

| AIRPO                        | RT DATA   |   |
|------------------------------|---|---|
|                              | EXISTING & PROPOSED                                   | ULTIMATE  |
| AIRPORT ELEVATION (MSL)      | 241.5'  | 241.5'  |
| AIRPORT REFERENCE POINT      | LAT 61"35"41.06" N                                    | LAT 61'35'41.06" N                                    |
| COORDINATES (NAD 83)         | LONG 149°05'19.77" W                                  | LONG 149'05'19.77" W                                  |
| MEAN MAXIMUM TEMPERATURE     | 58°F  | 58°F  |
| AIRPORT AND TERMINAL NAVAIDS | _   | _   |
| AIRPORT DESIGN GROUP         | 16/34-ARC B-III<br>9/27-ARC B-II<br>16G/34G - ARC A-1 | 16/34-ARC B-III<br>9/27-ARC B-II<br>16G/34G - ARC A-1 |
| AIRPORT APPROACH CATEGORY    | 16/34-GPS-A<br>9/27-GPS-A<br>16G/34G                  | 16/34-GPS-A<br>9/27-GPS-A<br>16G/34G                  |
| RUNWAY LIGHTING              | MIRL (16/34, 9/27)                                    | MIRL (16/34, 9/27)                                    |
| TAXIWAY LIGHTING             | MITL  | MITL  |

| DECLARED DIST                      | ANCES TABL | E     |
|------------------------------------|------------|-------|
|                                    | RW 16      | RW 34 |
| TAKE-OFF RUN AVAILABLE (TORA)      | 6008'      | 6008' |
| TAKE-OFF DISTANCE AVAILABLE (TODA) | 6008*      | 60081 |
| ACCELERATE-STOP DISTANCE (ASDA)    | 6008'      | 6008' |
| LANDING DISTANCE AVAILABLE (LDA)   | 550R'      | 6008* |

TAXIWAY SAFETY AREA (TSA) POWERPOLE SAME DISTANCE TO GO SIGN RUNWAY MARKING SIGN SAME SAME RUNWAY THRESHOLD LIGHTS REIL 🗆 VASI 8 PAPI RAIL ROAD SAME ROTATING BEACO SAME SAME ROTATING BEAM CEILOMETER ANEMOMETER ANEM SAME AIRFIELD PAVEMENT GRAVEL RUNWAY

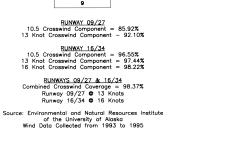
PROPOSED PROPERTY AQUISITION

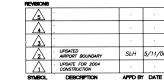
**\*\*\*\*\*\*\*\*** 

OFA, OFZ, RSA & RPZ FOR RW 16/34 SHOWN AT STANDARD DIMENSIONS FOR THE EXISTING RUNWAY LOCATION. THE OFA WIDTH NON-STANDARD CONDITION WILL BE SATISFIED BY MOVING RW 16/34 125' WEST NON STANDARD CONDITIONS 

| 1  | RUNWAY 1                                   | 6/34 (B III)                               | KUNWAY 9/2/                               | (B-II)       | GRAVEL RUNWAT 16G/34                         | G (A-1)  |
|--|--|--|---|--------------|--|----------|
|  | EXISTING                                   | ULTIMATE                                   | EXISTING                                  | ULTIMATE     | EXISTING                                     | ULTIMATE |
| APPROACH SURFACES<br>(VISIBILITY MINIMUMS) | 20:1 (≥1 MILE)                             | 20:1                                       | 20:1 (≥ 1 MILE)                           | 20:1         | 20:1 (≥1 MILE)                               | SAME     |
| DECLARED DISTANCES                         | SEE TABLE                                  | SAME                                       | NONE                                      | SAME         | NONE   | SAME     |
| INSTRUMENT RUNWAY                          | NO   | NO   | NO  | NO           | NO   | SAME     |
| PAVEMENT STRENGTH                          | >75,000 LBS                                | SAME                                       | ±15,000 LBS                               | SAME         | N/A  | SAME     |
| UTILITY                                    | NO   | NO   | YES                                       | YES          | YES  | YES      |
| % WIND COVERAGE                            | SEE WIND ROSE                              | SAME                                       | SEE WIND ROSE                             | SAME         | SAME AS 16/34                                | SAME     |
| RUNWAY DIMENSIONS                          | 100' x 6008'                               | SAME                                       | 75' x 3617'                               | SAME         | 60' x 1560'                                  | SAME     |
| RUNWAY SAFETY AREA DIMENSIONS              | 300' × 6608'                               | 300' x 7208'                               | 150' × 4017'                              | 150' x 4215' | 120' x 2040'                                 | SAME     |
| RSA DISTANCE BEYOND END                    | 300' - 600'                                | 600' - 600'                                | 200' - 200'                               | 300' - 300'  | 240' - 240'                                  | SAME     |
| RUNWAY END COORDINATES<br>(NAD 83)         | (16) 61'36'14.36" N<br>(16) 149'05'14.99'W | (16) 61°36°14.36″ N<br>(16) 149°05°17.68″W | (9) 61°35'41.96" N<br>(9) 149°06'02.32"W  | SAME         | (16G) 61°35′53.20″ N<br>(16G) 149°05′16.96°W | SAME     |
|  | (34) 61'35'15.19" N<br>(34) 149'05'14.62'W |  | (27) 61'35'27.86"N<br>(27) 149'04'53.67"W | SAME         | (34G) 61°35'37.83" N<br>(34G) 149°05'16.83"W | SAME     |
| RUNWAY TOUCHDOWN ZONE ELEV                 | 239.5 - 227.6                              | SAME                                       | 226.5 - 225.6                             | SAME         | 231.4 - 223.5                                | SAME     |
| RUNWAY PROTECTION ZONE                     | 500' x 700' x 1000'                        | SAME                                       | 250' x 450' x 1000'                       | SAME         | 200' x 400' x 1000'                          | SAME     |
| RUNWAY LIGHTING                            | MIRL                                       | SAME                                       | MIRL                                      | SAME         | NONE   | SAME     |
| RUNWAY MARKING                             | VISUAL (BASIC)                             | SAWE                                       | VISUAL (BASIC)                            | SAME         | NONE   | SAME     |
| RUNWAY OBJECT FREE AREA DIM'S              | 680' x 6908                                | 800' x 7208'                               | 500' x 4217'                              | SAME         | 250' × 2040'                                 | SAME     |
| NAVAIDS, VISUAL AIDS                       | VASI 4                                     | PAPI'S, REIL'S                             | NONE                                      | PAPI's       | NONE   | SAME     |
| EFFECTIVE GRADIENT                         | 0.47%                                      | SAME                                       | 0.17%                                     | SAME         | 0.50%  | SAME     |
|  |  |  |   |              |  |          |

|          | -                   | JOILDII             | 10 00 1   | ACILITIES            |                            |
|----------|---------------------|---------------------|-----------|----------------------|----------------------------|
|          | STRUCTURE<br>NUMBER | STRUCTURE<br>HEIGHT | ELEVATION | STRUCTURE<br>MARKING | STRUCTURE<br>DESCRIPTION   |
|          | 92-2                | 12'                 | 250'      | NONE                 | BJ CUSTOM AIRCRAFT         |
| (A-1)    | 78-1a               | 24'                 | 260'      | NONE                 | AIRCRAFT PAINTING CENTER   |
| JLTIMATE | 78-1b               | 12'                 | 248'      | NONE                 | U-SHAPED HANGAR            |
| SAME     | 77-1                | 24'                 | 262'      | NONE                 | NUGGET AVIATION HANGAR     |
| SAME     | 81-2                | 20'                 | 261'      | NONE                 | GALLAGHER ELECTRIC HANGAR  |
| SAME     | 84-1                | 30'                 | 252'      | NONE                 | SCHOOL DISTRICT WAREHOUSE  |
| SAME     | 80-1                | 40'                 | 260'      | NONE                 | FORMER WOOD'S AIR HANGAR   |
| ES       | 81-1                | 33'                 | 249'      | NONE                 | NHTI SHOP                  |
| SAME     | M-1                 | 25'                 | 258'      | NONE                 | FSS BUILDING               |
| SAME     | M-2                 | 20'                 | 248'      | NONE                 | CITY STORAGE               |
| SAME     | M-3                 | 35'                 | 260'      | NONE                 | FIRE DEPT TRAINING AREA    |
| SAME     |                     | 62'                 | 295'      | LIGHTED              | ANTENNA                    |
| SAME     | FSS                 | 65'                 | 295       | LIGHTED              | BEACON                     |
|          | 88-1                | 30'                 | 255'      | NONE                 | NHTI HANGAR                |
| SAME     |                     | 1                   | 240'      | NONE                 | NHTI WAREHOUSE             |
| SAME     | 86-2                | 20'                 |           |                      |                            |
| SAME     | 90-1                | 22'                 | 257'      | NONE                 | CITY OF PALMER MAINTENANCE |
| SAME     | 98-1                | 22'                 | 243'      | NONE                 | NHTI OFFICE BUILDING       |
| SAME     | 97-1                | 24'                 | 273'      | NONE                 | STATE FORESTRY OFFICE      |
| SAME     | 97-1                | 26'                 | 279'      | NONE                 | STATE FORESTRY WAREHOUSE   |
| SAME     | 97-1                | 55'                 | 300'      | NONE                 | STATE FORESTRY HANGAR      |
|          | 97-1                | 100'                | 346'      | LIGHTED              | FORESTRY ANTENNA           |





Date of Sponsor Review: 5/25/06 Name of Sponsor Project
Manager Responsible for ALP: JANE DALE

Signature of Sponsor Submitting ALP to FAA for Review:

FAR Airspace Beview Number 2004-AAL-10NRA
Airport Layout Plan Conditional Approval Subject To
ALP Approval 4 efter Dated:

BY.

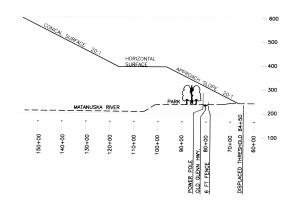
DATE: DATE:



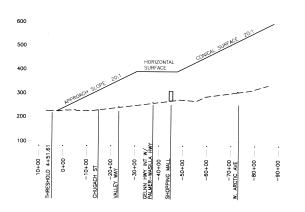
| CITY OF               | = PALMER        |
|-----------------------|-----------------|
| PALMER MUN            | IICIPAL AIRPORT |
| AIRPORT L             | AYOUT PLAN      |
| PALMEI                | r, alaska       |
| DRAWN BY:             | ENGINEER:       |
| DESIGNED BY:          | DATE: 05-11-06  |
| SCALE: AS NOTED       | JOB # 01-035    |
| PATH:                 |                 |
| FILE NO. 1of 7-Layout | SHEET: 1 OF 7   |

PART 77 PENETRATION (LAZY MOUNTAIN) 20:1 VISUAL UTILITY -APPROACH SLOPE 20:1 CONICAL SURFACE ELEV.= 226.5' -STA. 4+51.61 BEGIN RW 9/27 7:1 - ELEV = 220.5' STA 40+68.90 END RW 9/27

91



### RUNWAY 16 APPROACH PROFILE SCALE: 1" = 2000"



## 5 RUNWAY 09 APPROACH PROFILE 2 SCALE: 1\* = 2000'

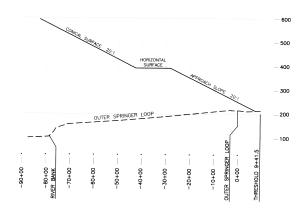
NOTES:
RUNWAY 16/34 IS 6008 FEET IN LENGTH AS SHOWN, PRIMARY
SURFACE IS 500 FEET WIDE BY 6408 FEET IN LENGTH, RUNWAY
9/27 IS 3615 FEET IN LENGTH AS SHOWN, PRIMARY SURFACE IS
250 FEET WIDE BY 4015 FEET IN LENGTH,

THERE ARE NO MANMADE OBSTRUCTIONS IN THE APPROACHES, AND NO NATURAL OBSTRUCTIONS OTHER THAN THE RISING TERRAIN OF LAZY MOUNTAIN TO THE NORTHEAST OF RUNWAY 16 AS SHOWN. THE PENETRATION IS NOT ON THE EXTENDED CENTERLINE OF THE RUNWAY.

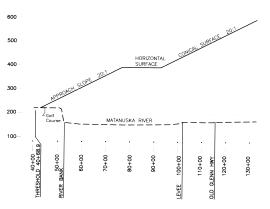
BASE MAPS USED ARE U.S.G.S. 1:25000 QUAD MAPS, QUAD C6 ANCHORAGE (NE, NW, SE, & SW).

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 OLDER 1:24000 QUAD MAP WITH ELEVATIONS IN ENGLISH UNITS IS NO LONGER AVAILABLE.



### PUNWAY 34 APPROACH PROFILE SCALE: 1" = 2000'



# 3 RUNWAY 27 APPROACH PROFILE 2 SCALE: 1" = 2000'



FINAL 05-01-2004



### APPROVAL SIGNATURES

Name of Airport: <u>Palmer Municipal</u> Date of Sponsor Review: \_ Signature of Sponsor Submitting ALP to FAA for Review:

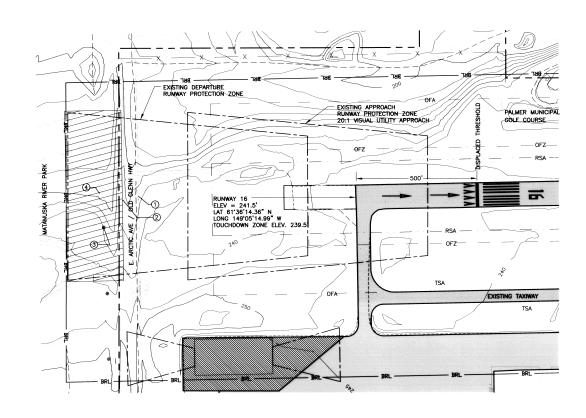
FAA Airspace Review Number 2004—AAL—10NRA
Airport Layout Plan Conditional Approval Subject To
ALP Approval Letter Dates: 1/26/04
BY: FAA Airports Division
FAA Airports Division
Alasko Region, AAL—601



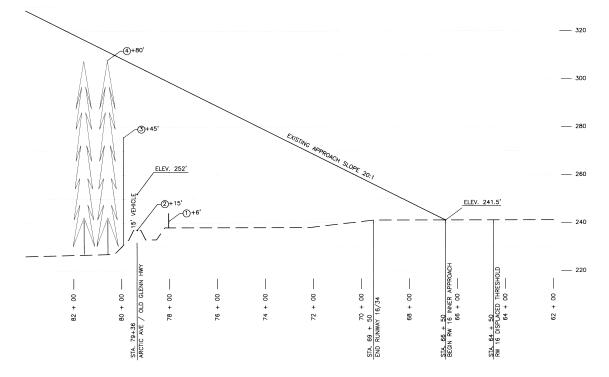
CITY OF PALMER PALMER MUNICIPAL AIRPORT AIRSPACE DRAWING PALMER, ALASKA

DESIGNED BY: DATE: 05-01-04 JOB № 01-035 SCALE: AS NOTED PATH FILE NO. 2 of 7-Layout SHEET: 2 OF 7





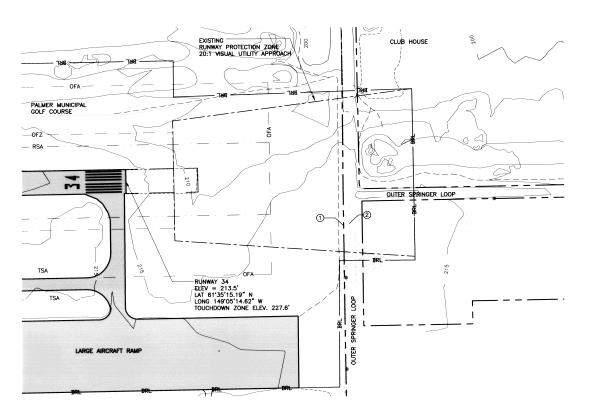
### PUNWAY 16 PLAN SCALE: HORZ: 1\*=200'



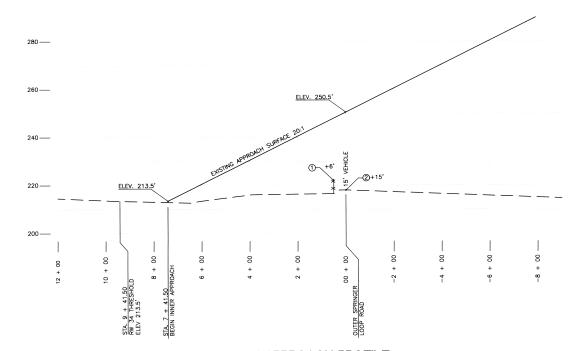
## 3 RUNWAY 16 APPROACH PROFILE 3 SCALE: HORZ: 1"=200" VERT: 1"= 20"

|     | RUNWAY      | 16 APPROACH         | I CLEARANCES   |
|-----|-------------|---------------------|--|
| NO. | OBJECT      | ESTIMATED ELEVATION | CLEAR DISTANCE   |
| 1   | FENCE       | 238 + 6'            | APPROACH SURFACE CLEARED BY 56'                                |
| 2   | PUBLIC ROAD | 237 + 15'           | APPROACH SURFACE CLEARED BY 53'                                |
| 3   | POWER POLE  | 231 + 45'           | APPROACH SURFACE CLEARED BY 32'                                |
| 4   | TREES       | 227 + 80'           | APPROACH SURFACE CLEARED BY 4'<br>PER SURVEY OF MARCH 24, 1999 |

THERE ARE NO OBSTRUCTIONS TO FAR PART 77 SURFACES.



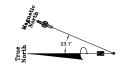
## PUNWAY 34 PLAN SCALE: HORZ: 1"=200"



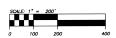
### RUNWAY 34 APPROACH PROFILE SCALE: HORZ: 1"-200" VERT: 1"- 20"

|     | RUNWAY      | 34 APPROACH         | H CLEARANCES                      |
|-----|-------------|---------------------|-----------------------------------|
| NO. | OBJECT      | ESTIMATED TOP ELEV. | CLEAR DISTANCE                    |
| 1   | FENCE       | 216.5 + 6'          | APPROACH SURFACE CLEARED BY 25'   |
| 2   | PUBLIC ROAD | 218 + 15'           | APPROACH SURFACE CLEARED BY 17.5' |

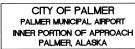
THERE ARE NO OBSTRUCTIONS TO FAR PART 77 SURFACES.



23' 06" DECLINATION EAST SOURCE: USGS GEOMAG CALCULATOR MONTH: OCTOBER 2000 RATE OF CHANGE APPROX 15' PER YEAR



FINAL



3 ^2

Signature of Sponsor Submitting ALP to FAA for Review:

FAA Airspace Review Number 2004—AAL—10NRA
Airport Layout Plan Conditional Appropri Subject To
ALP Approval Letter Dated; 122,004

BY: DATE: 1/24/04

APPROVAL SIGNATURES Name of Airport: <u>Palmer Municipal</u>

Date of Sponsor Review: \_\_\_ Name of Sponsor Project Manager Responsible for ALP: \_\_\_

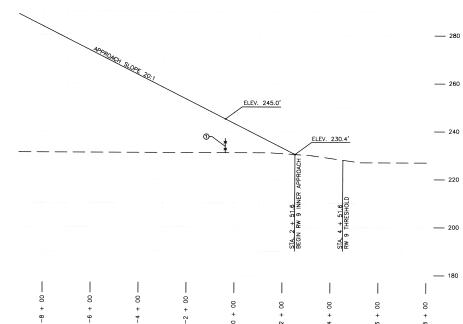
> DESIGNED BY: DATE: 05-01-04 FILE NO. 3 of 7-Layout SHEET: 3 OF 7

05-01-2004



EXISTING AVIGATION EASEMENT — RUNWAY 9
ELEV = 225.4'
LAT 61'35'41.96" N
LONG 149'06'02.32" W
TOUCHDOWN ZONE ELEV. 226.5' PROPOSED PROPERTY AQUISITION PUNWAY 9 PLAN

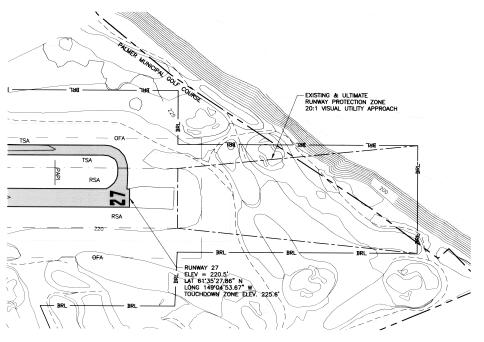
SCALE: HORZ: 1"=200' --- 300



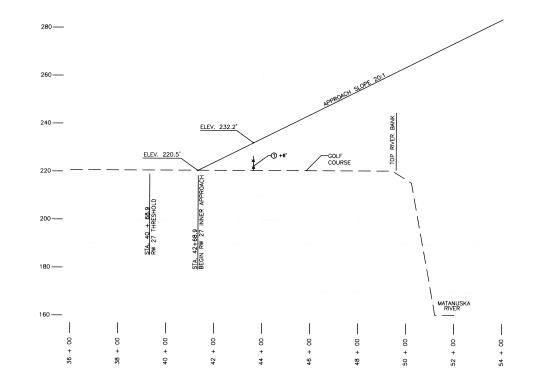
### RUNWAY 9 APPROACH PROFILE SCALE: HORZ: 1"=200" VERT: 1"= 20"

|     | RUNWAY | 9 APPROACH          | CLEARANCES                     |
|-----|--------|---------------------|--------------------------------|
| NO. | OBJECT | ESTIMATED TOP ELEV. | CLEAR DISTANCE                 |
| 1   | FENCE  | 231 + 6'            | APPROACH SURFACE CLEARED BY 8' |

THERE ARE NO OBSTRUCTIONS TO FAR PART 77 SURFACES.



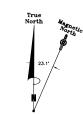
### PUNWAY 27 PLAN SCALE: HORZ: 1"=200"

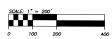


### 3 RUNWAY 27 APPROACH PROFILE 4 SCALE: HORZ: 1"=200" VERT: 1"= 201"

|     | 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.





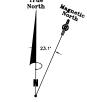
CITY OF PALMER PALMER MUNICIPAL AIRPORT INNER PORTION OF APPROACH PALMER, ALASKA

Signature of Sponsor Submitting ALP to FAA for Review:

FAA Airspace Review Number 2004-AAL-10NRA
Airport Layout Plan Conditional Approval Subject To
ALP Approval Letter Dates' 12(6)04

BY: DATE: 1/26/04

ENGINEER DESIGNED BY: DATE: 05-01-04 JOB # 01-035 FILE NO. 4 of 7-Layout SHEET: 4 OF 7



23" 06" DECLINATION EAST SOURCE: USGS GEOMAG CALCULATOR MONTH: OCTOBER 2000 RATE OF CHANGE APPROX 15' PER YEAR

FINAL 05-01-04

APPROVAL SIGNATURES

Date of Sponsor Review: \_\_\_\_ Name of Sponsor Project Manager Responsible for ALP: \_

| TRACT OR<br>PARCEL No. | HOW ACQUIRED          | DATE<br>ACQUIRED             |
|------------------------|-----------------------|------------------------------|
| 1                      | DEEDED FROM STATE     | 5/10/63                      |
| 2                      | FAA GRANT             | 7/13/77                      |
| 3                      | FAA GRANT             | 4/75                         |
| 4                      | FAA GRANT & CITY      | 5/86                         |
| 5                      | FAA GRANT             | 11/86                        |
| 6                      | FAA GRANT             | 8/77                         |
| 7                      | FAA GRANT             | 8/77                         |
| 8                      | FAA GRANT             | 2/80                         |
| 9                      | FAA GRANT             | UNKNOWN                      |
| 10                     | FAA GRANT             | 10/74                        |
| 11                     | FAA GRANT             | 4/75                         |
| 12                     | FAA GRANT             | UNKNOWN                      |
| 13                     | FAA GRANT             | 1/75                         |
| 14                     | FAA GRANT             | 2/76                         |
| 15                     | FAA GRANT             | 7/77                         |
| 16                     | FAA GRANT             | 8/77                         |
| 17                     | FAA GRANT             | 8/71, 12/71<br>10/78, & 1975 |
| 18                     | FAA GRANT             | 7/78                         |
| 19                     | FAA GRANT             | UNKNOWN                      |
| 20                     | FAA GRANT             | UNKNOWN                      |
| 21                     | FAA GRANT             | UNKNOWN                      |
| 22                     | FAA GRANT             | 8/78                         |
| 23                     | FAA GRANT             | 8/77                         |
| 24                     | FAA GRANT             | 10/78                        |
| 25                     | FAA GRANT             | 5/75                         |
| 26                     | FAA GRANT             | UNKNOWN                      |
| 27                     | FAA GRANT             | 8/77                         |
| 28                     | FAA GRANT             | 8/78                         |
| 29                     | FAA GRANT             | 9/77                         |
| 30                     | FAA GRANT             | 12/74                        |
| 31                     | FAA GRANT             | 5/75                         |
| 32                     | FAA GRANT             | 7/75                         |
| 33                     | FAA GRANT             | 9/77                         |
| 34                     | FAA GRANT             | 9/77                         |
| 35                     | FAA GRANT             | 10/74                        |
| 36                     | FAA GRANT             | 4/75                         |
| 37                     | FAA GRANT             | 10/78                        |
| 38                     | FAA GRANT             | 3/75                         |
| 39                     | FAA GRANT             | 7/75                         |
| 40                     | FAA GRANT             | 7/75                         |
| 41                     | FAA GRANT             | 4/75                         |
| 42                     | FAA GRANT             | 4/75                         |
| 43                     | FAA GRANT             | 1/75                         |
| 44                     | FAA GRANT             | 11/79                        |
| 45                     | FAA GRANT             | 12/74                        |
| 46                     | FAA GRANT             | AVIGATION EASEMENT           |
| 47                     | FAA GRANT             | AVIGATION EASEMENT           |
| 48                     | FAA GRANT             | 8/94                         |
| 49                     | FAA GRANT ALP 11-2004 | 8/04                         |
|                        |                       |                              |
| 50                     | FUTURE AQUISITION     |                              |



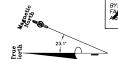
| 3 :<br>2 :<br>1 UP. | DATED PARCE | LS SLH | 5/11/08 |
|---------------------|-------------|--------|---------|
| 3 :<br>2 :          |             |        |         |
| <u>3</u> :          |             |        |         |
|                     |             |        |         |
| <u> </u>            |             |        |         |
| <u> </u>            |             |        |         |

### APPROVAL SIGNATURES

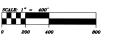
Name of Airport: <u>Palmer Municipal</u> Date of Sponsor Review: <u>5/2.**5/06**</u> Name of Sponsor Project
Manager Responsible for ALP: JANE DALE

Signature of Sponsor Submitting ALP to FAA for Review:

FAN dirspace Review Number 2004-AAL-10NRA Airport Layout Plan Conditional Approval Subject To ALP Approval Letter Dated: 17.504



23' 06" DECLINATION EAST SOURCE: USGS GEOMAG CALCULATOR MONTH: OCTOBER 2000 RATE OF CHANGE APPROX 15' PER YEAR



| PALMER MUNICIPAL AIRPORT                |                |  |  |  |  |
|---|----------------|--|--|--|--|
| AIRPORT PROPERTY PLAN<br>PALMER, ALASKA |                |  |  |  |  |
| AWN BY: ENGINEER:                       |                |  |  |  |  |
| BIGNED BY:                              | DATE: 05-11-06 |  |  |  |  |
| ALE: AS NOTED                           | JOB # 01-035   |  |  |  |  |
| TH                                      |                |  |  |  |  |

FILE NO. 5 of 7-Layout SHEET: 5 OF 7

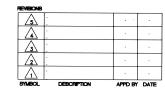
CITY OF PALMER

PROPOSED AVIGATION EASEMENT

PROPOSED PROPERTY AQUISITION FOR RPZ

FINAL 05-01-2004





#### APPROVAL SIGNATURES

Name of Airport: <u>Palmer Municipal</u>

Signature of Sponsor Submitting ALP to FAA for Review:

23' 06" DECLINATION EAST SOURCE: USGS GEOMAG CALCULATOR MONTH: OCTOBER 2000 RATE OF CHANGE APPROX 15' PER YEAR

PROPOSED AIRFIELD PAVEMENT GRAVEL RUNWAY

| B: 1 | <u> </u> | 400' |   | _   |
|------|----------|------|---|-----|
| Λ.   | -        |      |   |     |
| æ    | 00       | 40   | o | 800 |

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

DESIGNED BY: DATE: 05-01-04 SCALE: AS NOTED JOB # 01-035 FILE NO. 6 of 7-Layout SHEET: 6 OF 7

#### INTRODUCTION

THE CITY OF PALMER IS LOCATED IN SOUTH CENTRAL ALASKA ON THE UPPER COOK INLET NEAR THE CONFILIENCE OF THE MATANUSKA AND KNIK RIVERS. IT IS APPROXIMATELY 42 MILES NORTH OF THE CITY OF ANCHORAGE AND IS THE MATANUSKA—SUSITNA 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 2015 AND 18,000 IN 2015 AND 18,000 IN 2016 AND AN APPROXIMATE CITY OF PALMER POPULATION OF 4,900 IN 2015 AND 18,000 IN 2015 AND 18,000 IN 2016 AND AN APPROXIMATE CITY OF PALMER POPULATION OF 4,900 IN 2015 AND 18,000 IN 2016 AND AN APPROXIMATE CITY OF PALMER POPULATION OF 4,900 IN 2015 AND 18,000 IN 2016 AND AN APPROXIMATE CITY OF PALMER POPULATION OF 4,900 IN 2015 AND 18,000 IN 2016 AND AND APPROXIMATE CITY OF PALMER POPULATION OF 4,900 IN 2015 AND IN 2011 AND 5.100 IN 2016.

IN THE EARLY 20TH CENTURY, MOST OF THE COMMUNITIES IN THE MATANUSKA-SUSITNA 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, 39% 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 OVER 75,000 POUNDS (SINGLE-WHEEL LANDING GEAR). 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 IS GOOD CONDITION. PAVEMENT STRENGTH IS ESTIMATED AT 15,000 POUNDS SINGLE WHEEL. TW B IS A 45-FOOT WIDE, FULL-LENGTH PARALLEL TAXIWAY TO RW 9/27.

RW 16G/34G IS A 60-F00T WIDE, 1,560-F00T 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

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 TO TIE-DOWN SPACES. THE LARGE MAPPING APPROXIMATELY AS ADDROVING MAPPING AS PAUL OF THE PROXIMATELY AS ADDROVING PAUL OF THE PROXIMATELY AS ADDROVING PAUL OF THE PROXIMATELY AS ADDROVING PAUL OF THE PROXIMATELY PAUL OF THE PROXI AIRCRAFT APRON IS APPROXIMATELY 43,000 SQUARE YARDS OF PAVEMEN

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

BOTH ENDS OF RW 16/34 ARE EQUIPPED WITH VASIS

#### LANDSIDE FACILITIES

AVIATION-RELATED STRUCTURES AT THE AIRPORT (IN 2001) INCLUDED THE FAA'S FLIGHT SERVICE STATION AVIATION—RELATED STRUCTURES AT THE AIRPORT (IN 2001) INCLUDED THE FAS 3 FIRED THE FAS AT THE OFFICE AT 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 AREAS 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

#### RASED 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 92% SMALL, SINGLE ENGINE, PISTON—TYPE AIRCRAFT, 6% MULTI—ENGINE, PISTON—TYPE AIRCRAFT AND 2% OTHER AIRCRAFT.

### OPFRATIONS 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 FACILITIES, AND THE CURRENT NATIONAL AND REGIONAL AVIATION FORECASTS THAT INDICATE A MODEST GROWTH TREND.

### AMP TABLE 4.9 ANNUAL OPERATIONS FORECAST

| (PLAIVING FORECAST) |        |        |        |        |        |  |
|---------------------|--------|--------|--------|--------|--------|--|
| DESCRIPTION         | 1996   | 2001   | 2006   | 2011   | 2016   |  |
| I OCAL              | 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)

|   | (, _ , , , , , , , , , , , , , , , , , , |                  |                  |                  |               |            |                     |
|---|--|------------------|------------------|------------------|---------------|------------|---------------------|
|   |  | PISTON           |                  | TURBINE          |               |            |                     |
| 1 | YEAR                                     | SINGLE<br>ENGINE | MULTI-<br>ENGINE | TURBO-<br>ENGINE | TURBO-<br>JET | HELICOPTER | TOTAL<br>OPERATIONS |
| ŀ | 1996                                     | 17,186           | 3,411            | 350              | 50            | 325        | 21,322              |
| t | 2001                                     | 18,736           | 4,896            | 400              | 60            | 390        | 24,482              |
| t | 2006                                     | 20,582           | 6,493            | 1,194            | 186           | 420        | 28,875              |
| Ì | 2011                                     | 24,294           | 7,883            | 1,429            | 224           | 470        | 34,300              |
| ł | 2016                                     | 28,887           | 9,298            | 1,728            | 332           | 530        | 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

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

| ANNUAL<br>OPERATIONS | PEAK MONTH<br>OPERATIONS               | PEAK HOUR<br>OPERATIONS   |
|----------------------|--|---|
| 21,322               | 3,769                                  | 12  |
| 24,482               | 4,326                                  | 13  |
| 28,875               | 5,102                                  | 16  |
| 34,300               | 6,060                                  | 19  |
| 40,775               | 7,204                                  | 22  |
|                      | OPERATIONS 21,322 24,482 28,875 34,300 | OPERATIONS         OPERATIONS           21,322         3,769           24,462         4,326           28,875         5,102           34,300         6,060 |

#### 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 LARGER OR HEAVIER AIRCRAFT INDICATE AN ARC OF A-III/B-III. AIRCRAFT WITH AN A-III/B-III ARC AND WEIGHING OVER 60,000 POUNDS IS THE DESIGN AIRCRAFT GROUP FOR THE PRIMARY RUINWAY. THESE INCLUDE THE DC-3 (A-III) AND DC-6 (B-III). THE B-III 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 PERCUI AR RASIS

#### DEMAND FORECAST SUMMARY

AVIATION DEMAND FORECASTS ARE SUMMARIZED IN THE FOLLOWING TABLE.

#### AMP TABLE 4.13 DEMAND FORECAST SUMMARY

| AVIATION DEMAND   | ACTUAL                           |                                  | FORECAST YEAR                     |                                   |                                   |  |
|---|----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|
| FORECAST  | 1996                             | 2001                             | 2006                              | 2011                              | 2016                              |  |
| ANNUAL AIRCRAFT OPERATIONS:<br>LOCAL<br>ITINERANT<br><b>TOTAL</b> | 6,822<br>14,500<br><b>21,322</b> | 9,831<br>14,651<br><b>24,482</b> | 10,230<br>18,645<br><b>28,875</b> | 12,152<br>22,148<br><b>34,300</b> | 14,446<br>26,329<br><b>40,775</b> |  |
| PEAKING CHARACTERISTICS PEAK MONTH OPER. PEAK HOUR OPER.          | 3,769<br>12                      | 4,326<br>13                      | 5,102<br>16                       | 6,060<br>19                       | 7,204<br>22                       |  |
| BASED GENERAL<br>AVIATION AIRCRAFT                                | 134                              | 139                              | 165                               | 196                               | 233                               |  |
| ARC/DESIGN AIRCRAFT<br>GROUP - RUNWAY 16/34                       | B-III                            | B-III                            | B-III                             | B-III                             | B-III                             |  |
| ARC/DESIGN AIRCRAFT<br>GROUP - RUNWAY 09/27                       | B-II                             | B-II                             | B-II                              | B-II                              | B-//                              |  |

#### 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 166/34G.

RW 9/27 SAFETY AREA LENGTH BEYOND THE RUNWAY END IS 200 FEET AT EACH END. THE MINIMUM STANDARD OF 300 FEET CAN BE OBTAINED BY A GRADING PROJECT

ADDITIONAL PROPOSED CAPACITY AND FACILITY DEVELOPMENTS RECOMMENDED IN THE AMP ARE AS FOLLOWS:

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

INSTALL PAPIS AT EACH END OF RW 9/27. ALTHOUGH RW 16/34 HAS VASIS, PAPIS ARE EASIER TO INSTALL AND MAINTAIN THAN VASIS AND WOULD PROVIDE ADEQUATE GUIDANCE.

INSTALL REILS AT EACH END OF RW 16/34. REILS PROVIDE RAPID AND POSITIVE IDENTIFICATION OF THE APPROACH END OF A PARTICULAR RUNWAY FOR EFFECTIVE IDENTIFICATION OF A RUNWAY SURROUNDED BY OTHER LIGHTING, IDENTIFICATION OF A RUNWAY THAT LACKS CONTRAST WITH SURROUNDING TERRAIN, AND IDENTIFICATION OF A RUNWAY DURING REDUCED VISIBILITY.

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 TAXIMAYS 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   AREAS<br>(1996–2001) | PHASE   AREAS<br>(2001–2006)          | PHASE   AREAS<br>(2006–2016) |
|---------------------------|------------------------------|---------------------------------------|------------------------------|
| CONVENTIONAL HANGAR APRON | 3,867*                       | 4,240                                 | 4,733                        |
| ITINERANT AIRCRAFT APRON  | 10.440                       | 12,960                                | 18,360                       |
| LOCAL APRON (TIE-DOWN)    | 31.500                       | 36,600                                | 52,200                       |
| GRAND TOTAL               | 45,807                       | 53,800                                | 113,160                      |
| GRAND TOTAL               | 1 .5,557                     | · · · · · · · · · · · · · · · · · · · |                              |

\* 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)

|                         | BASED LARGE AIRCRAFT<br>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

| TERMINAL BUILDING REQUIREMENTS |                                      |    |       |  |  |
|--------------------------------|--------------------------------------|----|-------|--|--|
| PHASE                          | TERMINAL BUILDING<br>NEEDS (SQ. FT.) |    |       |  |  |
| PHASE I (0-5 YEARS)            | 1.3                                  | 33 | 1,617 |  |  |
| PHASE II (5-10 YEARS)          | 16                                   | 40 | 1,960 |  |  |
|                                | 22                                   | 55 | 2,695 |  |  |
| PHASE III (10-20 YEARS)        | 42                                   | 50 |       |  |  |

CONSTRUCT AUTO PARKING AREA. ADJACENT TO THE FSS IS 280 SY 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<br>PILOTS AND<br>PASSENGERS | EMPLOYEE<br>PARKING | PARKING<br>SPACE<br>DEMAND | AUTOMOBILE<br>PARKING<br>NEEDS (SQ. YD) |
|-----------|---------------------------------------|---------------------|----------------------------|---|
| PHASE I   | 33                                    | 19                  | 52                         | 1,820                                   |
| PHASE II  | 40                                    | 23                  | 63                         | 2,205                                   |
| 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 FATO 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 PROPERTY FOR RW 9 RPZ. THE EXISTING RW 9 RPZ IS PROTECTED BY AN AVIATION EASEMENT. THE PROPERTY WITHIN THE RPZ SHOULD BE PURCHASED TO PLACE THE PROPERTY AND AIRSPACE WITHIN AIRPORT CONTROL.





#### APPROVAL SIGNATURES

Name of Airport: <u>Palmer Municipa</u> 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-10NRA
Airport Layout Plan Conditional Approval Subject To
ALP Approval Letter Optics

FOR DATE: 7 26/04

ska Region, AAL-601

PALMER MUNICIPAL AIRPORT NARRATIVE REPORT PALMER, ALASKA DRAWN BY: DESIGNED BY DATE: 05-01-04

CITY OF PALMER

FINAL 05-01-2004

JOB # 01-035 SHEET: 7 OF 7 FILE NO. 7 of 7-Layout