



U.S. Department
of Transportation

Federal Aviation
Administration

FAA Alaskan Region
222 W. 7th Avenue, Box 14
Anchorage, Alaska
99513-7587

FILE COPY

May 31, 2011

Jonathan C. Owen
Airport Manager
Public Safety Department, City of Palmer
231 W. Ever Green Avenue
Palmer, Alaska 99645-6952

Dear Mr. Owen:

Palmer Airport
"As-Built" Airport Layout Plan (ALP) Approval

We have completed a review of the "As Built" ALP for the Palmer Airport. The ALP is conditionally approved. This approval is subject to the condition that future development may not be undertaken without environmental approval by the Federal Aviation Administration. Please note that future development at this airport will require an ALP "update" using the current advisory circular on airport design (AC150/5300-13).

This as-Build approval excludes the approval of the Land Use Plan.

Please note the attached outstanding issues attached to this letter.

We have enclosed a copy of the signed ALP for your records. Contact Eric Helms at 271-5202 if you have any questions.

Sincerely,

John Lovett
Lead Civil Engineer

Enclosures:
Palmer ALP "As Built"

Attachment to Palmer Airport
Airport Layout Plan as-Built Approval Letter
April 25, 2011

Questions, Concerns and Recommendations

1. Runway 9/27 is classified as a Utility Runway, which means the runway was constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight and less (CFR Title 14, Part 77.3). Current airport remarks in the Alaska Supplement state "RWY 09/27 CLSD TO ACFT OVER 12500 LBS". We have the following questions/comments:
 - a. Runway 9/27 is 3,617 feet long and it could accommodate could accommodate large aircraft.
 - b. The ALP runway data states that the pavement strength is $\pm 15,000$ pounds.
 - c. Between 2005 and 2007 our office issued 2 grants to rehabilitate this runway.
 - d. Runway 9/17 is the only runway in Palmer that provides non-precision instrument weather minimums, enhancing the accessibility to the airport.
 - e. If the runway can support aircraft with a weight capacity $> 12,500$ pounds then (1) the restriction in the Alaska Supplement needs to be deleted and (2) the ALP Part 77 surfaces will need to be update.

Action: Please validate the pavement strength of runway 9/27.

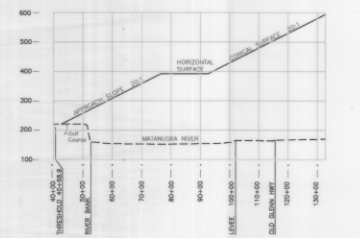
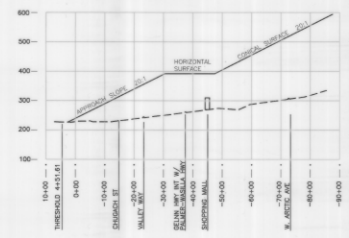
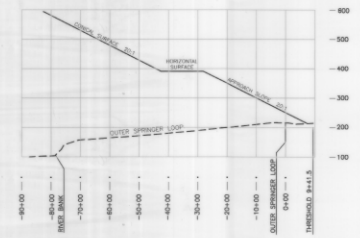
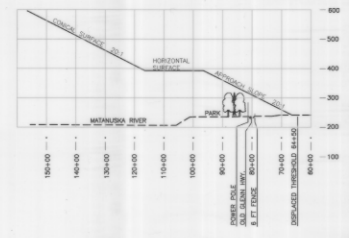
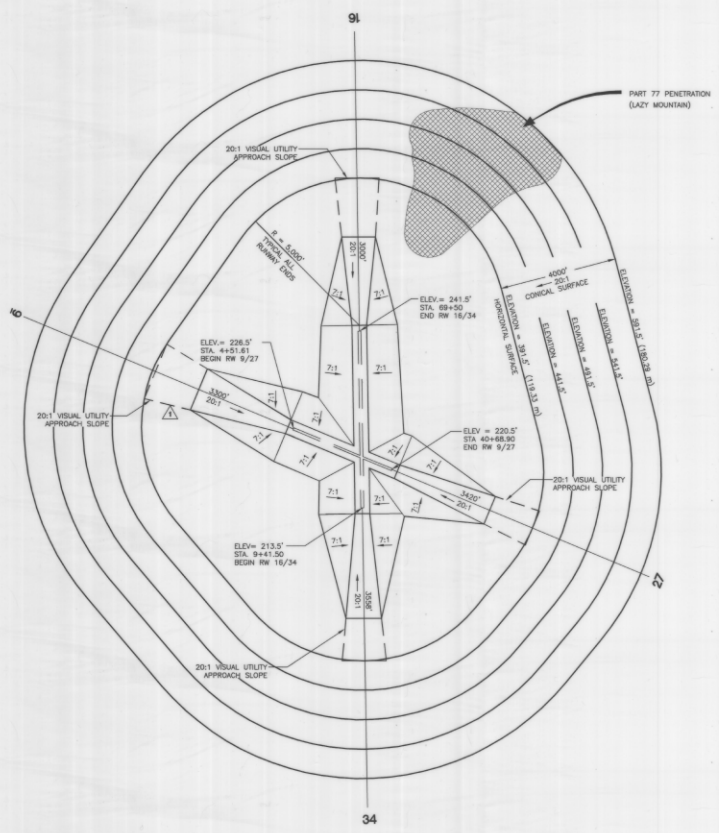
2. The Object Free Area of Runway (OFA) 16/34 does not meet the standards specified in FAA Advisory Circular 150/5300-13, Paragraph 307 and Table 3-3. It appears that within the OFA we have the airport perimeter fence, terrain and golf course fairways. There is no OFA Modification to Standards for these conditions or a short-term plan to resolve this conflict. Please provide this office with a corrective plan to this pending issue by December 31, 2011.

Action: Please provide to this office a request for an OFA Modification to Standards or a schedule to remove all incompatible uses of the OFA.

3. During the airport site visit of 4/19/2011 it appeared that there were various tree obstructions on the airport (i.e. trees on runway 9 and possibly a building). We would like to suggest to the airport to consider an Aeronautical Survey in the near future.

DATE PLOTTED: 08/15/11
 FALLMER MUNI 15-3-11
 AIRSPACE DRAWING

\\fs01\08_021_Palmer Airport Design_2006\CAD\Drawings\Airport Layout_Plan\05021_Airp_Lay_2007_1-1.dwg (7/11) at 09:18 by lic
 LAYOUT: 2 of 7
 REF: 05021_Airp_0501, RWY09B, RWY15B, RWY27B, RWY34B



NOTES:
 RUNWAY 16/24 IS 6008 FEET IN LENGTH AS SHOWN. PRIMARY SURFACE IS 500 FEET WIDE BY 848 FEET IN LENGTH. RUNWAY 9/27 IS 3615 FEET IN LENGTH AS SHOWN. PRIMARY SURFACE IS 250 FEET WIDE BY 4015 FEET IN LENGTH.
 THERE ARE NO MANMADE OBSTRUCTIONS IN THE APPROACHES, AND NO NATURAL OBSTRUCTIONS OTHER THAN THE PEAK TOPGRAPH OF LAZY MOUNTAIN TO THE NORTHWEST OF RUNWAY 16 AS SHOWN. THE PENETRATION IS NOT ON THE EXTENDED CENTERLINE OF THE RUNWAY.
 BASE MAPS USED ARE U.S.G.S. 1:25000 QUAD MAPS, QUAD OF ANCHORAGE ONE, RWY, SEC. 8, SW3.
 RUNWAY ELEVATIONS AND PART 77 ELEVATIONS ARE SHOWN IN U.S. IMPERIAL FEET ABOVE MEAN SEA LEVEL (MSL).
 THE MOST RECENT USGS QUAD MAP AT 1:25000 WAS USED, SO THE CONTOURS AND ELEVATIONS ON QUAD MAP ARE METRIC. THE ELDER 1:50000 QUAD MAP WITH ELEVATIONS IN ENGLISH UNITS IS NO LONGER AVAILABLE.

REVISION	DATE	DESCRIPTION	APP'D BY	DATE
1		UPDATE RWY 9 APPROACH WIDTH		6/7/11

APPROVAL SIGNATURES
 Name of Airport: Palmer Municipal
 Date of Sponsor Review: _____
 Name of Sponsor Project Manager Responsible for ALP: _____
 Signature of Sponsor Submitting ALP to FAA for Review: _____

FAA Airspace Review Number 2004-AL-1060R
 Airport Layout Plan Conditional Approval Subject to ALP Approval Limited to: 15/10/11
 BY: [Signature] DATE: 11/15/11
 FAA Region: ALASKA
 Alaska Region, AAL-601

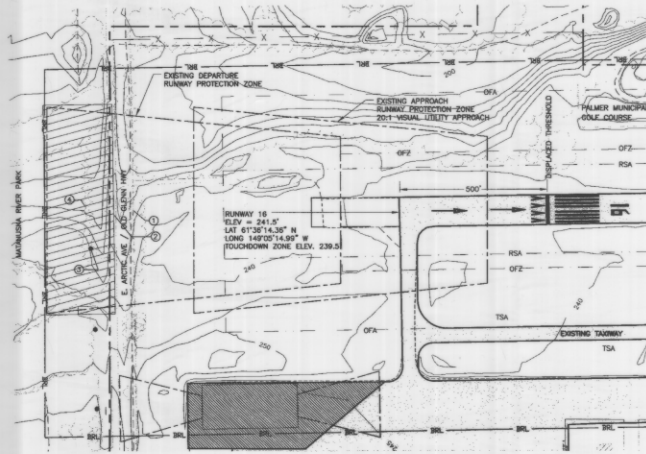


CITY OF PALMER
PALMER MUNICIPAL AIRPORT
AIRSPACE DRAWING
PALMER, ALASKA

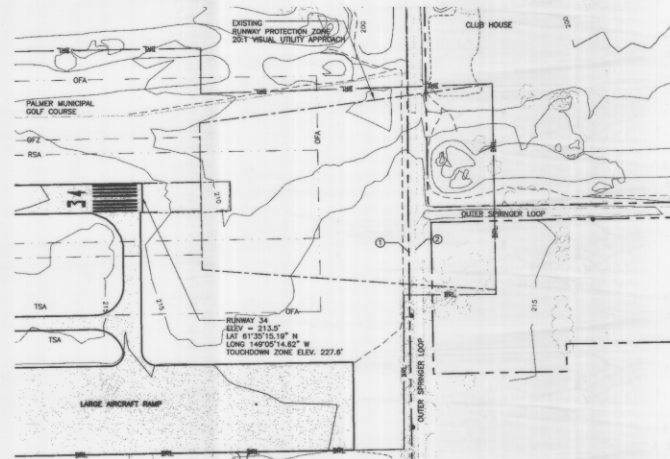
DRAWN BY: _____
 CHECKED BY: _____ DATE: 04-01-9
 SCALE AS NOTED JOB #: 05-02
 PLOT: _____
 FILE NO. 2 of 7 Layout SHEET: 2 OF 7



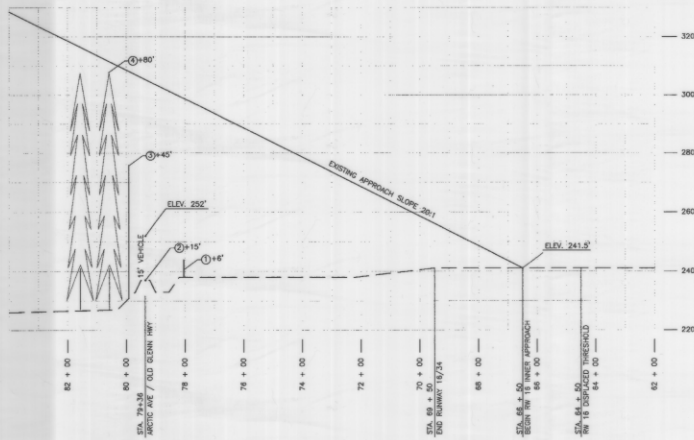
05-FILE COPY, NONE CA
 05-31-11
 Palmer Airport
 Inner Approach Surface 33



1 RUNWAY 16 PLAN
SCALE: HORIZ. 1"=200'



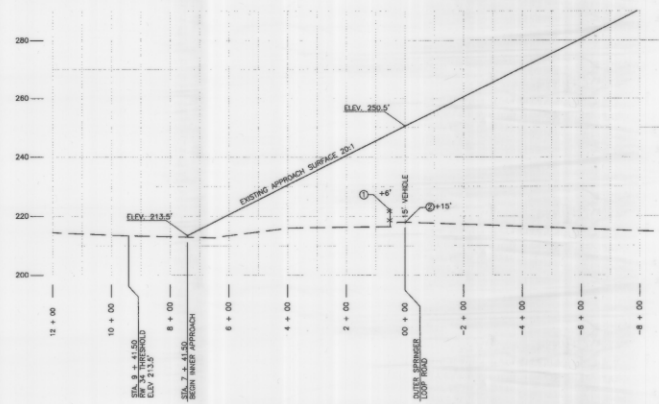
2 RUNWAY 34 PLAN
SCALE: HORIZ. 1"=200'



3 RUNWAY 16 APPROACH PROFILE
SCALE: HORIZ. 1"=200' VERT. 1"=20'

RUNWAY 16 APPROACH CLEARANCES		
NO.	OBJECT	CLEARANCE
1	FENCE	238 ± 4'
2	PUBLIC ROAD	237 ± 15'
3	POWER POLE	231 ± 45'
4	TREES	227 ± 80'

THERE ARE NO OBSTRUCTIONS TO FAR PART 77 SURFACES.



4 RUNWAY 34 APPROACH PROFILE
SCALE: HORIZ. 1"=200' VERT. 1"=20'

RUNWAY 34 APPROACH CLEARANCES		
NO.	OBJECT	CLEARANCE
1	FENCE	218.5 ± 4'
2	PUBLIC ROAD	218 ± 15'

THERE ARE NO OBSTRUCTIONS TO FAR PART 77 SURFACES.



REVISION	DESCRIPTION	APP'D BY	DATE

APPROVAL SIGNATURES
 Name of Airport: Palmer Municipal
 Date of Sponsor Review: _____
 Name of Sponsor Project Manager Responsible for ALP: _____
 Signature of Sponsor Submitting ALP to FAA for Review: _____
 FAA Airspace Review Number 2004-AL-1008A
 Airport Layout Plan Conditional Approval Subject to ALP Approval Letter, Order # 726104
 BY: [Signature] DATE: 7/2/04
 FAA, Airports Division
 Alaska Region, AAL-601

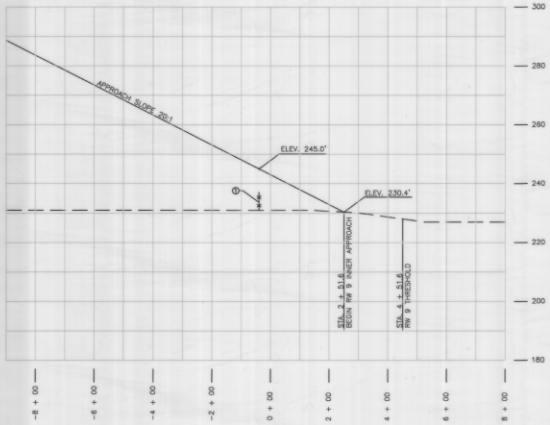
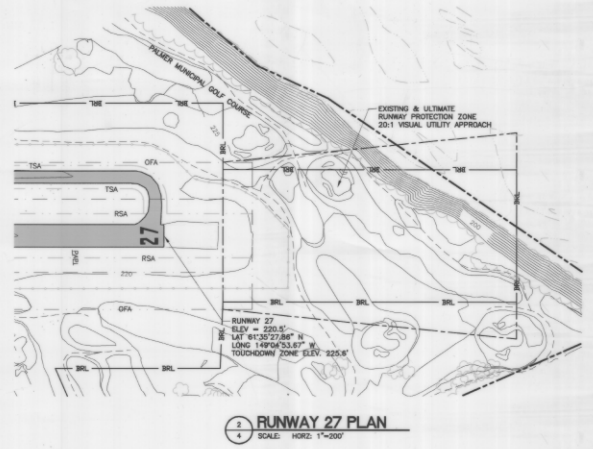
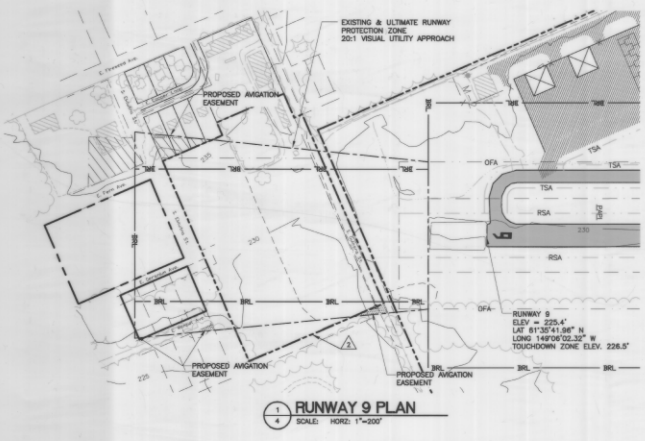


CITY OF PALMER
PALMER MUNICIPAL AIRPORT
INNER PORTION OF APPROACH
PALMER, ALASKA
 DRAWN BY: _____ ENGINEER: _____
 CHECKED BY: _____ DATE: 06-09-04
 SCALE: AS NOTED JOB #: 05-085
 PATH: _____
 FILE NO. 9 of 7-Layout SHEET: 3 OF 7

I:\Projects\03-013 Palmer Airport\Airport\Drawings\ALP\ALP-307_1.e1_06/07/04.dwg at 11:55 by cob
 LAYOUT: 3 of 6
 05-01-2004

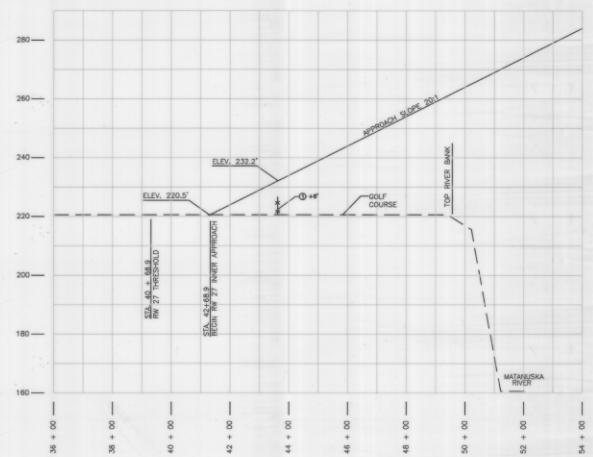
DATE: 5-31-11
 DRAWN BY: Palmer, Muri
 CHECKED BY: Inner Approach Surface

H:\Jobs\02-021_Palmer_Airport_Design_2005\CAD\Drawings\Airport_Layout_Plan\02021_alp_4a.dwg, 1=1, 04/07/11 at 09:18 by bc
 LAYOUT: 4 of 7
 XREF: 02021_alp_4a.dwg, 02021_alp_4b.dwg



RUNWAY 9 APPROACH CLEARANCES			
NO.	OBJECT	ESTIMATED TOP ELEV.	CLEAR DISTANCE
1	FENCE	231 + 5'	APPROACH SURFACE CLEARED BY 5'

THERE ARE NO OBSTRUCTIONS TO FAR PART 77 SURFACES.



RUNWAY 27 APPROACH CLEARANCES			
NO.	OBJECT	ESTIMATED TOP ELEV.	CLEAR DISTANCE
1	FENCE	220.5' + 6'	APPROACH SURFACE CLEARED BY 5.7'

THERE ARE NO OBSTRUCTIONS TO FAR PART 77 SURFACES.

△ UPDATED AIRPORT BOUNDARY TO INCLUDE PROPERTY ACQUIRED UNDER AP-014-2009



SYMBOL	DESCRIPTION	APPROVED BY	DATE
△	UPDATED AIRPORT BOUNDARY		
△	AP-014-2009		
△	DESIGNED BY RW #12		12/3/08
△	CHECKED		

APPROVAL SIGNATURES

Name of Airport: Palmer Municipal
 Date of Sponsor Review: _____
 Name of Sponsor Project Manager Responsible for ALP: _____
 Signature of Sponsor Submitting ALP to FAA for Review: _____

FAA Airspace Review Number 2004-AAL-1069A
 Airport Layout Plan Conditional Approval Subject to ALP Approval letter dated: 10/25/11
 by: [Signature] DATE: 5/24/11
 FAA, Alaska Region, AAL-601



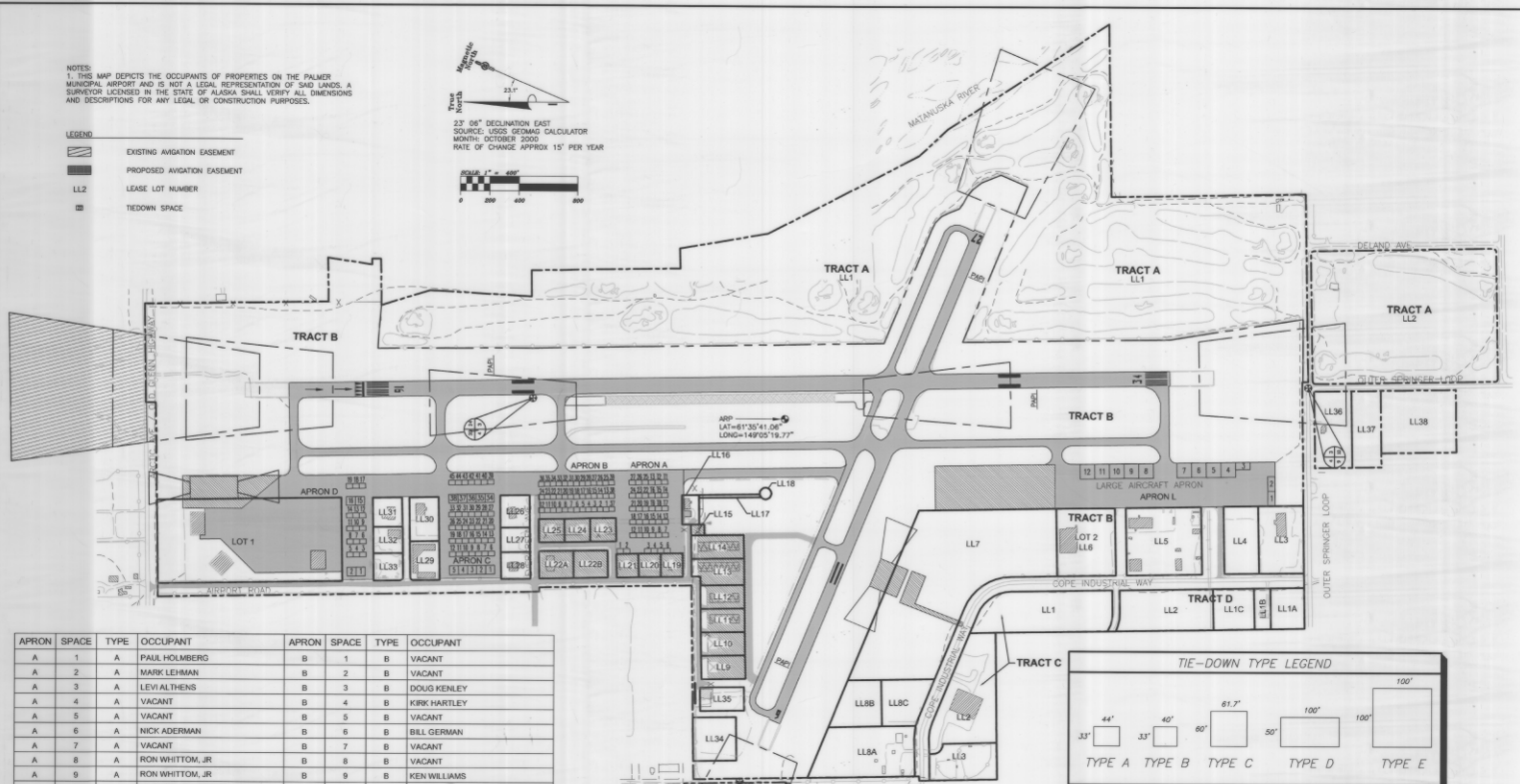
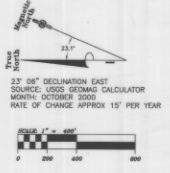
**CITY OF PALMER
 PALMER MUNICIPAL APPROACH
 INNER PORTION OF APPROACH
 PALMER, ALASKA**

DRAWN BY: ENR008
 DESIGNED BY: _____ DATE: 04-01-06
 SCALE: AS NOTED JOB #: 02-021
 PLOT: _____
 FILE NO. 4 of 7-Layout SHEET: 4 OF 7

DATE: 04/07/11
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]

NOTES:
 1. THIS MAP DEPICTS THE OCCUPANTS OF PROPERTIES ON THE PALMER MUNICIPAL AIRPORT AND IS NOT A LEGAL REPRESENTATION OF SAID LANDS. A SURVEY LICENSED IN THE STATE OF ALASKA SHALL VERIFY ALL DIMENSIONS AND DESCRIPTIONS FOR ANY LEGAL OR CONSTRUCTION PURPOSES.

LEGEND
 [Symbol] EXISTING AVIATION EASEMENT
 [Symbol] PROPOSED AVIATION EASEMENT
 [Symbol] LEASE LOT NUMBER
 [Symbol] TEDOWN SPACE



APRON	SPACE	TYPE	OCCUPANT	APRON	SPACE	TYPE	OCCUPANT
A	1	A	PAUL HOLMBERG	B	1	B	VACANT
A	2	A	MARK LEHMAN	B	2	B	VACANT
A	3	A	LEVI ALTHEUS	B	3	B	DOUG KENLEY
A	4	A	VACANT	B	4	B	KIRK HARTLEY
A	5	A	VACANT	B	5	B	VACANT
A	6	A	NICK ADERMAN	B	6	B	BILL GERMAN
A	7	A	VACANT	B	7	B	VACANT
A	8	A	RON WHITTON, JR	B	8	B	VACANT
A	9	A	RON WHITTON, JR	B	9	B	KEN WILLIAMS
A	10	A	VACANT	B	10	B	VACANT
A	11	A	JOEL HARD	B	11	B	VACANT
A	12	A	VACANT	B	12	B	JORDAN GREER
A	13	A	RICHARD WILMARTH	B	13	B	JOHN DEFFENDERFER
A	14	A	VACANT	B	14	B	VACANT
A	15	A	VACANT	B	15	B	VACANT
A	16	A	CHRIS HOUCHE	B	16	B	VACANT
A	17	A	VACANT	B	17	B	VACANT
A	18	A	VACANT	B	18	B	VACANT
A	19	A	VACANT	B	19	B	VACANT
A	20	A	VACANT	B	20	B	VACANT
A	21	A	VACANT	B	21	B	VACANT
A	22	A	VACANT	B	22	B	ROBERT & KIT JONES
A	23	A	JIM KINCAID	B	23	B	VACANT
A	24	A	VACANT	B	24	B	VACANT
A	25	A	VACANT	B	25	B	VACANT
A	26	A	VACANT	B	26	B	VACANT
A	27	A	WILLIAM BOUGHTON	B	27	B	VACANT
A	11	A	TRANSIENT	B	28	B	VACANT
A	12	A	TRANSIENT	B	29	B	VACANT
A	13	A	TRANSIENT	B	30	B	GRAN VANBAVEL
A	14	A	TRANSIENT	B	31	B	VACANT
A	15	A	TRANSIENT	B	32	B	VACANT
A	16	A	TRANSIENT	B	33	B	DAVID EARL
A	17	A	TRANSIENT	B	34	B	VACANT
A	18	A	TRANSIENT	B	35	B	VACANT
A	19	A	WARREN WOODS	B	36	B	VACANT
				B	37	B	ROBERT FISK
				B	38	B	VACANT
				B	39	B	VACANT

APRON	SPACE	TYPE	OCCUPANT	APRON	SPACE	TYPE	OCCUPANT	APRON	SPACE	TYPE	OCCUPANT
C	1	C	VACANT	C	27	A	VACANT	D	8	A	BRUCE W. EDWARDS
C	2	C	VACANT	C	28	A	VACANT	D	9	A	VACANT
C	3	C	MARK LEE	C	29	A	CHARLES YODER	D	10	A	JEAN BREW
C	4	C	VACANT	C	30	A	VACANT	D	11	A	DON VOIGT
C	5	C	VACANT	C	31	A	VACANT	D	12	A	VACANT
C	6	A	VACANT	C	32	A	VACANT	D	13	A	JEFFREY NORTON
C	7	A	VACANT	C	33	A	VACANT	D	14	A	VACANT
C	8	A	VACANT	C	34	C	VACANT	D	15	C	VACANT
C	9	A	VACANT	C	35	C	RAYMAX ENTERPRISES	D	16	C	VACANT
C	10	A	CAREN DELLACIOPPA	C	36	C	VACANT	D	17	A	VACANT
C	11	A	DAVID BLOCK	C	37	C	VACANT	D	18	A	VACANT
C	12	A	MICHAEL HOLMAN	C	38	C	VACANT	D	19	A	VACANT
C	13	A	CORRIE FRUHWIRTH	C	39	A	VACANT				
C	14	A	CHARLES GALLAGHER	C	40	A	VACANT	L	1	D	JOHN S REFFERT
C	15	A	DAN DARROW	C	41	A	VACANT	L	2	D	JOHN S REFFERT
C	16	A	VACANT	C	42	A	VACANT	L	3	D	VACANT
C	17	A	JOHN MEARS	C	43	A	VACANT	L	4	E	DAVID GILLET
C	18	A	LEO NARDIN	C	44	A	VACANT	L	5	E	BUSH AIR CARGO
C	19	A	VACANT	C	45	A	VACANT	L	6	E	ABBE AIR CARGO
C	20	A	LOU PACKER					L	7	E	BUSH AIR CARGO
C	21	A	VACANT	D	1	C	ALASKA WILDLIFE TROOPERS	L	8	E	VACANT
C	22	A	ERIC YOULD	D	2	C	ALASKA WILDLIFE TROOPERS	L	9	E	VACANT
C	23	A	VACANT	D	3	A	BU CUSTOM AIRCRAFT	L	10	E	VACANT
C	24	A	SCOTT FRANK	D	4	A	BU CUSTOM AIRCRAFT	L	11	E	VACANT
C	25	A	SCOTT FRANK	D	5	A	VACANT	L	12	E	VACANT
C	26	A	VACANT	D	6	A	VACANT				

LOT/TRACT	LEASE LOT	OCCUPANT	AREA (ACRES)
A	LL1	GOLF COURSE	118.5
A	LL2	GOLF COURSE	26.3
LOT 1	-	STATE OF ALASKA-FORESTRY	16.5
LOT 2	LL6	HAGELAND AVIATION SERVICES	4.2
B	LL3	HITCHHIKOROCK EQUIPMENT	3.2
B	LL4	NEW HORIZONS TELECOM	2.5
B	LL5	NEW HORIZONS TELECOM	5.4
B	LL7	VACANT	20.5
B	LL8A	CITY FIRE DEPT	5.2
B	LL8B	VACANT	2.2
B	LL8C	SNOW STORAGE	2.2
B	LL9	VACANT	1.1
B	LL10	VACANT	1.1
B	LL11	PALMER HANGARS OWNERS ASSOC	1.1
B	LL12	VACANT	1.1
B	LL13	VACANT	1.4
B	LL14	VACANT	1.3
B	LL15	AIRPORT LIGHTING/NAV AIDS	0.2
B	LL16	AIRPORT ADMINISTRATION	1.5
B	LL17	FAA	0.2
B	LL18	FAA	0.1
B	LL19	VACANT	0.6
B	LL20	VACANT	0.6
B	LL21	VACANT	1.0
B	LL22A	AIRPORT MAINTENANCE	0.6
B	LL22B	SNOW STORAGE	1.0
B	LL23	VACANT	0.6
B	LL24	VACANT	0.6
B	LL25	VACANT	0.6
B	LL26	BISHOP dba NUGGET AVIATION	1.0
B	LL27	BISHOP dba NUGGET AVIATION	0.8
B	LL28	GALLAGHER	0.8
B	LL29	HELMERICKS	1.2
B	LL30	COLVILLE LOGISTICS	1.4
B	LL31	BU CUSTOM AIRCRAFT ENGINES	0.9
B	LL32	DENIER	0.8
B	LL33	COLVILLE LOGISTICS	0.8
B	LL34	SNOW STORAGE	2.0
B	LL35	HILL	1.1
B	LL36	VACANT	3.1
B	LL37	HEPP	2.4
B	LL38	VANERNEE	5.0
C	LL1	VACANT	5.7
C	LL2	MATANUSKA-SUSITNA BOROUGH	5.9
C	LL3	VACANT	2.5
D	LL1A	VACANT	1.5
D	LL1B	CITY WELL	0.7
D	LL1C	VACANT	1.8
D	LL2	VACANT	4.1



APPROVAL SIGNATURES

Name of Airport: Palmer Municipal
 Name of Sponsor/Review: _____
 Name of Sponsor/Project: _____
 Manager/Responsible for ALP: _____
 Signature of Sponsor Submitting ALP to FAA for Review: _____

FAA Airspace Review Number 2004-AL-1069A
 Airport Layout Plan Conditional Approval Subject to ALP Approval Letter No. _____
 BY: [Signature] DATE: 5/11/11
 Title: [Signature]

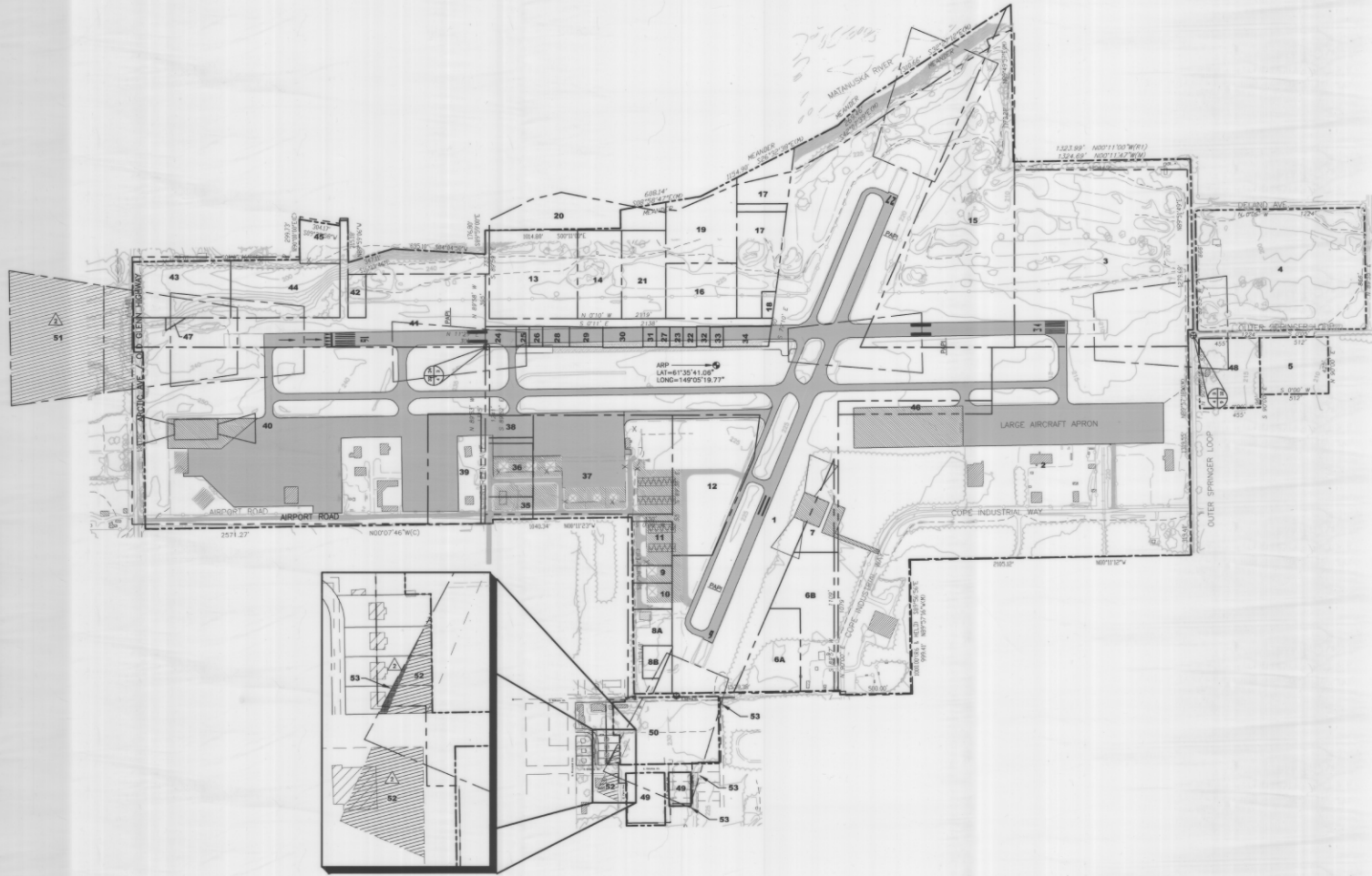
**CITY OF PALMER
PALMER MUNICIPAL AIRPORT
LAND OCCUPANCY PLAN
PALMER, ALASKA**

DRAWN BY: [Signature] ENGINEER: _____
 DESIGNED BY: _____ DATE: 04-09-11
 SCALED AS NOTED JOB #: 05-031
 FILE NO. 5 of 7-Layout SHEET: SB OF 7

U:\North\04\021_Palmer Airport Design\2004\CAD Drawings\Airport Layout Plan\05021_Land_Occupancy_Plan.dwg, 1=1, 04/07/11 at 09:20 by HJ
 XREF: 05031_ALP_48000001, 05031_ALP_48001

DATE: 5/17/11
 DRAWN BY: [Signature]
 PROPERTY PLAN

DATE: 5/17/11
 DRAWN BY: [Signature]
 PROPERTY PLAN



TRACT OR PARCEL No.	HOW ACQUIRED	DATE ACQUIRED
1	DECEDED FROM STATE	5/10/63
2	FMA GRANT	7/13/77
3	FMA GRANT	4/75
4	FMA GRANT	5/86
5	FMA GRANT	11/86
6	FMA GRANT	8/77
7	FMA GRANT	8/77
8	FMA GRANT	2/80
9	FMA GRANT	UNKNOWN
10	FMA GRANT	10/74
11	FMA GRANT	4/75
12	FMA GRANT	UNKNOWN
13	FMA GRANT	1/75
14	FMA GRANT	2/78
15	FMA GRANT	7/77
16	FMA GRANT	8/77
17	FMA GRANT	8/77, 12/77, 10/78, 8, 10/78
18	FMA GRANT	7/78
19	FMA GRANT	UNKNOWN
20	FMA GRANT	UNKNOWN
21	FMA GRANT	UNKNOWN
22	FMA GRANT	8/78
23	FMA GRANT	8/77
24	FMA GRANT	10/78
25	FMA GRANT	5/75
26	FMA GRANT	UNKNOWN
27	FMA GRANT	8/77
28	FMA GRANT	8/78
29	FMA GRANT	9/77
30	FMA GRANT	12/74
31	FMA GRANT	5/75
32	FMA GRANT	7/75
33	FMA GRANT	9/77
34	FMA GRANT	9/77
35	FMA GRANT	10/74
36	FMA GRANT	4/75
37	FMA GRANT	10/78
38	FMA GRANT	3/75
39	FMA GRANT	7/75
40	FMA GRANT	7/75
41	FMA GRANT	4/75
42	FMA GRANT	4/75
43	FMA GRANT	11/75
44	FMA GRANT	11/79
45	FMA GRANT	12/74
46	FMA GRANT	UNKNOWN
47	FMA GRANT	UNKNOWN
48	FMA GRANT	5/94
49	FMA GRANT AIR-011-2004	8/04
50	FMA GRANT AIR-014-2009	6/09
51	AVIGATION EASEMENT	8/86 - NO EXP.
52	AVIGATION EASEMENT	10/82 - NO EXP.
53	FUTURE EASEMENT	



APPROVAL SIGNATURES

Name of Airport: Palmer Municipal
 Date of Sponsor Review: _____
 Name of Sponsor Project Manager Responsible for ALP: _____
 Signature of Sponsor Submitting ALP to FAA for Review: _____

FAA Airspace Review Number 2004-AK-10818
 Airport General Plan Condition Approval Subject To ALP Approval Letter Number: _____ DATE: 5/17/11
 BY: [Signature]
 FAA Region, AAL-601

NOTES:
 1. BEARINGS AND DISTANCE SHOWN WERE OBTAINED OR COMPUTED BASED ON A LEGAL DESCRIPTION PROVIDED BY ALASKA FIRST TITLE INSURANCE AGENCY, INC. DATED MARCH 28, 1997, EXCEPT AS NOTED BELOW.
 2. MEANDERS SHOWN ALONG THE WEST BANK OF THE METANAKSA RIVER ARE APPROXIMATE, AND ARE SHOWN FOR AREA CALCULATIONS ONLY.
 3. THIS MAP DEPICTS THE GENERAL OWNERSHIP OF PROPERTIES AT OR AROUND THE PALMER MUNICIPAL AIRPORT AND IS NOT A LEGAL REPRESENTATION OF SAID LANDS. A SURVEYOR LICENSED IN THE STATE OF ALASKA SHALL VERIFY ALL DIMENSIONS AND DESCRIPTIONS FOR ANY LEGAL OR CONSTRUCTION PURPOSES.

LEGEND

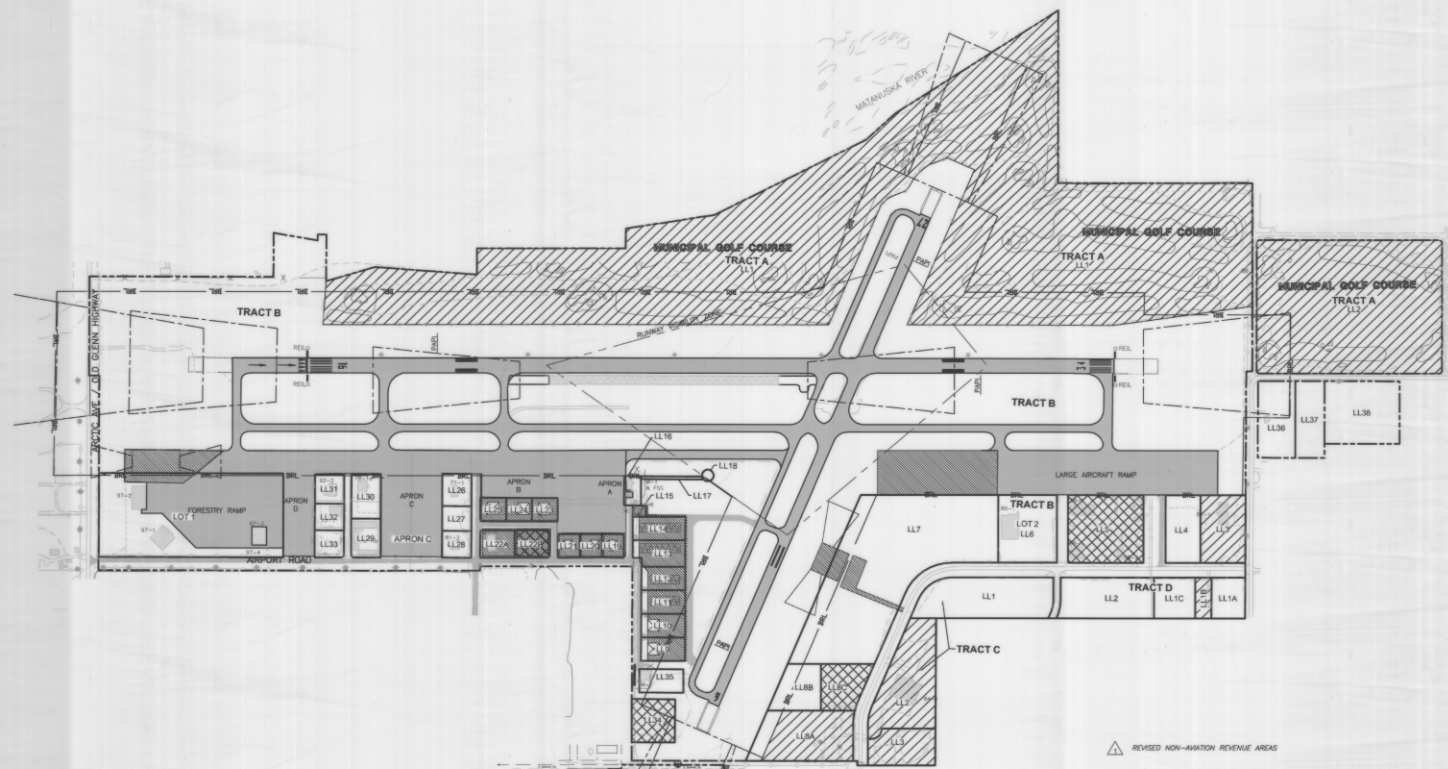
- PROPOSED AVIGATION EASEMENT
- AIRFIELD PAVEMENT
- PROPOSED AIRFIELD PAVEMENT
- GRAVEL RUNWAY
- EXISTING AVIGATION EASEMENT

**CITY OF PALMER
 PALMER MUNICIPAL AIRPORT
 AIRPORT PROPERTY PLAN
 PALMER, ALASKA**

DRAWN BY: [Signature] DATE: 04-21-8
 SCALED AS NOTED JOB #: 05-028
 PLEN: _____
 FILE NO. 5 of 7 Layout SHEET: 5 OF 7

PALMER MUNICIPAL AIRPORT
 5-31-11
 Land Use Drawing 9/7

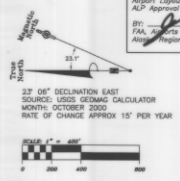
PALMER MUNICIPAL AIRPORT
 5-31-11
 Land Use Drawing 9/7



△ REVISED NON-AVIATION REVENUE AREAS

LEGEND

	NON-AVIATION REVENUE USE AREA
	MIXED USE AREA
	PROPOSED AVIATION EASEMENT
	EXISTING AVIATION EASEMENT
	AIRFIELD PAVEMENT
	PROPOSED AIRFIELD PAVEMENT
	GRAVEL RUNWAY



REVISION	DESCRIPTION	APPROVED BY	DATE
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APPROVAL SIGNATURES

Name of Airport: Palmer Municipal
 Date of Sponsor Review: _____
 Name of Sponsor Project: _____
 Manager Responsible for ALP: _____
 Signature of Sponsor Submitting ALP to FAA for Review: _____

FAA Airspace Review Number 2004-AAL-1049A
 Airport Layout Plan Conditional Approval Subject to ALP Approval Legally Binding
 BY: [Signature] DATE: 5/21/11
 FAA Airspace District: _____
 Alaska Region, AAL-601

**CITY OF PALMER
 PALMER MUNICIPAL AIRPORT
 AIRPORT LAND USE PLAN
 PALMER, ALASKA**

DRAWN BY: _____ ENGINEER
 DESIGNED BY: _____ DATE: 04-05-08
 SCALED AS NOTED JOB #: 05-033
 PAGES: _____
 FILE NO. 6 of 7-Layout SHEET: 6 OF 7

PURPOSE

THIS NARRATIVE REPORT IS INCLUDED WITH THE AIRPORT LAYOUT PLAN FOR PALMER, ALASKA IN ACCORDANCE WITH THE FAA ADVISORY CIRCULAR 150/5300-13 CHANGE 7, AIRPORT DESIGN, AS REVISED FOR THE ALASKA REGION. THE RATIONALE FOR THE DEVELOPMENT FEATURES OF THE AIRPORT AND PERTINENT INFORMATION SUPPORTING THE DEVELOPMENT PLAN ARE PRESENTED HERE AND IN THE AIRPORT MASTER PLAN (AMP) PREPARED IN APRIL 2001.

INTRODUCTION

THE CITY OF PALMER IS LOCATED IN SOUTH CENTRAL ALASKA ON THE UPPER COOK INLET NEAR THE CONFLUENCE OF THE MATANUSKA AND KIVIK RIVERS. IT IS APPROXIMATELY 42 MILES NORTH OF THE CITY OF ANCHORAGE AND IS THE MATANUSKA-SUSTINA BOROUGH SEAT.

THE AMP REPORTS AN APPROXIMATE POPULATION OF 74,000 FOR THE BOROUGH AND OF 4,500 FOR PALMER IN 2001. THE BOROUGH AND THE CITY HAVE EXPERIENCED RAPID GROWTH FOR MANY YEARS AND THE GROWTH IS FORECASTED TO CONTINUE. THE AMP FORECASTS AN APPROXIMATE BOROUGH POPULATION OF 112,000 IN 2011 AND 125,000 IN 2016 AND AN APPROXIMATE CITY OF PALMER POPULATION OF 4,900 IN 2011 AND 5,100 IN 2016.

IN THE EARLY 20TH CENTURY, MOST OF THE COMMUNITIES IN THE MATANUSKA-SUSTINA BOROUGH WERE ESTABLISHED TO SUPPORT FARMING AND MINING ACTIVITY. TODAY, THE LOCAL ECONOMY HAS BECOME LARGELY DEPENDENT ON INCOME OBTAINED OUTSIDE OF THE BOROUGH. IN 2001, 99% OF THE WORKING RESIDENTS IN THE BOROUGH TRAVELED OUTSIDE OF THE BOROUGH FOR EMPLOYMENT.

THE MAJOR UTILITY COMPANIES, HOSPITAL, GOVERNMENT, SCHOOL DISTRICT, PIONEER HOME AND JOB CORPS TRAINING CENTER PROVIDE MOST OF THE EMPLOYMENT FOUND IN PALMER. THERE ARE APPROXIMATELY 700 BUSINESSES REGISTERED IN PALMER. LOCAL AGRICULTURE, TOURISM AND CONSTRUCTION PROVIDE ADDITIONAL EMPLOYMENT OPPORTUNITIES.

INVENTORY

AIRSIDE FACILITIES

THE AIRPORT OPERATES THREE RUNWAYS, RW 16/34, RW 9/27, AND GRAVEL RW 16G/34G.

RW 16/34 IS THE PRIMARY RUNWAY. IT IS 100 FEET WIDE AND 6008 FEET LONG WITH A PAVED SURFACE IN GOOD CONDITION. PAVEMENT STRENGTH IS ESTIMATED AT 15,000 POUNDS SINGLE. THE RW 16 APPROACH THRESHOLD IS DISPLACED 500 FEET DUE TO AN OBSTRUCTION. TAXIWAY A IS A 50-FOOT WIDE, FULL-LENGTH PARALLEL TAXIWAY TO THE PRIMARY RUNWAY.

RW 9/27 IS A UTILITY CLASS CROSS-WIND RUNWAY. IT IS 75 FEET WIDE AND 3,617 FEET LONG WITH A PAVED SURFACE IN GOOD CONDITION. PAVEMENT STRENGTH IS ESTIMATED AT 15,000 POUNDS SINGLE WHEEL. TW B IS A 40-FOOT WIDE, FULL-LENGTH PARALLEL TAXIWAY TO RW 9/27.

RW 16G/34G IS A 60-FOOT WIDE, 1,560-FOOT LONG GRAVEL UTILITY CLASS RUNWAY ADJACENT TO RW 16/34. THIS RUNWAY IS USED FOR SMALL WHEELED OPERATIONS IN THE SUMMER AND SKI OPERATIONS IN THE WINTER.

ADDITIONAL TAXIWAYS PROVIDE ACCESS FROM THE PARKING APRONS TO THE PARALLEL TAXIWAYS AND VARIOUS POINTS ON THE RUNWAYS.

THE AIRPORT HAS FIVE AREAS OF AIRCRAFT APRONS, FOUR NORTH OF RW 9/27 FOR SMALL AIRCRAFT AND ONE TO THE SOUTH FOR LARGE AIRCRAFT. IN TOTAL, THE SMALL AIRCRAFT APRONS COMPRISE APPROXIMATELY 112,000 SQUARE YARD OF PAVED AREA AND PROVIDE 105 TIE-DOWN SPACES. THE LARGE AIRCRAFT APRON IS APPROXIMATELY 43,000 SQUARE YARDS OF PAVEMENT.

THE AIRPORT HAS A STANDARD ROTATING BEACON AND A LIGHTED WIND CONE. BOTH PAVED RUNWAYS ARE EQUIPPED WITH MILLS AND ALL TAXIWAYS ARE EQUIPPED WITH MILLS. THE TAXIWAY LIGHTS HAVE THE STANDARD BLUE LENSES. THE APRON AREAS HAVE NO EDGE LIGHTING.

BOTH ENDS OF RW 16/34 AND RW 9/27 ARE EQUIPPED WITH PAPI. Δ

LANDSIDE FACILITIES

AIRWAY-RELATED STRUCTURES AT THE AIRPORT (IN 2001) INCLUDED THE FAA'S FLIGHT SERVICE STATION AND STORAGE FACILITY, EIGHT BUILDINGS DESIGNATED AS FIXED BASE OPERATOR/MAINTENANCE/HANGAR FACILITIES, THE CITY OF PALMER'S FIRE DEPARTMENT TRAINING CENTER, ONE WAREHOUSE, ONE BUILDING LEASED TO A SPECIAL BASED OPERATOR AND TWO BUILDINGS DESIGNATED STRICTLY AS AIRCRAFT STORAGE. THESE AIRPORT STRUCTURES ARE IN FAIR TO GOOD CONDITION. OTHER BUILDINGS LOCATED ON AIRPORT PROPERTY INCLUDE THE MUNICIPAL GOLF COURSE CLUBHOUSE.

SEVERAL LOCAL ROADS PROVIDE ACCESS TO THE AIRPORT AND LINKS TO THE GLENN HIGHWAY. ACCESS BETWEEN THE DEVELOPED AREA AT THE NORTH SIDE OF THE AIRPORT AND THE SOUTH SIDE IS NOT POSSIBLE WITHOUT LEAVING THE AIRPORT PROPERTY AND USING CITY STREETS. A RAIL SPUR IS LOCATED ADJACENT TO THE LARGE AIRCRAFT APRON. ALL MAJOR UTILITIES ARE AVAILABLE ON THE AIRPORT.

AVIATION FORECASTS

BASED AIRCRAFT

THE AMP INDICATES THERE WERE 116 BASED AIRCRAFT IN 1999 AND FORECASTS 196 BASED AIRCRAFT IN 2011 AND 233 BASED AIRCRAFT IN 2016. THE MIX OF BASED AIRCRAFT IS FORECASTED TO BE APPROXIMATELY 62% SMALL, SINGLE ENGINE, PISTON-TYPE AIRCRAFT, 6% MULTI-ENGINE, PISTON-TYPE AIRCRAFT AND 32% OTHER AIRCRAFT.

OPERATIONS FORECAST

THE AMP INCLUDES OPERATIONS FORECASTS USING A VARIETY OF METHODS. THE PLANNING FORECAST USES THE NUMBER OF BASED AIRCRAFT AND TAKES INTO CONSIDERATION THE ANTICIPATED INCREASE IN BUSINESS RELATED FLYING AND THE AIRPORT'S ABILITY TO ACCOMMODATE BUSINESS OPERATORS, AN ANTICIPATION OF INCREASED CARGO OPERATIONS AS CONSTRAINTS INCREASE AT NEARBY CARGO AIRPORTS, THE ADDITION OF THE STATE DIVISION OF FORESTRY AERIAL FIRE FIGHTING FACILITY, AND THE CURRENT NATIONAL AND REGIONAL AVIATION FORECASTS THAT INDICATE A MODEST GROWTH TREND.

**AMP TABLE 4.9
ANNUAL OPERATIONS FORECAST
(PLANNING FORECAST)**

DESCRIPTION	1996	2001	2006	2011	2016
LOCAL	6,822	9,831	10,230	12,152	14,446
ITINERANT	14,500	14,651	18,645	22,148	26,329
TOTAL OPERATIONS	21,322	24,482	28,875	34,300	40,775

THE FORECAST OF OPERATIONS BY AIRCRAFT FLEET MIX WAS BASED ON AN ANALYSIS OF EXISTING OPERATIONS AND PROJECTIONS OF FUTURE ACTIVITY LEVELS. DURING THE PLANNING PERIOD, ACTIVITY BY TURBINE-POWERED AIRCRAFT IS PROJECTED TO INCREASE TO APPROXIMATELY 5% OF TOTAL OPERATIONS ANNUALLY DUE TO THE AGING OF PISTON-POWERED AIRPLANES IN THE CARGO FLEET AT SIMILAR AIRPORTS AND AN ANTICIPATED INCREASE IN CHARTER OPERATIONS FOR THE STATE DIVISION OF FORESTRY FACILITY. THIS CONCLUSION IS REINFORCED BY FAA PROJECTIONS THAT SHOW BOTH INCREASED USE OF AIR TRANSPORTATION AND THE GROWTH OF THE TURBINE-POWERED COMPONENT OF THE GENERAL AVIATION FLEET.

**AMP TABLE 4.10
FORECAST OF OPERATIONS BY AIRCRAFT MIX
(PLANNING FORECAST)**

YEAR	PISTON ENGINE		TURBINE		TOTAL OPERATIONS
	SINGLE ENGINE	MULTI-ENGINE	TURBO-ENGINE	TURBO-JET	
1996	17,185	3,117	562	522	21,322
2001	18,735	4,896	400	60	24,482
2006	20,582	6,493	1,194	186	28,875
2011	24,294	7,883	1,429	224	34,300
2016	28,087	9,298	1,728	332	40,775

OPERATIONAL PEAKING CHARACTERISTICS

MANY OF THE AIRPORT'S FACILITY NEEDS ARE RELATED TO LEVELS OF ACTIVITY DURING PEAK PERIODS. THE AMP FORECASTS PEAK MONTH AND PEAK HOUR OPERATIONS BASED ON A REVIEW OF 3 YEARS OF HISTORICAL DATA.

**AMP TABLE 4.12
HISTORICAL AND FORECASTED ANNUAL OPERATIONS**

YEAR	ANNUAL OPERATIONS	PEAK MONTH OPERATIONS	PEAK HOUR OPERATIONS
1996	21,322	3,769	12
2001	24,482	4,326	13
2006	28,875	5,102	16
2011	34,300	6,060	19
2016	40,775	7,204	22

AIRPORT REFERENCE CODE (ARC)

THE MAJORITY OF AIRPLANES USING THE AIRPORT SATISFY THE ARC OF A-1/B-1, WHICH INCLUDES MOST SMALL GENERAL AVIATION AIRCRAFT. HOWEVER, THE MAJORITY OF EXISTING CARGO AND HEAVIER AIRCRAFT INDICATE AN ARC OF A-1/B-1/B-1. AIRCRAFT WITH AN A-1/B-1/B-1 ARC AND WEIGHING OVER 60,000 POUNDS IS THE DESIGN AIRCRAFT GROUP FOR THE PRIMARY RUNWAY. THESE INCLUDE THE DC-3 (A-1) AND DC-6 (B-1/B-1). THE B-1/B-1 GROUP MEETS THE 500 ANNUAL OPERATIONS CRITERION AND WILL HAVE THE MOST CRITICAL APPROACH SPEED AND LARGEST WINGSPAN FOR AIRCRAFT USING THE AIRPORT ON A REGULAR BASIS.

DEMAND FORECAST SUMMARY

AVIATION DEMAND FORECASTS ARE SUMMARIZED IN THE FOLLOWING TABLE.

**AMP TABLE 4.13
DEMAND FORECAST SUMMARY**

AVIATION DEMAND FORECAST	ACTUAL FORECAST YEAR				
	1996	2001	2006	2011	2016
ANNUAL AIRCRAFT OPERATIONS:					
LOCAL	6,822	9,831	10,230	12,152	14,446
ITINERANT	14,500	14,651	18,645	22,148	26,329
TOTAL	21,322	24,482	28,875	34,300	40,775
PEAKING CHARACTERISTICS					
PEAK MONTH OPER.	3,769	4,326	5,102	6,060	7,204
PEAK HOUR OPER.	12	13	16	19	22
BASED GENERAL AVIATION AIRCRAFT	134	139	165	196	233
ARC/DESIGN AIRCRAFT GROUP - RUNWAY 16/34	B-1/B-1	B-1/B-1	B-1/B-1	B-1/B-1	B-1/B-1
ARC/DESIGN AIRCRAFT GROUP - RUNWAY 9/27	B-1/B-1	B-1/B-1	B-1/B-1	B-1/B-1	B-1/B-1

PROPOSED DEVELOPMENT

CONDITIONS AT THE AIRPORT THAT DO NOT MEET THE MINIMUM DESIGN STANDARDS AND THE RESOLUTION TO THESE NON-STANDARD CONDITIONS ARE SUMMARIZED BELOW.

RW 16 SAFETY AREA LENGTH BEYOND RW END IS 300 FEET. THE MINIMUM STANDARD OF 600 FEET CAN BE OBTAINED BY A GRADING AND DRAINAGE IMPROVEMENT PROJECT.

RW 16/34 OBJECT FREE AREA WIDTH IS 680 FEET DUE TO A FENCE THAT SEPARATES THE RUNWAY AREAS FROM THE MUNICIPAL GOLF COURSE. THE MINIMUM STANDARD OF 800 FEET CAN BE OBTAINED BY RELOCATING THE RUNWAY 125 FEET WEST. THIS MOVE WOULD ELIMINATE RUNWAY 16G/34G.

ADDITIONAL PROPOSED CAPACITY AND FACILITY DEVELOPMENTS RECOMMENDED IN THE AMP AND NOT AS YET COMPLETED ARE AS FOLLOWS:

CONSTRUCT HOLDING BAYS. CONSTRUCT HOLDING BAYS NEAR THE ENDS OF EACH RUNWAY TO REDUCE CONGESTION AT THE TAKEOFF END OF THE RUNWAY IN USE. HOLDING BAYS PROVIDE A SAFE AREA FOR PILOTS TO RUN UP THE AIRCRAFT ENGINE WHILE OUTSIDE OF THE OFA OF THE ACTIVE RUNWAY AND IS IMPORTANT FOR AIRPORTS WITHOUT AN ATCT.

PROVIDE FOR DEVELOPMENT OF HANGAR SPACE FOR AIRCRAFT STORAGE. THE AMP FORECASTS HANGAR SPACE NEEDS FOR SMALL AIRCRAFT STORAGE AND ASSUMES 20% OF BASED SINGLE-ENGINE, PISTON AIRCRAFT WOULD BE STORED IN HANGARS IF THE SPACE WAS AVAILABLE. ADDITIONAL TAXIWAYS AND ROADS WILL BE NECESSARY TO PROVIDE AIRSIDE AND LANDSIDE ACCESS TO HANGAR DEVELOPMENT AREAS. THE FORECASTED REQUIRED HANGAR SPACE IS SHOWN IN THE TABLE BELOW.

CONSTRUCT GENERAL AVIATION PARKING APRON. THE AMP FORECASTS ITINERANT AIRCRAFT AND BASED AIRCRAFT GENERAL AVIATION PARKING APRON AREA NEEDS.

GENERAL AVIATION APRON REQUIREMENTS ARE AS FOLLOWS, WITH HANGAR APRON AREAS REPRESENTING THE REQUIRED HANGAR FLOOR SPACE.

**AMP TABLE 5.10
SUMMARY OF TOTAL GENERAL AVIATION APRON REQUIREMENTS
(IN SQUARE YARDS)**

DESCRIPTION	PHASE I AREAS (1996-2001)	PHASE I AREAS (2001-2006)	PHASE I AREAS (2006-2016)
CONVENTIONAL HANGAR APRON	3,867*	4,240	4,733
ITINERANT AIRCRAFT APRON	18,440	12,960	18,360
LOCAL APRON (TIE-DOWN)		31,500	36,600
GRAND TOTAL	45,807	53,800	113,160

* FOR THIS TABLE, HANGAR APRON EQUALS THE EQUIVALENT AREA OF HANGAR FLOOR SPACE EXPRESSED IN SQUARE YARDS.

EXPAND THE LARGE AIRCRAFT PARKING APRON. THE AMP FORECASTS PARKING APRON NEEDS FOR BASED AND TRANSIENT LARGE AIRCRAFT AS FOLLOWS:

**AMP TABLE 5.11
LARGE AIRCRAFT APRON REQUIREMENTS (IN SQUARE YARDS)**

PHASE	BASED LARGE AIRCRAFT PARKING APRON NEEDS	TRANSIENT LARGE CARGO AIRCRAFT PARKING APRON NEEDS
PHASE I (0-5 YEARS)	43,300	21,800
PHASE II (5-10 YEARS)	53,100	32,700
PHASE III (10-20 YEARS)	53,100	32,700

CONSTRUCT TERMINAL BUILDING. THERE IS NO TERMINAL BUILDING ON THE AIRPORT. THE REQUIRED SIZE WAS DETERMINED USING THE AN FAA METHOD BASED ON OPERATIONAL CHARACTERISTICS.

**AMP TABLE 5.13
TERMINAL BUILDING REQUIREMENTS**

PHASE	PEAK HOUR OPERATIONS	PEAK HOUR PILOTS AND PASSENGERS	TERMINAL BUILDING NEEDS (SQ. FT.)
PHASE I (0-5 YEARS)	13	33	1,617
PHASE II (5-10 YEARS)	16	40	1,960
PHASE III (10-20 YEARS)	22	55	2,695

CONSTRUCT AUTO PARKING AREA. ADJACENT TO THE FSS IS 280 SF OF PARKING AREA IS AVAILABLE. THE FOLLOWING PARKING AREA REQUIREMENTS ARE BASED ON THE FORECASTED NUMBER OF EMPLOYEES AND OPERATIONS.

**AMP TABLE 5.14
AUTO PARKING AREA REQUIREMENTS**

PHASE	PEAK-HOUR PILOTS AND PASSENGERS	EMPLOYEE PARKING	PARKING SPACE DEMAND	AUTOMOBILE PARKING NEEDS (SQ. YD)
PHASE I	33	19	52	1,820
PHASE II	40	23	63	2,325
PHASE III	55	32	87	3,045

INSTALL SECURITY FENCING. THE PRESENT AIRPORT FENCING DOES NOT PROVIDE SECURITY FOR PARKED AIRCRAFT OR THE AIRSIDE FACILITIES. ADDITIONAL FENCING ON THE AIRSIDE OF ALL ACCESS ROADS SHOULD BE INSTALLED TO RESTRICT ACCESS TO ALL AIRSIDE FACILITIES. THE PROJECT SHOULD INCLUDE AUTOMATIC GATES ACROSS ACCESS AND SERVICE ROADS.

INSTALL HELIPORT FACILITY. IN 2001, IT WAS ESTIMATED THAT THERE WERE APPROXIMATELY 350 HELICOPTER OPERATIONS ANNUALLY. ONE PAVED AND THREE PARKING POSITIONS DESIGNED FOR MEDIUM HELICOPTERS SHOULD BE DEVELOPED. AN AUTO PARKING AREA AND ACCESS ROAD WILL ALSO BE NEEDED. THE EXISTING TURF HELIPORT NEAR THE NORTH END OF THE AIRPORT IS USED EXCLUSIVELY BY THE STATE FORESTRY FOR FIRE FIGHTING OPERATIONS AND IS NOT AVAILABLE TO OTHER USERS.

ACQUIRE AVIATION EASEMENTS FOR RW 9 RPZ. FIVE SMALL AVIATION EASEMENTS ARE NECESSARY TO COMPLETE Δ PROTECTION OF THE RUNWAY 9 RPZ SO THAT THE AIRSPACE IS WITHIN AIRPORT CONTROL.



REVISION	DESCRIPTION	APPROVED BY	DATE
Δ			
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Δ	DESIGN FOLLOWUP BY PALMER MUNICIPAL ENGINEER	DMC	4/1/11
Δ	DESIGN FOLLOWUP BY PALMER MUNICIPAL ENGINEER	DMC	4/1/11
Δ	DESIGN FOLLOWUP BY PALMER MUNICIPAL ENGINEER	DMC	4/1/11

APPROVAL SIGNATURES

Name of Airport: Palmer Municipal
 Date of Sponsor Review: _____
 Name of Sponsor Project Manager/Responsible for ALP: _____
 Signature of Sponsor for Submitting ALP to FAA for Review: _____

FAA Airspace Review Number 2004-AAA-1098A
 Airport Layout Plan Conditional Approval Request to ALP Approval Letter Number: 56110
 Airport File Name: 56110
 FAA Region: AAI-801

**CITY OF PALMER
PALMER MUNICIPAL AIRPORT
NARRATIVE REPORT
PALMER, ALASKA**

DRAWN BY: ENGINEER
 CHECKED BY: DATE: 04-01-11
 SCALE: AS NOTED JOB #: 09-08
 TITLE: _____
 FILE NO.: 7#7-Land SHEET: 7 OF 7

04-11-11
 Narrative Report
 15-31-11
 04-11-11