS, and form T-100 data do not provide details about the type of aircraft used for a given flight. Kodiak-based Island Air Service provides scheduled flights to and from Port Lions twice per day on Monday through Saturday, and once on Sunday. Monday through Saturday Island Air operates a Piper Cherokee (A-I) and on Sunday a Britten-Normal Islander (A-II). Based on this information, there are a maximum of 834 and 104 scheduled operations per year by Piper Cherokees and Britten-Normal Islanders, respectively. Only the Piper Cherokee is above the 500 annual operations threshold for critical aircraft as defined in AC 150/5000-17. Consequently, an estimated 800 itinerant operations by current critical aircraft occur annually at Port Lions Airport.

#### 4. Annual itinerant operations by future critical aircraft

Since 2009, an average growth rate of -4.4% and -5.2% is projected from enplanement data via TAF and ACAIS, respectively. As a result of this information, it is likely that future operations by critical aircraft will remain approximately constant or decrease proportional to the stated growth rate.

#### 5. Number of based aircraft

The TAF report for Port Lions, updated in February of 2019, lists no based aircraft at the airport starting in 2008. There are records in the TAF of one based aircraft at Port Lions Airport between 1996 and 2007.

#### 6. Annual instrument approaches

All approaches to the Port Lions airport are visual only; there are no existing instrument approaches at the Port Lions airport.

#### 7. Number of enplanements

Passenger enplanements at the Port Lions airport saw substantial growth and recession over the past 20 years. Enplanements increased as anticipated by HDR in the 2007 Airport Master Plan (AMP) through the peak in 2009. At this inflection point, airport activity stagnated, and by 2018 had returned to the levels seen at the turn of the century. Note that these data closely follow the population trend for the Port Lions area during the same period. The reported enplanements from the Terminal Area Forecast (TAF) and Air Carrier Activity Information System (ACAIS) databases are reported in Table 2.

![](_page_18_Figure_5.jpeg)

Table 2. Reported Passenger Enplanements (2002-2018) Port Lions Airport.

#### 8. Critical Aircraft

Kodiak-based Island Air Service provides scheduled flights to and from Port Lions twice per day on Monday through Saturday, and once on Sunday. Monday through Saturday Island Air operates a Piper Cherokee (A-I) and on Sunday a Britten-Normal Islander (A-II).

Source: FAA Terminal Area Forecast Feb 2019, ACAIS Reports 2002-2018

The most demanding aircraft is the Piper Cherokee (A-I) with approximately 1,250 annual operations.

#### 9. Runway Design Code (RDC)

The RDC for the near term layout is A-I-VIS. The RDC for the ultimate layout is A-I-5000.

#### C. ALTERNATIVES / PROPOSED DEVELOPMENT

Alternatives were evaluated and analyzed by HDR in the 2007 AMP. This included alternatives to relocate the airport to the east or west of Branchwater Creek that were rejected due to the watershed being used for municipal water supply, the expense of constructing the access road, the severe impact to wetlands, the likely presence of deep peat and ash foundation soils, and the negative weather impacts of a runway at a higher elevation. An alternative considered on Pelegribni Point was rejected due to rolling terrain, effects on conservation land set aside by the Kodiak Island Borough, impacts to an established subdivision, and public opposition.

Alternative 1, an extension of the existing runway on the current alignment was considered but rejected due to the impacts of construction on the inter-tidal wetlands, which were deemed to be a critical habitat and subsistence use area.

Alternative 2, the AMP "build alternative," is a rotation relative to the existing alignment and construction of a new runway. This alternative was reanalyzed and is the proposed development of the ALP.

#### • Proposed development

DOT&PF proposes to rotate the runway approximately 11 degrees counter-clockwise, extend the runway from 2,200 to 3,300 feet, replace runway lighting, provide a rotating beacon, a segmented circle and wind cone, and a Snow Removal Equipment Building (SREB). Extending the runway will require rotating the runway, constructing new RSA, apron, connecting taxiway, airport bypass road, maintenance pad for a SREB, and maintaining existing trail access.

Precision Approach Path Indicators (PAPI's) may be installed at the FAA's discretion; however, DOT&PF has a long standing policy that installation and maintenance of a PAPI is the responsibility of the FAA. FAA air traffic organization should be brought into the design process early to ensure PAPIs are correctly incorporated into the project and to ensure that the FAA will accept these lights for ownership and maintenance. The AMP states, "should the post construction flight check indicate potential issues, DOT&PF should set up the approaches with the final approach course to the threshold angled away from the terrain per [AC 5300/13a]" (pg 36).

• Discuss near term and future approach procedures

The near term plan will be a visual approach. The ultimate plan will support nonprecision instrument approaches and visibility minimums of one-mile.

#### • Navigational aids or other equipment needs

The near term layout plan includes a rotating beacon, lighted wind cone, and an FAA camera. These facilities are currently provided at the airport and will be replaced or moved.

The ultimate layout plan includes a PAPI visual approach aid. The PAPI will provide vertical guidance information to pilots and help maintain the correct approach. The PAPI when set at the steepest allowable 4° nominal setting will allow Runway 05 threshold to be non-displaced upon proper installation and after completion of an FAA flight check.

#### • Wind coverage

The FAA guidance calls for runways to be oriented such that a minimum of 95% wind coverage is achieved. Based on the current wind data (source: Port Lions Airport Wind Cone) available for the Port Lions airport, the proposed runway will provide:

Airport Reference Code (ARC)	Crosswind Component	Wind Coverage
A-I & B-I	10.5 knots	98.20%
A-II & B-II	13.0 knots	99.22%
C-I through D-III	16.0 knots	99.87%
A-IV through D-VI	20.0 knots	99.98%

Discussion with the local populace revealed that the wind data may not be reliable. Reported wind is not always what is experienced by pilots during operations. The data, however, closely matches the Ouzinkie wind tower data located 14 miles N 73°14.4' E (maintained by HDR Alaska, Inc). The Ouzinkie wind tower is the closest reporting station to the airport.

#### **D. MODIFICATION TO STANDARDS**

There are no approved Modifications of Standards (MOS) on file with the FAA. No MOS applications are being submitted with the ALP.

#### **E. OBSTRUCTION SURFACES**

The near term and ultimate runways depicted in the accompanying ALP are utility runways with visual and non-precision instrument approaches, respectively. The Federal Aviation Regulations – Part 77 require the following obstruction identification surfaces to be analyzed.

	Dimensional Standards (ft)	
Surface Item	Visual /	Non-Precision
	Utility	Instrument / Utility
	Runway	Runway
Width of Primary Surface and Approach Surface	250	500
Width at Inner End		
Radius of Horizontal Surface	5,000	5,000
Approach Surface Width at End	1,250	2,000
Approach Surface Length	5,000	5,000
Approach Slope	20:1	20:1

#### F. RUNWAY PROTECTION ZONE

The existing runway has multiple areas of vehicle incursions. The 06 approach RSA and RPZ are used by vehicles to access a road to a material site and trail north of the threshold. The 24 approach RSA and RPZ are used to access a road to private property and trails to the northeast of the threshold.

The proposed near term and ultimate layouts propose to remove all vehicles from the runway and runway safety area by building an apron access road and realigning the road off the RSA, see ALP Sheet 4, Near-term / Ultimate Airport Layout Plan.

#### G. DEVELOPMENT SUMMARY

The current approved ALP was signed in April 1983. Projects completed since the approved ALP:

**Project Title:** Port Lions Airport Surfaces (Project #D34112)

**AIP #:** 83-130-202-350-183

**Construction:** 1983

**Project Scope:** This project was completed in 1983 and consisted of reconstructing the apron; airport lighting; shore protection; miscellaneous airport improvements; and the addition of 6" of aggregate surface course to the runway, taxiway, and apron.

Project Title: Port Lions Regulator Building (Project #52575)

AIP #: 3-02-0235-004-2011

**Construction: 2011** 

**Project Scope:** This project consisted of decommissioning the existing regulator building; installing a new regulator building complete with lighting, heating, and convenience receptacles; new service entrance equipment, panel board, airport constant current regulator, and relocating electrical hook-ups. The regulator is a pre-engineered structure supported on a steel frame/skid foundation anchored to the existing ground. A temporary foundation was selected in anticipation of a future airport reconstruction project, which proposes to realign the runway.

### H. SHADOW OR LINE-OF-SIGHT STUDY FOR TOWERED AIRPORTS

A shadow or line-of-sight study is not required. There is no plan to construct a tower at the Port Lions airport.

### I. LETTERS OF COORDINATION WITH ALL LEVELS OF GOVERNMENT

The project's Environmental Assessment (pending) contains all the documentation for coordination with government agencies.

A memorandum from Venus Larson (FAA) titled "Amended Conditional Categorical Exclusion Approval for Port Lions Geotechnical Investigations and Airport Layout Plan (ALP)" grants approval of a Simple Record CATEX for this ALP's conditional approval.

### J. WILDLIFE HAZARD MANAGEMENT ISSUES REVIEW

#### • Landfill

The Port Lions landfill is located 3500' (1.1 km) south of the current runway. This Class III Community Landfill encompasses approximately 5.7 acres (2.3 ha) and is permitted by the Alaska Department of Environmental Conservation (ADEC). It is managed to reduce attractants to scavenging animals such as bears, foxes, gulls, eagles, ravens, crows and magpies by fencing, sorting, and containing waste until it can be incinerated. Local pilots have experienced occasional bird strikes and close calls, but these instances have been greatly reduced since landfill management has been improved and more closely monitored.

AC 150/5200-33B recommends a separation distance of 5,000 feet from municipal solid waste landfills. ADEC authorization for municipal landfills requires documentation demonstrating the landfill does not pose a bird hazard to aircraft, also required by AC 150/5200-33B, Section 2-2). During the most recent inspection by ADEC (July 12, 2018), the landfill received an inspection score of 86% for the way it was managed to reduce attractants.

Runway expansion being considered in this project will not bring the end of the runway any closer to the landfill, however, realignment will bring southern approach and departure flight paths closer to it. The primary concern with these flight paths is an increased possibility of bird-strikes during the most vulnerable time of flight (take-off and landing). These concerns can be mitigated by closely adhering to the conditions of the most recent permit (ADEC SW3A169-20; August 7, 2015 - August 7, 2020) and the recommendations for improvement cited after the July 12, 2018 inspection, with special attention given to minimizing attractants to avian scavengers.

#### • Wetlands

Wetlands are present on airport property. Realigning the runway would reduce the amount of wetlands thereby reducing the potential for wildlife hazards associated with wetlands.

### K. PRELIMINARY IDENTIFICATION OF ENVIRONMENTAL FEATURES

#### • Major airport drainage ditches

There are no existing major drainage ditches located along the Port Lions airport.

#### • Wetlands

A wetland jurisdictional determination report was completed and submitted to the USACE on February 20, 2019. The USACE issued an approved Jurisdictional Determination on April 30, 2019. The following wetlands have been identified in the project area:

- **PFO1/4B** Saturated Broad-Leaved Deciduous/Needle-Leaved Evergreen Forested
- **PFO4/1B** Saturated Needle-Leaved Deciduous/Broad-Leaved Evergreen Forested
- **PFO4B** Saturated Needle-Leaved Evergreen Forested
- **PSS1/EM1B** Saturated Broad-Leaved Deciduous Scrub-Shrub/Persistent Emergent
- **PSS1/EM1C** Seasonally Flooded Broad-Leaved Deciduous Scrub-Shrub/Persistent Emergent
- PSS1C Seasonally Flooded Broad-Leaved Deciduous Scrub-Shrub
- **PSS4/EM1B** Saturated Needle-Leaved Evergreen Scrub-Shrub/Persistent Emergent
- **PEM1F** Semi-Permanently Flooded Persistent Emergent

The following waterbodies have been identified in the project area:

- E1UBL Subtidal Estuarine Water with an Unconsolidated Bottom
- E2USP Irregularly Flooded Intertidal Estuarine Unconsolidated Shore
- **R1UBV** Permanently Flooded Tidal Stream with an Unconsolidated Bottom
- **R3UBH** Permanently Flooded Upper Perennial Stream with an Unconsolidated Bottom

#### • Flood zones

The Port Lions airport is not located within a FEMA-mapped area and would be consistent with E.0. 11988.

#### • Historic or cultural features

There are two site eligible for listing on the National Register of Historic Places:

- KOD-1042 located south of the end of the runway 05 threshold. The site consists of a low mound of cultural material that extends for approximately 7.5m along the beach.
- KOD-1043 located approximately 50m southwest of KOD-1042 on a small bench along the eastern bank of the stream. The site consists of cultural materials.

#### • Section 4(f) features

There are no additional Section 4(f) resources other than the two historic sites (KOD-1042 and KOD-1043).

#### • Flora / Fauna

#### Flora

The vicinity of the Port Lions airport is principally a gentle south-facing slope with a flat plateau where the current runway is located with elevations ranging from sea level to 250 ft (76.2 m). Based on an analysis of a vegetative cover map created in 2000 by Fleming and Paige (2004), the area is primarily characterized by alder (39.3%), spruce (38.1%), gravel (11.1%), and meadow (7.6%). Several acres of spruce forest at either end of the existing runway have been cut as part of airport maintenance.

The intertidal habitat adjacent to the airport provides additional flora and support a rich array of plants typical of intertidal areas throughout the Kodiak Archipelago.

#### Fauna

A wildlife assessment was completed in May 2019 for the area surrounding and including the Port Lions airport.

Mammals include Kodiak brown bears, Sitka black-tailed deer and red fox are known inhabitants. Roosevelt elk, red squirrels, snowshoe hares, voles, little brown bats, otters, beavers, weasels, rats, and mice are present but uncommon.

The nearshore waters adjacent to the Port Lions airport in Kizhuyak Bay are used by resident harbor seals, northern sea otters and Dall's porpoise. Pacific white-sided and harbor porpoises are less common, but also present. Steller's sea lions are prevalent around the Kodiak Archipelago and transit near the study area. Common whales that seasonally use northern Kizhuyak Bay, Whale Pass and Marmot Bay include killer (orca), humpback, gray, sei, minke and fin whales.

41 bird species are likely to be seasonal or year-round residents. 40 species (primarily shorebirds, waterfowl, and seabirds) likely use intertidal and nearshore waters.

Two andadromous fish streams are present in the airport vicinity providing habitat for Dolly Varden, pink salmon, and sculpin.

No reptiles or amphibians are expected.

#### • Federally-listed Endangered and Threatened Species

Two USFWS-listed species (Steller's eider and northern sea otter) and five NMFS-listed species (sei whale, fin whale, western North Pacific gray whale, Western North Pacific humpback whale, and Western Steller sea lions) regularly use nearby marine habitat in Kizhuyak Bay. The Western Steller sea lions may, on rare occasions, haul-out on intertidal areas adjacent to the airport.

While not endangered or threatened species, two USFWS Birds of Conservation Concern are seasonal residents of the area: peregrine falcon and marbled murrelet. Another four probably use the adjacent intertidal and nearshore marine waters: red-throated loon, black oystercatcher, lesser yellowlegs, and rock sandpiper. Bald eagles, protected under the Bald Eagle Protection Act, are also residents but no nests were observed within the vicinity of the airport.

#### • Solid Waste

The Port Lions landfill is located 3500' (1.1 km) south of the current runway. This Class III Community Landfill encompasses approximately 5.7 acres (2.3 ha) and is permitted by the ADEC. It is managed to reduce attractants to scavenging animals such as bears, foxes, gulls, eagles, ravens, crows and magpies by fencing, sorting, and containing waste until it can be incinerated.

#### • Environmental Justice

The Port Lions community is above the state and regional average for minority and lowincome population statistics, protected under E.O. 12898 and Title VI of the Civil Rights Act of 1964.

#### • Hazardous Materials

A Phase I Environmental Site Assessment was completed November 2018 and did not identify any records of hazardous materials and no evidence of recognized environmental conditions. Unidentified buried drums may be located below ground and heavy metals, equivalent to household litter, may be in the vicinity of the airport. Overall, the risk of environmental contamination being present is low.

#### L. DECLARED DISTANCES

Declared distances are only to be used with turbine-powered aircraft. The TORA, TODA, ASDA, and LDA will be equal to the runway length in cases where a runway does not have displaced thresholds, stopways, or clearways, and have a standard runway safety area (RSA), runway object free area (ROFA), runway protection zone (RPZ), and threshold siting surface (TSS) (AC 150/5300-13A, Paragraph 323). Near term RW 05 has a displaced threshold. No proposed runways have stopways and clearways. The declared distances are:

Near term:

-RW 05: TORA (3300'), TODA (3300'), ASDA (3300'), LDA (2650') -RW 23: TORA (3300'), TODA (3300'), ASDA (3300'), LDA (3300')

Ultimate:

-RW 05: TORA (3300'), TODA (3300'), ASDA (3300'), LDA (3300') -RW 23: TORA (3300'), TODA (3300'), ASDA (3300'), LDA (3300')