



Omak Municipal Airport (OMK)

Airport Layout Plan Update – City Council Meeting

September 5, 2023



THE LANGDON GROUP
a J·U·B Company



GATEWAY MAPPING INC.
a J·U·B Company

OTHER J-U-B COMPANIES

RECAP OF KEY ISSUES

1 HANGAR EXPANSION / DEVELOPMENT

2 UPDATING INSTRUMENT APPROACH PROCEDURES

3 APRON EXPANSION AND DEVELOPMENT

4 HELICOPTERS

5 ACCOMODATIONS FOR AGRICULTURAL AND FIREFIGHTING OPS

6 FUNDING

FORECAST SUMMARY

DNR AERIAL FIREFIGHTING OPERATIONS					
Year	Rotorcraft Type 1	Rotorcraft Type 2	Air Attack	Air Tanker	Fire Boss
2018	0	126	100	4	160
2019	0	60	60	0	136
2020	80	74	56	0	150
2021	62	60	116	0	232
2022	2	50	54	0	82

Source: DNR



Forecast	2022	2027	2032	2042
Based Aircraft	7	15	20	30
Operations	1,330	1,378	1,428	1,544

Critical Aircraft
The most demanding aircraft or group of aircraft (in terms of size and/or speed) that contributes to over **500** operations annually

DESIGN CRITERIA

EXISTING (A-II) AND FUTURE (B-II) CRITICAL AIRCRAFT DESIGN CHARACTERISTICS		
Characteristic	Cessna Caravan Aircraft Performance (A-II)	Air Tractor 802F Aircraft Performance (B-II)
Approach Speed	79 Knots	103 Knots
Wingspan	52 Feet	53 Feet
Tail Height	15 Feet	12 Feet
Max Takeoff Weight (MTOW)	8,000 Pounds	16,000 Pounds
Main Gear Width (MGW)	12 Feet	24 Feet
Cockpit to Main Gear (CMG)	12 Feet	24 Feet
# Engines	1	1

Source: FAA Aircraft Characteristics Database



LANDSIDE RECOMMENDATIONS

Hangars



The Omak Airport currently accommodates **9** leased hangars that are located on airport property, totaling approximately **19,000 square feet**. Three additional hangars are located “through-the-fence” off the airport property and are not included in these calculations.

Current Hangar Space: ±19,000 square feet

Recommended: ±55,000 square feet by 2042

Helicopters



During the fire season in the summer, there are **10** itinerant rotorcraft (helicopters) that use the taxiway and aprons simultaneously.

FAA design guidelines require **800** square yards of apron area per itinerant helicopter.

Current Helipad Apron space: ± 1,600 square yards

Recommended: 2-4 additional helipads with up to 3,200 square yards of additional apron area to accommodate seasonal itinerant helicopter activity.

Aprons

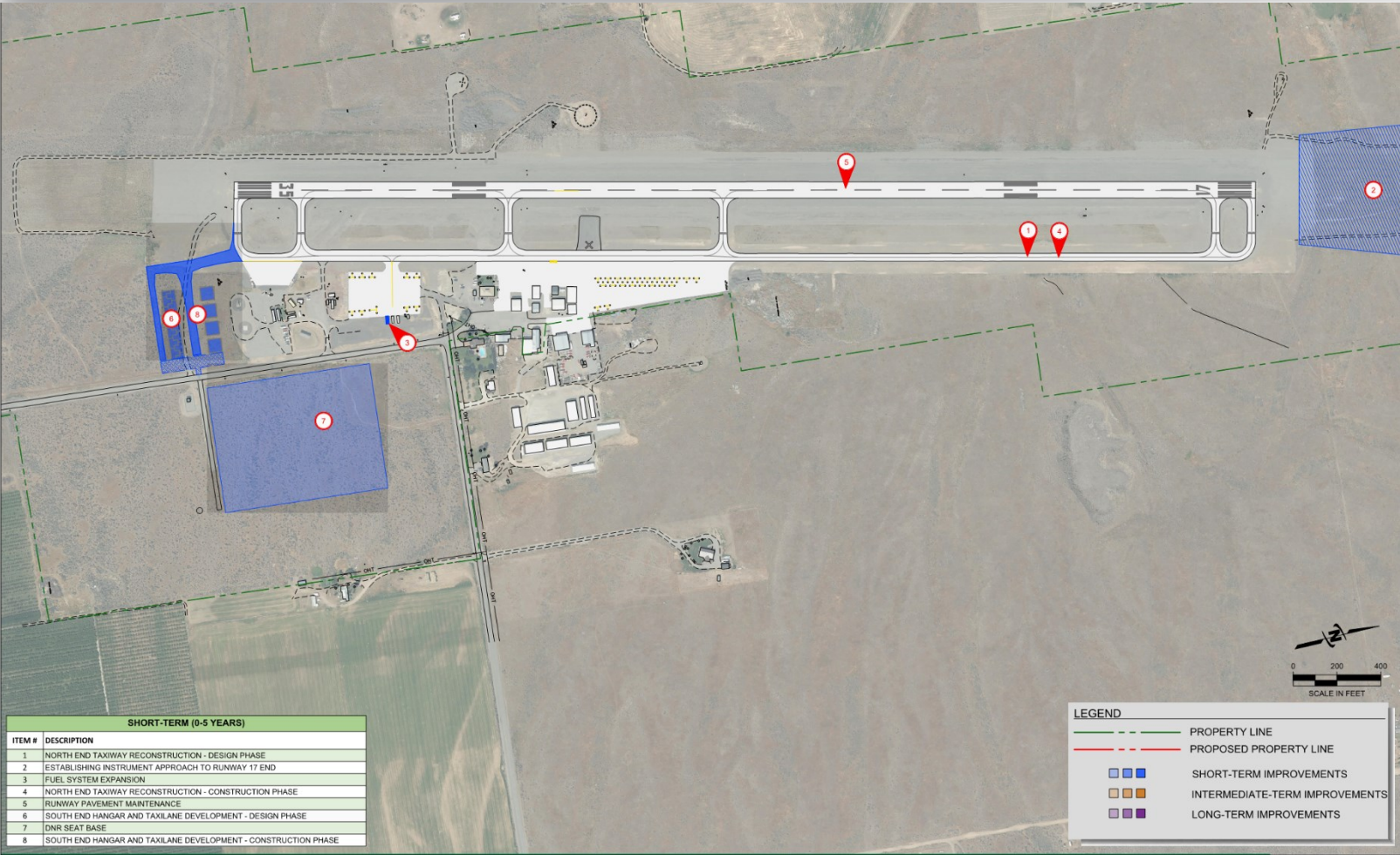


The current aprons include space for based aircraft and itinerant aircraft parking which totals over 30,000 square yards of space. The current aircraft apron area is sufficient for the current planning period but could change as growth continues.

Current Apron Space: ±30,000 square yards

Recommended: As demand materializes

SHORT-TERM IMPLEMENTATION



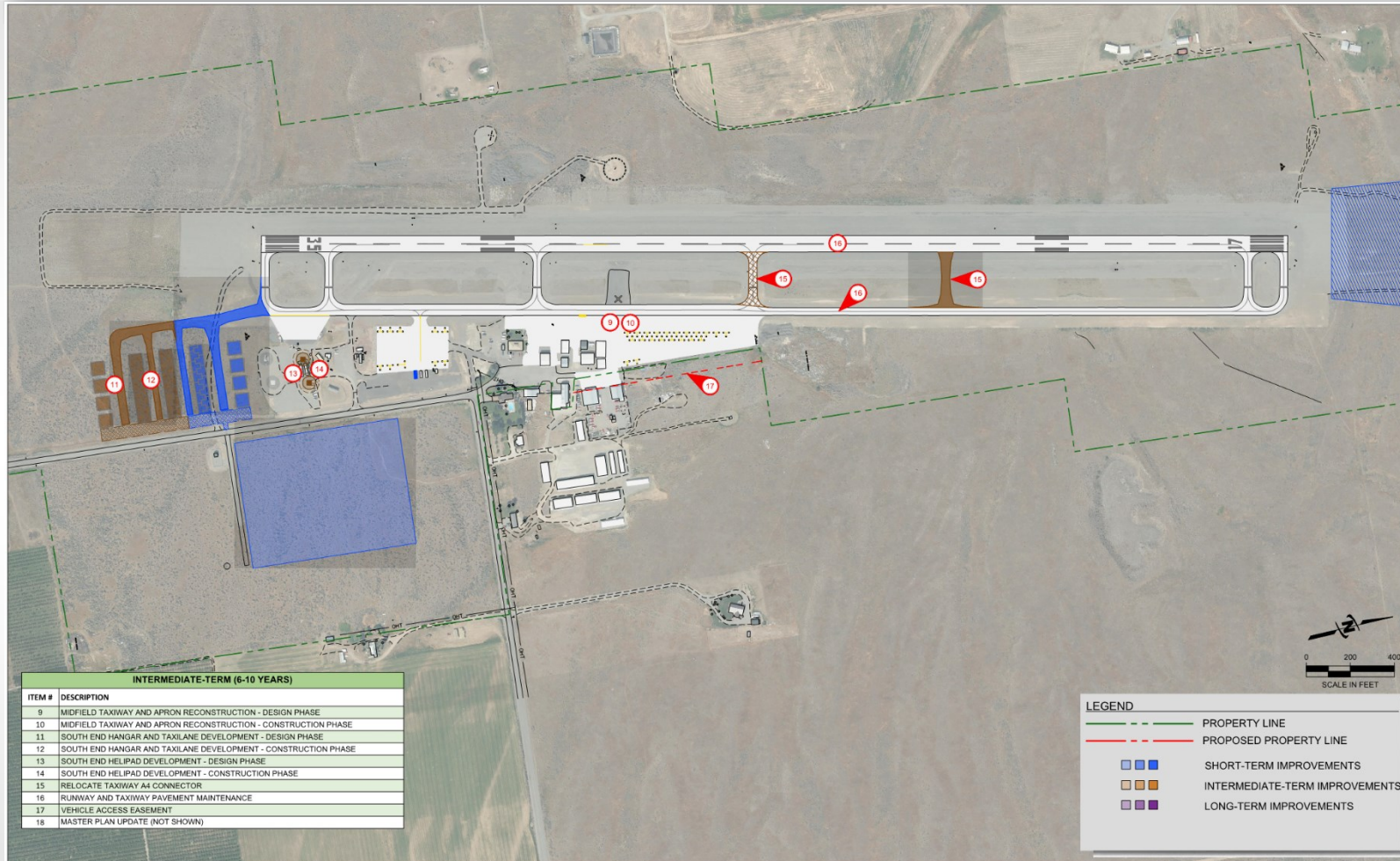
SHORT-TERM (0-5 YEARS)	
ITEM #	DESCRIPTION
1	NORTH END TAXIWAY RECONSTRUCTION - DESIGN PHASE
2	ESTABLISHING INSTRUMENT APPROACH TO RUNWAY 17 END
3	FUEL SYSTEM EXPANSION
4	NORTH END TAXIWAY RECONSTRUCTION - CONSTRUCTION PHASE
5	RUNWAY PAVEMENT MAINTENANCE
6	SOUTH END HANGAR AND TAXILANE DEVELOPMENT - DESIGN PHASE
7	DNR SEAT BASE
8	SOUTH END HANGAR AND TAXILANE DEVELOPMENT - CONSTRUCTION PHASE

NO	DESCRIPTION	TOTAL
1	North End Taxiway Reconstruction – Design Phase	\$200,000
2	Establishing Instrument Approach to Runway 17 End	\$0
3	Fuel System Expansion	\$300,000
4	North End Taxiway Reconstruction - Construction Phase	\$972,000
5	Runway and Taxiway Connector Pavement Maintenance	\$300,000
6	South End Hangar and Taxilanes Development - Design Phase	\$150,000
7	DNR SEAT Base	TBD
8	South End Hangar and Taxilanes Development – Construction Phase	\$750,000
Total		\$2,672,000

OMK Short -Term Improvements (0-5yrs)



INTERMEDIATE-TERM IMPLEMENTATION



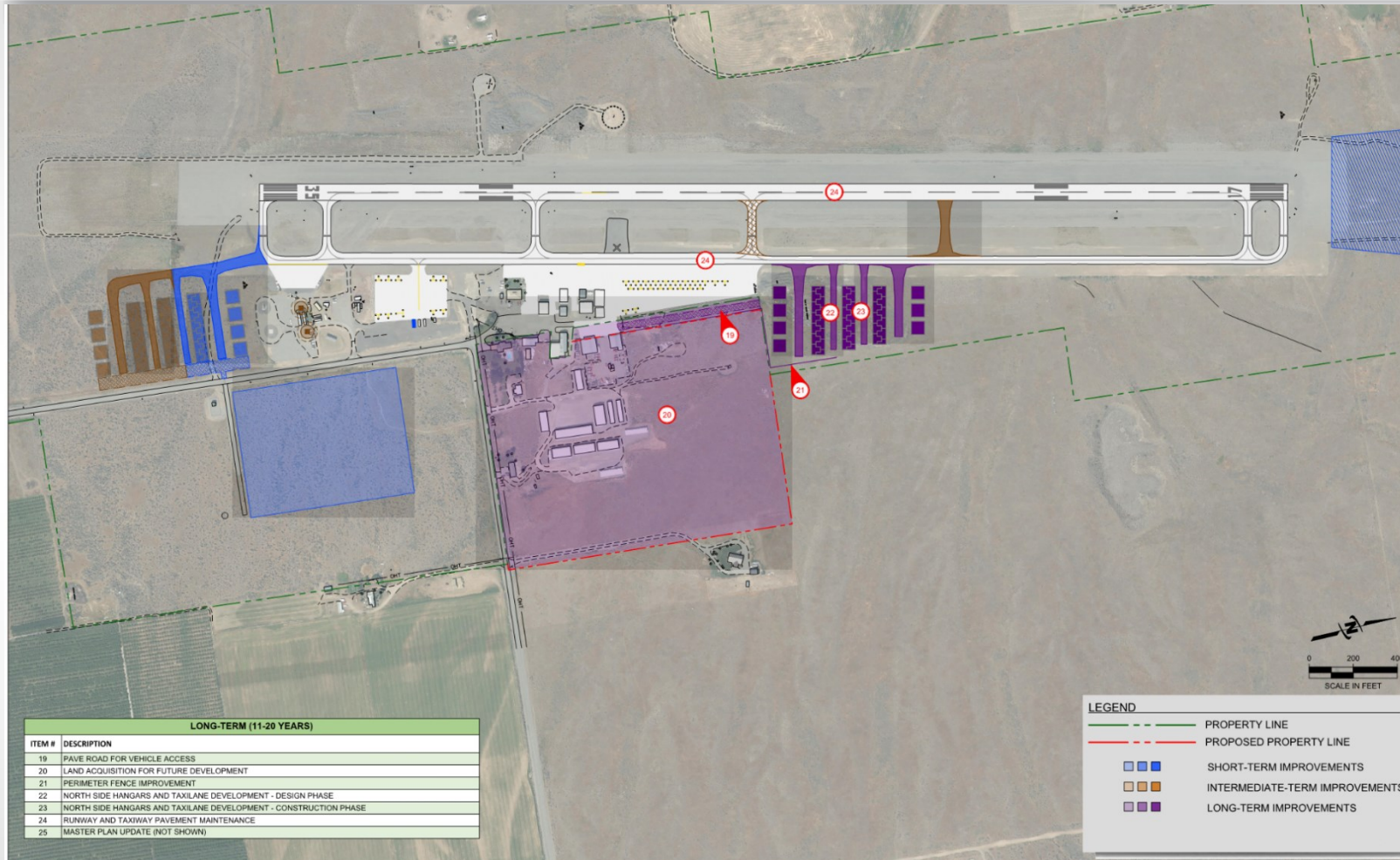
NO	DESCRIPTION	TOTAL
9	Midfield Taxiway and Apron Reconstruction – Design Phase	\$300,000
10	Midfield Taxiway and Apron Reconstruction – Construction Phase	\$3,120,000
11	South End Hangar and Taxilanes Development - Design Phase	\$150,000
12	South End Hangar and Taxilanes Development – Construction Phase	\$750,000
13	South End Helipad Development – Design Phase	\$100,000
14	South End Helipad Development – Construction Phase	\$250,000
15	Relocate Taxiway A4 Connector	\$700,000
16	Runway and Taxiway Pavement Maintenance	\$300,000
17	Vehicle Access Easement	\$15,000
18	Master Plan Update	\$400,000
Total		\$6,085,000

OMK Intermediate -Term Improvements (6-10yrs)



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LONG-TERM IMPLEMENTATION



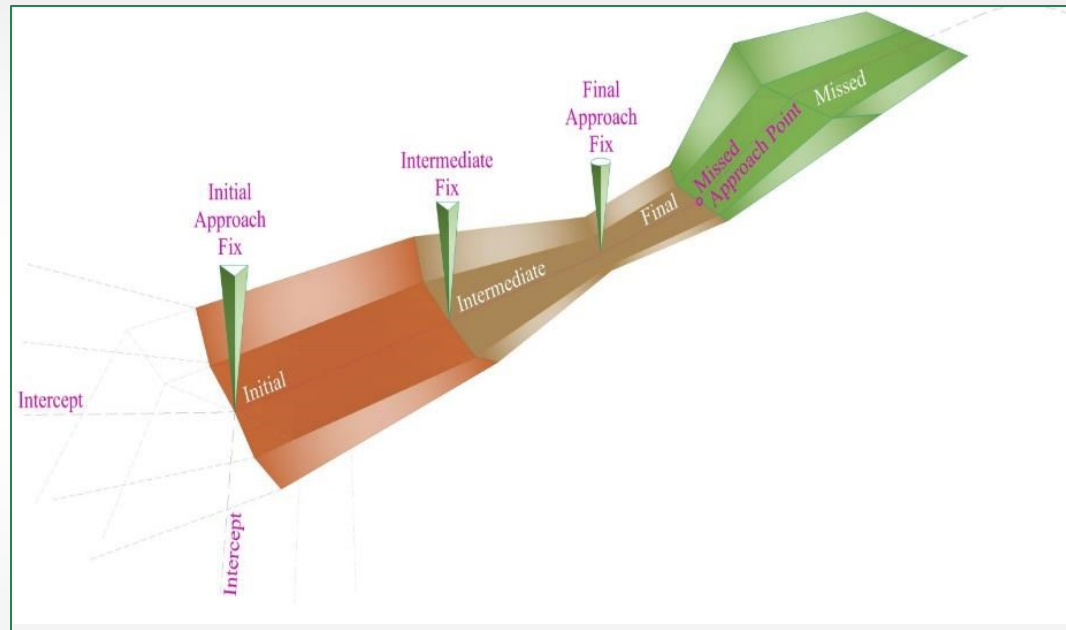
OMK Long -Term Improvements (11-20yrs)



NO	DESCRIPTION	TOTAL
19	Pave Road for Vehicle Access Easement	\$300,000
20	Land Acquisition for Future Development	\$700,000
21	Perimeter Fence Improvement	\$30,000
22	North Side Hangars and Taxilane Development – Design Phase	\$150,000
23	North Side Hangars and Taxilane Development – Construction Phase	\$1,500,000
24	Runway and Taxiway Pavement Maintenance	\$300,000
25	Master Plan Update	\$400,000
Total		\$3,380,000

AIRSIDE RECOMMENDATIONS: UPDATING LEGACY APPROACH

GPS (RNAV) Approach Visualization

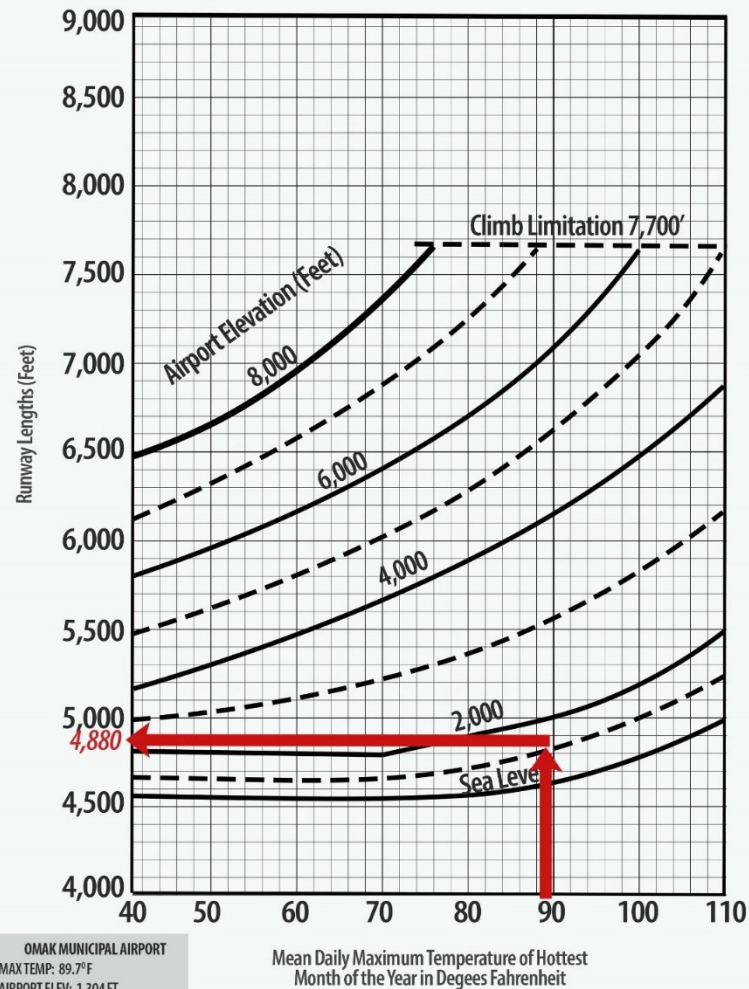


Instrument Approach Procedure (IAP)

Runway End	Current	Future
17	Visual	Recommend IAP
35	GPS Approach	Updated Legacy Approach

The FAA has identified the need to update the Legacy Approach at the Omak Airport and will be publishing a new approach in October of 2023. It is recommended that the Omak Airport should file a request with the FAA to establish an Instrument Approach Procedure for Runway 17.

AIRSIDE RECOMMENDATIONS: RUNWAY LENGTH



Future Critical Aircraft:
 Air Tractor 802F Fire Boss



- Maximum Certified Take-Off Weight: 16,000 pounds
- Recommended Runway Length: **≥4,880 feet**
- Advisory Circular 150/5325-4B for Airplanes Within a Max Certificated Takeoff Weight of More Than 12,500 Pounds Up to And Including 60,000 pounds.
- Based on 75% of fleet with 60% useful load value

Omak's Current Runway Environment

- Runway Length: 4,672 feet
- Airport Elevation: 1,304 feet
- Mean Maximum Temperature: 89.7 degrees Fahrenheit

**Note that the runway length may be a consideration for larger business aircraft operators. It is up to the pilot's discretion whether they choose to land on the runway.*

OMAK MUNICIPAL AIRPORT MASTER PLAN



DRAFT FINAL

Submitted by:



JUB ENGINEERS, INC.



THE
LARRISON
GROUP

OTHER JUB COMPANIES



GATEWAY
MAPPING
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- It is requested that the City Council moves to approve the Airport Master Plan and Airport Layout Plan, as well as authorize the Mayor to sign the project and grant closeout documents.

NEXT STEPS



THANK YOU

QUESTIONS?



J-U-B ENGINEERS, INC.



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