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## 5 EVALUATION OF ALTERNATIVES

### 5.1 INTRODUCTION

The purpose of this chapter is to identify and evaluate alternative development strategies for the Yakima Air Terminal/McAllister Field (YKM). Developing alternatives is the best way to ascertain how to meet the facility needs established in the previous chapter (Chapter 4, Facility Requirements). In this chapter the facility requirements that require physical improvements are identified, alternative ways to meet those requirements are developed and these are compared and a preferred development plan is selected to be the basis for the Airport Layout Plan (ALP). The following areas have alternatives that have been analyzed for the ALP at YKM.

1. The airfield (runways and taxiways),
2. The passenger terminal area (Terminal building, aircraft apron, and auto parking), and
3. General aviation areas (hangars and tiedowns).

The following assumptions were drawn from analyses prepared in previous chapters and represent the framework used for formulating the development strategies.



Although all development proposals have alternatives, in some cases only one is feasible. The findings of these analyses are summarized in Table 5-1 with details on the decision process discussed in the remainder of this chapter.

**Table 5-1: Summary of Alternative Analyses**

Issue	Conclusions	Recommendation
<b>Airport Classification and Design:</b>		
FAA ARC Classification	C-III for all airfield facilities.	No alternatives were considered.
<b>Runways:</b>		
Runway Length	The recommendation is to extend the runway to 8,847 feet. It was necessary to assure that the existing length of 7,604 feet is maintained on Runway 9/27 to accommodate all forecast operations. Preserving the potential for a runway extension should demand for additional length occur in the future, either to accommodate new aircraft or as part of a strategic plan to attract new airport tenants was determined to be essential to the long-term goal of using the airport as a central component of community economic development.	Three alternatives were considered including: (1) keeping the runway at its current length; (2) maintaining the previous master plan's recommendation for extension of the runway to 10,000 feet; or (3) extending the within the current airport property lines (8,847 feet).
Crosswind Runway	FAA standards have shown that Runway 4/22 is not required for either capacity or wind coverage. Therefore the runway is not eligible for continued FAA funding.	The alternatives considered were to either close the runway and redevelop the land for other airport purposes or for the City to commit locally generated funds to its long-term maintenance and operation. The City has determined that the runway should continue to function until the cost of maintenance exceeds the City's ability to finance them.

**Table 5-1: Summary of Alternative Analyses (Continued)**

Issue	Conclusions	Summary
<b>Taxiways</b>		
Taxilanes	<p>Realign taxiways to eliminate direct access from parking aprons to the runway in order to reduce the potential for runway incursions.</p> <p>Provide new access taxiways as appropriate to support new development areas.</p>	None considered.
<b>Pavement Maintenance</b>		
Airfield pavements	Continue with the annual pavement maintenance program for all pavements	A complete schedule for pavement maintenance has been established as part of the Pavement Conditions Index report completed as part of this study. The full report is included as Appendix C to this master plan.
<b>Terminal Facilities</b>		
Passenger Terminal Building	<p>The recommended action is to construct a new terminal at the existing site in order to continue to use the aircraft apron and automobile parking facilities.</p> <p>The existing terminal building needs to be bigger based on the forecast increase in passengers. Additionally, the condition of the existing building is such that major maintenance and rehabilitation efforts would be needed to keep it functional over the long term.</p>	Two primary alternatives were considered: the first maintains operations in the existing terminal building and the second constructs a new terminal to replace the existing. Several alternatives were considered as to the ultimate location of a new terminal.
Support Facilities	The airline apron, automobile parking, and other facilities associated with the passenger terminal are included in the alternative discussion related to the terminal building.	None considered

**Table 5-1: Summary of Alternative Analyses (Continued)**

Issue	Conclusions	Summary
<b>General Aviation</b>		
General Aviation Facility	<p>The recommendation is to use existing hangar facilities to satisfy demand while facilitating continued development in the south GA area.</p> <p>The existing GA areas will need to grow in order to accommodate the increased demand for hangar and aircraft parking aprons.</p>	Primary consideration was given to where new GA development should occur.
<b>Support Facilities</b>		
Fueling	<p>The current system is adequate.</p> <p>The private sector will continue to upgrade and improve as needed.</p>	None



## 5.2 RUNWAY ALTERNATIVES

### 5.2.1 Runway 9/27

The forecasts of aviation demand for both the number of operations and the types of aircraft to use YKM have shown that the existing length of Runway 9/27 (7,604 feet) is sufficient through the year 2030. The two previous airport master plans recommended the runway be extended to a total length of 10,000 feet and this is reflected on the current Airport layout Plan (ALP) and has been accounted for in airport land use planning. As demonstrated in Chapter 3, Forecast of Aviation, there is no justification for a runway extension at this time, nor is one foreseen within the next 20 years. However, during the master planning process it was recognized by the City that the Yakima Air Terminal/McAllister Field is one of the key components of a long-term regional economic development strategy. By including a plan to provide a longer runway, the City can continue to work toward attracting better airline service, aircraft manufacturing facilities and heavy maintenance and overhaul facilities. Should these efforts be successful, the work required for a runway extension could begin. This will include developing a detailed project purpose and need statement, additional planning and further environmental analyses, and review and approvals by the FAA. By including an extension in this master plan the local land use planning agencies can continue to consider the long-range airport configuration in comprehensive planning activities.

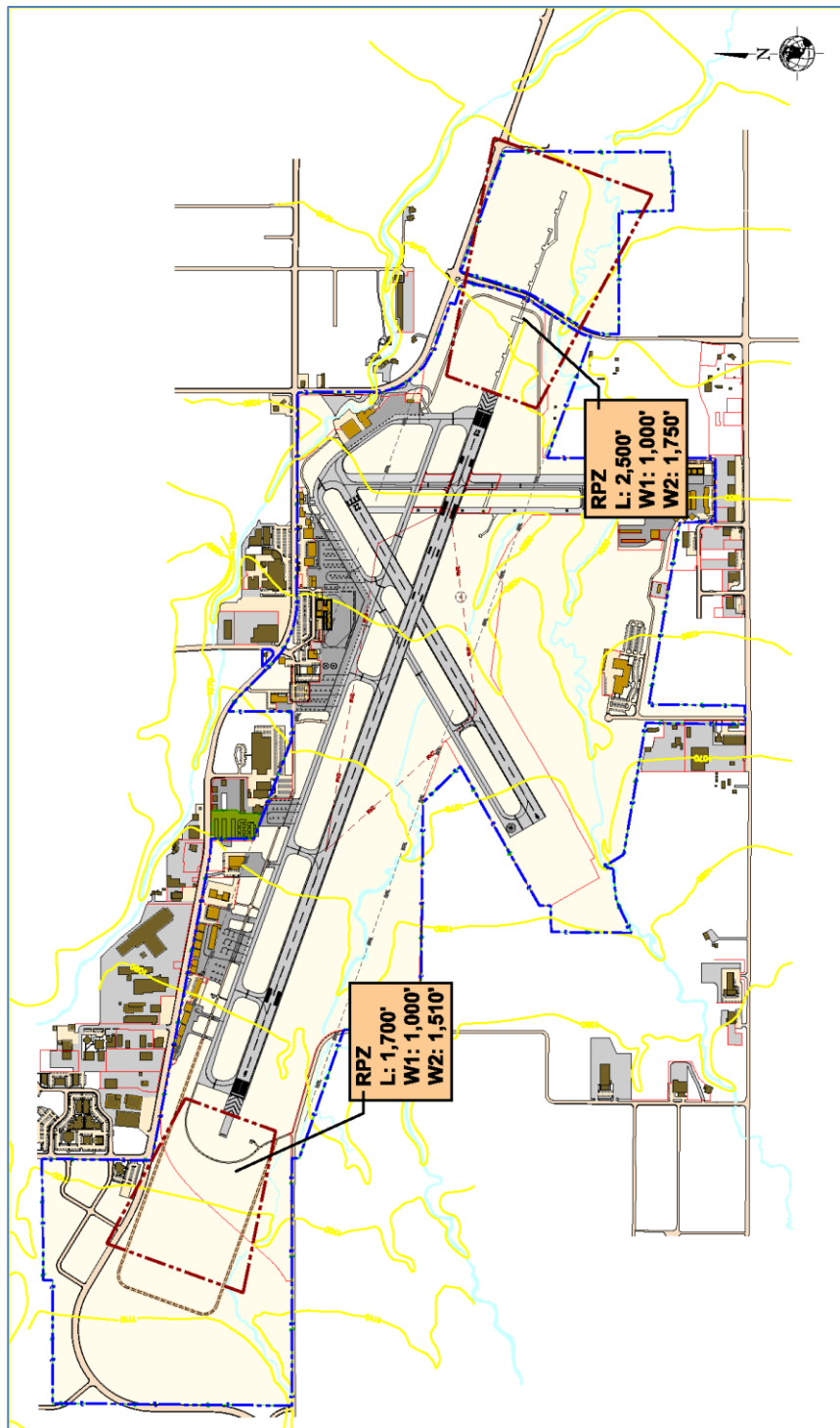
Three runway alternatives were considered.

**No-action (Figure 5-1).** The current runway length has been shown to be adequate for all current and forecast activity at the airport.

**Extend Runway 9/27 to 10,000 feet (Figure 5-2).** Even though current forecasts do not justify a runway extension, the master plan could retain the possibility for a runway extension at 10,161 feet as recommended in both the 1998 and 2003 master plan and that has been considered in the development of both the city and county's comprehensive planning efforts.

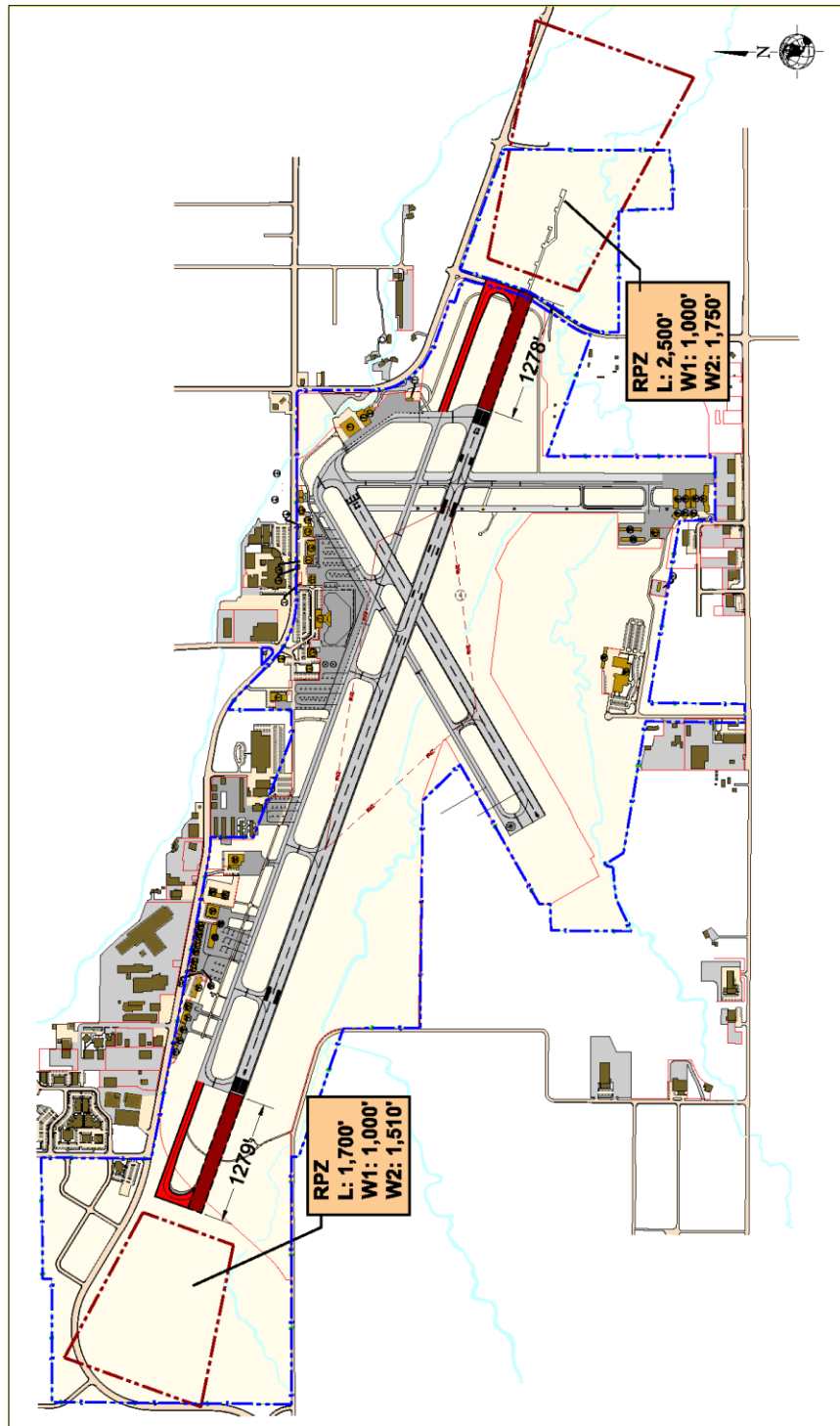
**Extend Runway 9/27 to The Maximum Extent Possible on Existing Airport Property (Figure 5-3).** This alternative plans for a runway extension to obtain the maximum length possible (8,847 feet) while staying within current airport property. This positions the City to respond to future opportunities in aircraft manufacturing, maintenance or testing without requiring the purchase of additional land or creating adverse impacts on adjacent property owners.

Alternatives 2 and 3 include an extension of parallel Taxiway A to provide coverage for the full length of the runway.

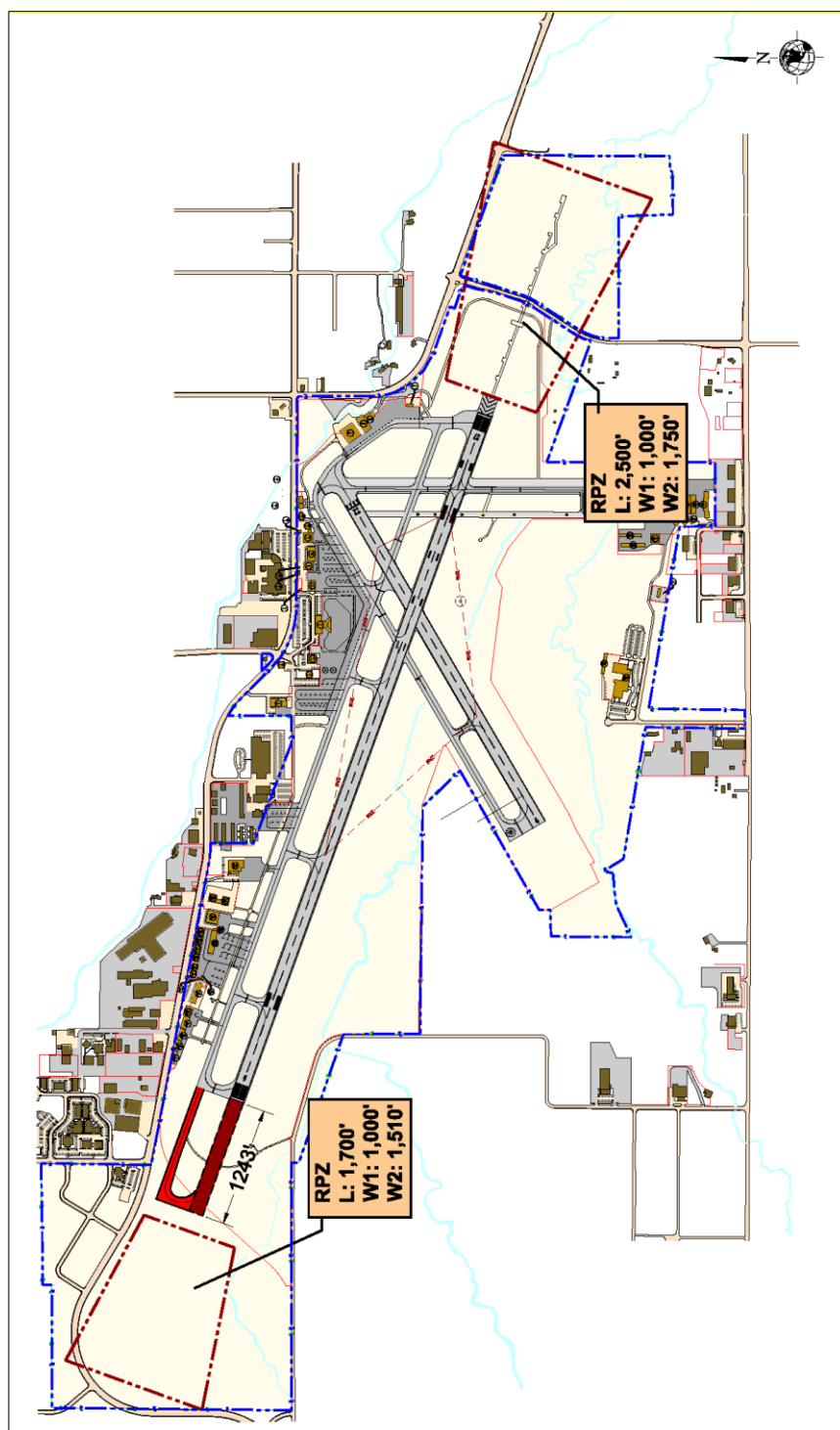


**Figure 5-1: No-Action**





**Figure 5-2: Extend Runway 9/27 to 10,000 Feet**



**Figure 5-3: Extend Runway 9/27 to the Maximum Extent on Existing Airport Property (8,847 feet)**

## 5.2.2 Analysis of Runway 9/27 Alternatives

The safe and efficient movement of aircraft is a primary factor in alternative evaluation. Safety is the number one priority and all alternative layouts meet FAA safety criteria. Determining which of these alternative represents the best course of action at YKM requires a comparison of the three. This comparison uses criteria that consider the needs of the airport and its users, balanced with any identified impacts to the environment and community. The evaluation criteria used are:

### **Does It Meet the Airport's Forecast Needs:**

The types of aircraft forecast to use YKM require that the current runway length be maintained. Any of the alternatives are acceptable in this regard.

### **Does it Have Any Impact on the Approach Capability:**

The current precision instrument approach procedure is to Runway 27 with an Area Navigation (RNAV) (Required Navigation Performance) approach available to Runway 9. Neither Alternative 1 nor 3 will change the Runway 27 threshold and therefore will have no negative impact on the published approach. Alternative 2 relocates the Runway 27 threshold 1,278 feet to the east resulting in a need to relocate the instrumentation and redesign the approach procedure.

### **What are the Environmental Considerations:**

The primary environmental difference between the alternatives could be expected to result from noise exposure with the shifting of the runway ends. However, given the low levels of activity and the nature of the forecast fleet mix, noise levels are not significant enough to create community impact. No other environmental effects are anticipated at this time. Of course prior to any runway extension project a detailed environmental analysis will be required.

### **Are There Engineering/Logistical Considerations:**

Alternative 1 requires no physical change to the airport and therefore is free of complicating factors. Alternative 2 requires changes to both ends of the runway including the relocation or closure of South 16<sup>th</sup> Avenue and relocation of all component parts of the Instrument Landing System (ILS). Alternative 3 will require extensive land preparation efforts including grading activities to ensure the Runway Safety Area (RSA) and Object Free Area (OFA) requirements are met.

### **What is the Estimated Cost of Implementation:**

Planning level cost estimates have been prepared for the alternatives to include all aspects of the project as well as any identifiable environmental and permitting requirements, professional design

fees, state sales taxes, and contingencies. These are offered for comparative purposes and the true estimate of cost will need to be based on more detailed study at the time of implementation.

The cost of Alternative 1 would be negligible since no physical changes are required.

Alternative 2 requires that the runway be extended by constructing 1,279-foot extensions to both ends. The cost estimate includes relocation of the ILS system components, roadway relocation costs associated with South 16<sup>th</sup> Avenue, and environmental studies, in addition to the cost of the runway extension.

Alternative 3 limits construction activities to the Runway 9 end. Only the localizer would need to be relocated. The cost estimate includes the work required to secure project approvals (environmental and purpose and need statements) as well as all activities associated with extending the runway and taxiway.

Table 5-2 presents a summary of the findings of the alternative analyses for Runway 9/27.

**Table 5-2: Analysis of Runway Alternatives**

	Alternative 1	Alternative 2	Alternative 3
Meets Airport Needs	Meets the needs of the critical aircraft and forecast operations.	10,000 feet exceeds the needs of the aircraft using YKM or forecast to do so. It does provide for future flexibility and maintains the ability to react to future opportunities.	8,847 feet of available runway meets the needs of the critical aircraft as well as providing expansion potential to react to unforeseen opportunity.
Impact on Approaches	No impact on the precision approach to Runway 27	The Runway 27 threshold will move 1,278 feet to the east under this alternative requiring a relocation of the ILS system and a redesign of the precision approach procedure. The extension to Runway 9 will require that the non-precision approach to this end also be redesigned.	No impact on the precision approach to Runway 27 but the non-precision approach to Runway 9 will need to be redesigned.
Land Use and Environmental Compatibility	No off-airport impacts	Extending the runway on both ends changes the Airport Compatibility Overlay Zone (ACOE) in both directions and over three individual jurisdictions.	Off-airport impacts are limited to the properties immediately off the end of Runway 9.

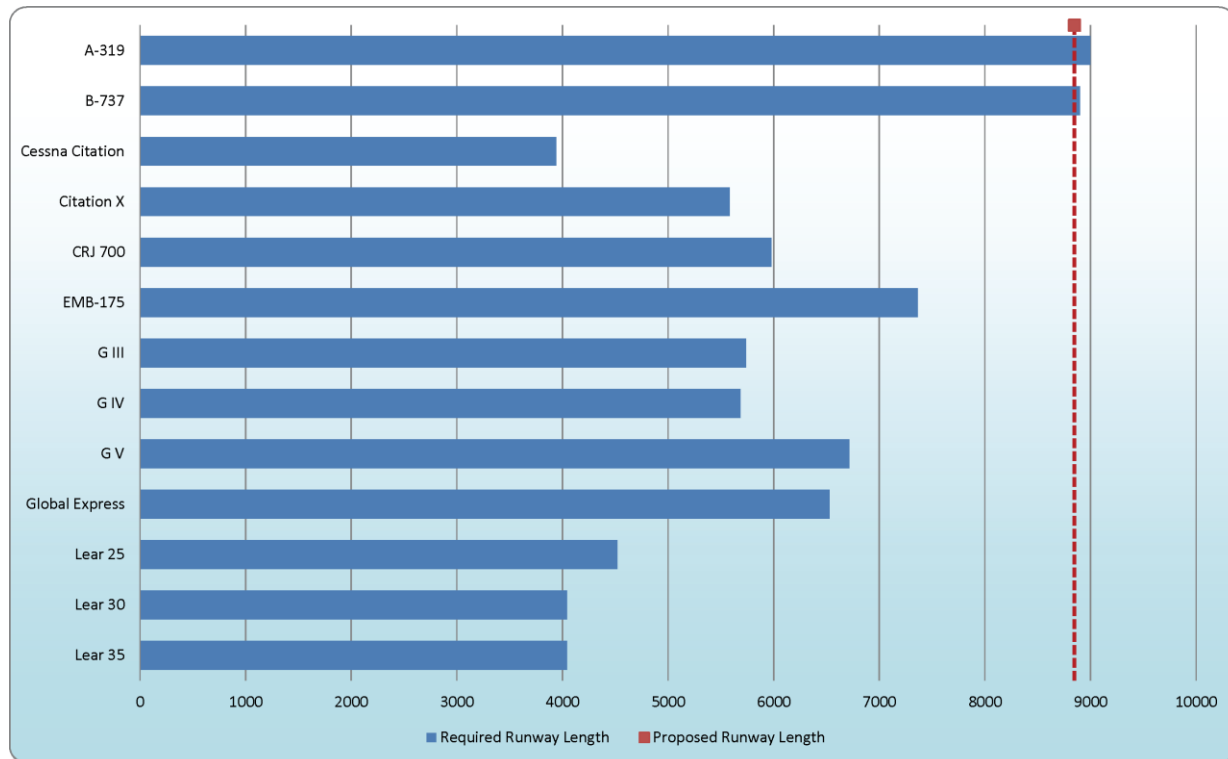
**Table 5-2: Analysis of Runway Alternatives (Continued)**

	Alternative 1	Alternative 2	Alternative 3
Engineering/Logistical Considerations	None	Establishing work zones on both ends of the existing runway adds complications and costs to the implementation. Additionally the relocation of the ILS equipment and the relocation of South 16 <sup>th</sup> Avenue create complications as well as expenses.	None
Estimated Cost of Implementation	None	\$14.5 Million	\$5.8 million

### 5.2.3 Runway 9/27 Recommendation

Although Alternative 1 provides for the needs of the aircraft forecast to use YKM, it does not allow for flexibility in attracting new users. In this respect Alternative 3 is the superior alternative. It is recommended that the ALP depict an extension to Runway 9/27 that brings the physical length to 8,847 feet. As Figure 5-4 shows, all aircraft can use this length of runway for operations at YKM.

It is recognized that this extension is being recommended for planning purposes and that there is no current demand driving implementation. When demand materializes, the City will need to work with FAA to assure that an extension is justified and all environmental clearances are obtained.



**Figure 5-4: Aircraft Use of 8,847-Foot Runway at YKM**

### 5.2.4 Runway 4/22

In the Facility Requirements chapter it was shown that Runway 4/22 was not considered to be essential to airport operations based on FAA criteria. The wind rose showed that Runway 9/27 provides more than 95 percent coverage for all aircraft under all weather conditions. This resulted in a determination that Runway 4/22 is not eligible for continued FAA support.

However, other reasons for maintaining Runway 4/22 do exist. Runway 4/22 provides flexibility in operations for most general aviation (GA) aircraft. Additionally, during periods when Runway 9/27 has been unavailable because of construction or other reasons, most commercial operations have been able to continue service using Runway 4/22. Therefore, the future for the runway needs to be included in this analysis.

Unlike the previous discussion, the future for Runway 4/22 has a limited basis for analysis. It will either be phased from operation as the pavement deteriorates or the City will elect to reconstruct and maintain the runway at their expense.



Over the course of this master plan ATCT personnel have recorded the number and types of operations that occur on Runway 4/22 each month. These data show that use is generally limited to small single-engine piston aircraft that fall within the FAA classification for B-I (small). These records further showed that use of the runway was approximately 4.5 percent of total annual operations with the heaviest use occurring between May and August.

Based on this data, if Runway 4/22 is to be reconstructed, it should be reconstructed to B-I (small) standards. This will include reducing the width from 150 to 60 feet, as well as reductions in other dimensions as shown in Table 5-3. The cost of reconstruction for this runway at B-I (small) standards has been estimated to be \$1,140,000.

**Table 5-3: B-I (small) Design Criteria (Runway 4/22)**

Design Feature	Existing (ft.)	Standard (ft.)	Difference
<b>Runway:</b>			
Width	150	60	Reduce the runway width by 90 feet
Runway Shoulder Width	5	10	Increase runway shoulder width
Runway Blast Pad Width	None	80	Add new blast pads to the end of the runway
Runway Blast Pad Length	None	60	Add new blast pads to the end of the runway
Runway Safety Area (RSA) Width	200	120	Reduce RSA width
Safety Area Length (beyond runway end)	600	240	Reduce RSA length
Object Free Area Width	400	250	Reduce OFA width
Object Free Area Length (beyond runway end)	600	240	Reduce OFA length will be reduced
Obstacle Free Zone Width	250	250	Meets Standard
Obstacle Free Zone Length	200	200	Meets Standard

*Source: FAA Advisory Circular 150/5300-13, Airport Design, Change 6*

*Note: Runway 4/22 and Taxiway B were constructed to meet B-III standards that exceed B-I (small) standards.*

### 5.2.5 Runway 4/22 Recommendation

Given the low usage of the runway, it is recommended that the City stabilize the current pavement and restrict use to small aircraft. At the same time alternative funding sources such as WSDOT Aviation can be explored to ascertain whether adequate non-FAA funding sources may be available

for reconstruction. Should these efforts prove to be futile, the runway should be closed to aircraft operations.

### 5.2.6 Taxiways

The taxiway system at YKM currently serves the runway system efficiently allowing exit from the runway and safe access to the terminal and hangar areas. Additionally, the critical dimensions of the taxiways match or exceed FAA Airport Design standards. The analysis of the taxiway system identified the following items for discussion:

1. At the time that Runway 9/27 is extended, an equal extension to Taxiway A should be accomplished. The taxiway should be constructed at a width of 75 feet.
2. Taxiway C currently provides access to Runway 9/27 as well as to the South GA area. At present Taxiway C crosses the runway approximately 830 feet from the Runway 27 threshold. Based on standards and guidance from AC 150/5300-13A this taxiway connection needs to be revised to assure that aircraft do not have a direct path onto the runway. It is recommended that a partial parallel taxiway be constructed to allow the general aviation aircraft from the south GA area to cross the runway at the Runway 27 threshold. When this is built the section of Taxiway C between Taxiway A and the runway can be closed and all aircraft routed to the end of Runway 27.

## 5.3 TERMINAL ALTERNATIVES

The passenger terminal facilities at YKM are located on the north side of the runway at the approximate intersection of Runways 9/27 and 4/22. The terminal area consists of the passenger terminal building, terminal curbside, commercial aircraft parking apron, the surface access system and automobile parking areas, and the airport administration offices.



The terminal area is accessed using either West Washington Avenue or South 24th Street onto the airport entry drive.

The passenger terminal building was constructed in 1950 at a cost of \$200,000. In 1968, a ground level concourse in a “V” configuration was added to provide enclosed circulation space behind the security checkpoint. The terminal was again expanded and renovated between 1997 and 2000, expanding the passenger hold room, adding toilets to the secure area, and installing a canopy over the baggage unloading area. On the landside, the project reconstructed the departures/arrivals curbside canopy and renovated the passenger ticketing and baggage claim lobbies.

The terminal currently has approximately 30,838 square feet of space on two levels. All passenger processing occurs on the ground floor. The second floor includes an unoccupied restaurant and bar space that has several different floor elevations, a meeting room, and an abandoned ATCT.

A URS team conducted a Terminal Facility Assessment in June and July of 2011, a copy of which is contained in this report as Appendix B. The team included a terminal planner and architect, an electrical engineer, a mechanical engineer, and a structural engineer. The team evaluated the overall condition of the terminal building and assessed how well the building accommodates air passenger processing. The information included in this report is based on review of documents and information provided by the airport, on-site inspections, and comments and input received from airport personnel.

In addition to the assessment of the terminal, the Facility Requirements determination in the previous chapter showed that over the next 20 years, the space requirements within the terminal will need to be expanded. The alternatives being considered for the terminal begin with the decision as to whether the City should construct a new passenger terminal or renovate the existing. If the decision is made to construct a new building, the decision then becomes—where is the best location for the new terminal.

Making the first decision involves defining the level of renovation that would need to occur in the existing terminal and comparing the cost of this with the cost of constructing a new facility. The terminal assessment revealed several major factors that need to be addressed.

1. The interior layout is inefficient and creates points of conflict with passenger movements.
2. The interior layout includes fixed facilities such as walls and elevators that not only limit the flexibility of the space but also limit the use of the space for other functions. This is particularly noticeable in the area of the baggage claim and Rent-a-Car (RAC) facilities.
3. The current interior décor is outdated and needs upgrading.

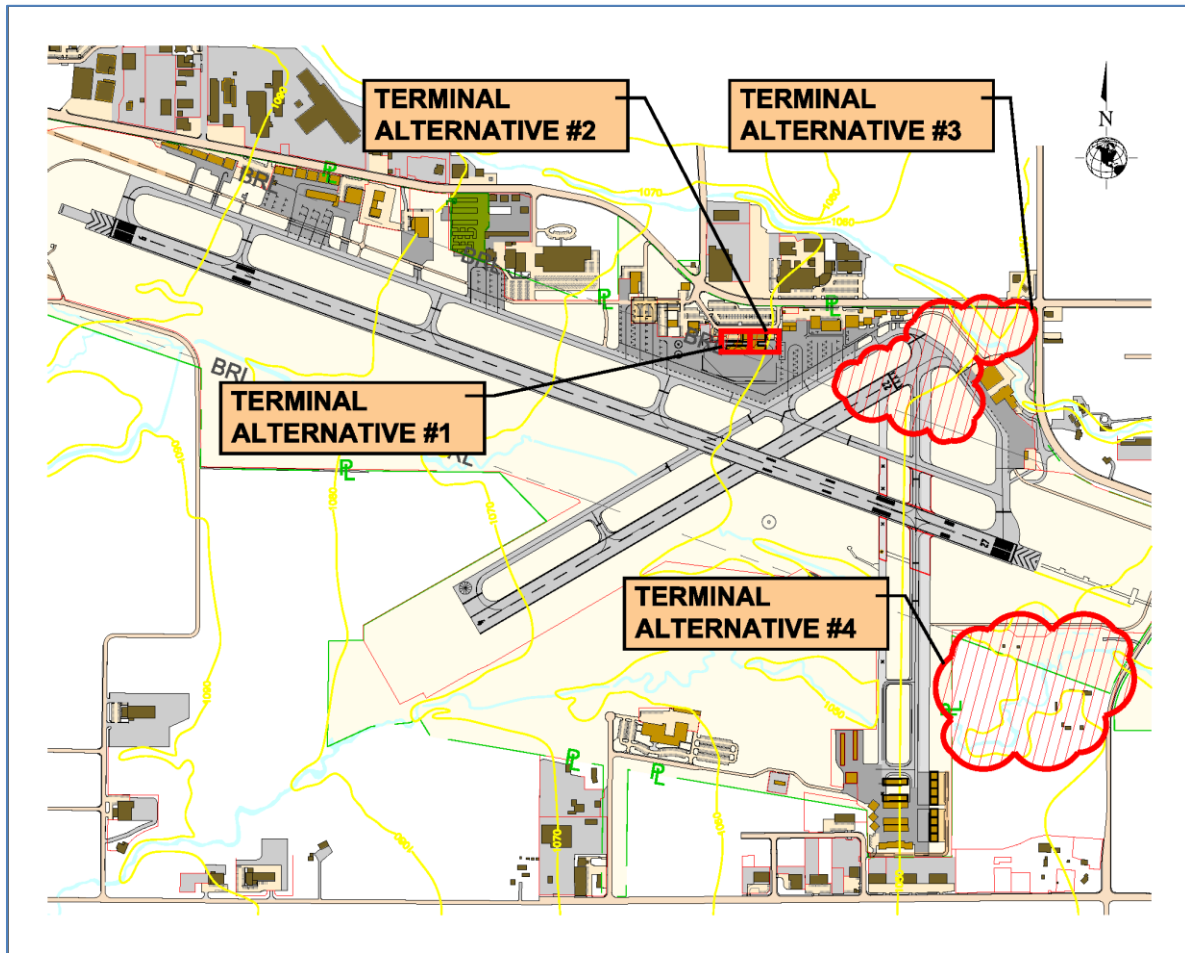
4. Any rehabilitation of the terminal will require that it be brought into compliance with the 1997 Uniform Building Code.
5. The building's roof, while in good condition, shows signs of ponding and has numerous penetrations due to heating, cooling, and other mechanical units. The roof should be replaced within 5 years.
6. The building space on the terminal's second level is not suitable for use as a passenger terminal. Most facilities on this level have not been maintained at the same level as the public spaces on level one.
7. Portions of the fire suppression system may be undersized.
8. The heating, cooling, dampers, rooftop ductwork, and water heaters all should be replaced prior to 2015.
9. The building is not wired for modern communications and computer systems.

Based on these deficiencies the cost of a terminal upgrade is likely to be close to the cost of building a new terminal. In this case a preliminary estimate shows a cost of \$14.5 million to rehabilitate the existing structure and expand to meet future needs. This is compared to a cost of roughly \$18.4 million to construct a new building.

If it is determined that the City's preference is to construct a new terminal, the next decision is to select the site for the new building. The master plan has identified three potential sites for a new terminal. These are shown in Figure 5-5 and described as follows.

- ♦ **Terminal Alternative 1:** Rehabilitate the existing building and expand as needed.
- ♦ **Terminal Alternative 2:** Construct a new terminal building adjacent to the existing in order to maintain the existing roadway access, parking, apron area, and other support functions.
- ♦ **Terminal Alternative 3:** Relocate the terminal complex to the east of Runway 4/22 if the City determines to close the runway.
- ♦ **Terminal Alternative 4:** Relocate the terminal complex to the southeast.

These alternatives were compared to determine which would best serve the airport's needs. The criteria and a comparison of the positions are as follows.



**Figure 5-5: Terminal Location Alternatives**

### 5.3.1 Analysis of Terminal Alternatives

The following presents a summary of the alternative analysis for the terminal.

- ♦ **Meets FAR Part 77 Criteria:** No terminal location can be developed if it does not meet this criterion. Alternatives 1, 2, and 4 meet this criterion but the position of Alternative 3 only works if Runway 4/22 is closed. While this runway is currently not eligible for federal funds, it is in use and the City has decided to commit funds to its operation and maintenance. Therefore, construction of a terminal area would not be compatible as long as the runway is operational.

- ♦ **Available Land:** Is the site large enough to accommodate an expanded terminal building as well as to allow for flexibility in operations should conditions change in the future.

All three alternatives have adequate land available although the City currently owns the land for Alternatives 1, 2, and 3 but would need to purchase approximately 40 acres of land to develop Alternative 4.

- ♦ **Can Site Adapt to Unforeseen Needs:** Any new terminal needs to be adaptive to unforeseen increases in demand levels. This includes the possibility that larger aircraft will be used, that additional airlines will offer service, or that passenger levels will increase faster than forecast.

All of the alternatives are expandable.

- ♦ **Compatibility with Other Land Uses:** The passenger terminal area must compliment (or at least not conflict with) surrounding land uses. None of the sites create compatibility issues with surrounding land. Additionally, Alternative 4 would provide incentive for further development of adjacent land.

- ♦ **Design Issues:** This factor identifies whether there are any site-specific issues that could complicate the design and construction of terminal facilities. These factors could include soils, grading, removal of existing facilities, etc.

For Alternative 1 the existing building would need to remain operational during the rehabilitation of the structure, adding a level of complexity and increased cost.

For Alternatives 2, 3, and 4 the new terminal would be constructed separate from the existing building. Alternative 2 would have the advantage of being able to use the existing aircraft parking apron, the auto parking lots, and the surface access system. Alternatives 3 and 4 would need to add those support facilities as part of the terminal construction. No other specific design issues have been identified at any site.

- ♦ **Cost Issues:** Working with the design issues identified in the preceding bullets, cost factors were developed to represent relative cost differentials between the sites. The cost estimates reflect the level of effort involved in implementation. Costs for Alternatives 1 and 2 are limited to the cost of the terminal building since support facilities (aircraft apron, auto parking, etc.) will remain usable. For Alternative 3 all facilities will need to be reconstructed and in Alternative 4 reconstruction will also be needed as will land acquisition.

A summary of the Terminal Analysis is shown in Table 5-4.



**Table 5-4: Summary of Terminal Location Analysis**

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Meets FAR Part 77 Criteria	Yes	Yes	Yes	Yes
Sufficient Land Available	Yes	Yes	Yes	Yes
Can Site Adapt to Unforeseen Needs	Yes	Yes	Yes	Yes
Compatibility with Other Land Uses	Yes	Yes	Yes	Yes
Design Issues	Yes	No	No	No
Cost	\$14.5 Million	\$18.3 Million	\$20.9 Million	\$28.5 Million

### 5.3.2 Recommended Terminal Area Alternative

Terminal Alternative 2 should be selected as the plan for the development of the terminal at YKM for the following reasons:

1. It is the least expensive of any of the “new building” alternatives because it can be accomplished in a manner that allows continuous use of the terminal support facilities.
2. Rehabilitating the existing terminal provides for a cosmetic upgrade without fully addressing some of the issues that exist at the building such as the external vents for the heating, ventilation, and air conditioning (HVAC) that necessitates all the roof penetrations.
3. Reconstructing the existing terminal will necessitate that operations be conducted during construction. This could suppress demand at a time when the City and community are attempting to promote the use of the local airport.

## 5.4 GENERAL AVIATION/AIRCRAFT STORAGE REQUIREMENTS

Based on the growth in based aircraft and loss of private hangars at YKM, new general aviation facilities are required. The need is summarized in the following table:

**Table 5-5: Summary of General Aviation Requirements**

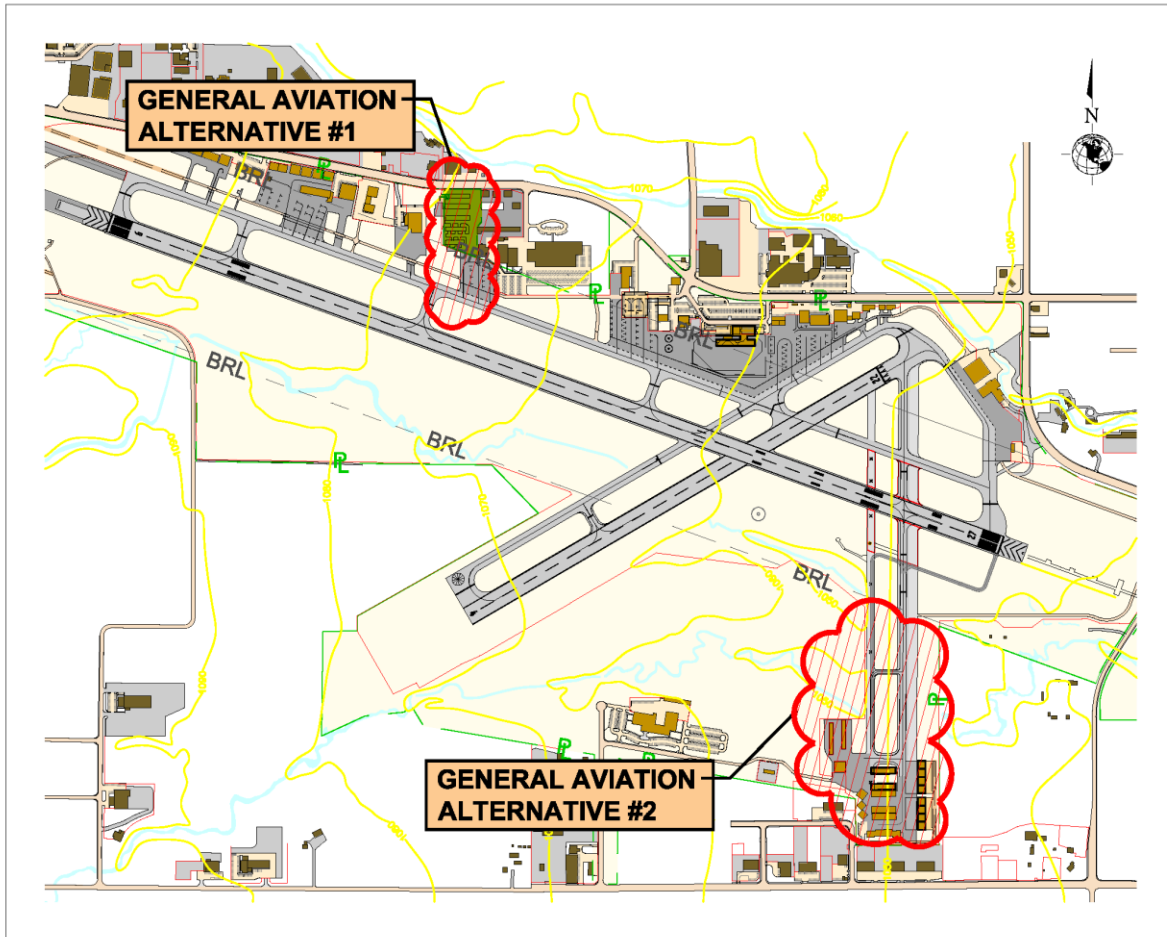
Facility		2010	2015	2020	2025	2030
Small T-Hangars	Number	110	119	124	131	138
	Space (s.f.)	651,360	701,133	734,162	772,519	814,443
Medium T-Hangars	Number	9	10	10	10	11
	Space (s.f.)	63,000	70,000	70,000	70,000	77,000
Group Hangars	Number	37	39	42	46	51
	Space (s.f.)	275,250	291,629	316,997	343,251	382,500
Based Tiedowns	Number	7	7	8	8	9
	Space (s.f.)	6,300	6,300	7,200	7,200	8,100
Transient Tiedowns	Number	5	5	5	5	6
	Space (s.f.)	12,500	12,500	12,500	12,500	15,000
Total Requirement	s.f.	1,008,410	1,081,562	1,140,858	1,205,470	1,297,043
	acres	23	25	26	28	30

In addition there is a need to replace hangars that were lost due to the closure of the privately owned and operated hangars at the Noland Decoto site (Alternative 1). Refer to Figure 5-6 for Alternative locations. This area offered storage for approximately 75 aircraft, most of which have remained on the airport but are currently using tie-downs.

To accommodate long-term growth it is recommended that the City continue with their plan to purchase facilities at Noland-Decoto and in the short-term direct general aviation demand to the existing T-hangars. This allows for immediate use of existing facilities and provides a low-cost development option.

Additional demand should be accommodated at the south GA area (Alternative 2) where infrastructure exists and additional hangar development can be accommodated. However, as the number of aircraft based in this area increases, taxiway access could become an issue. With a single taxiway connection accommodating two-way traffic, delays are likely to become more frequent. Also, all aircraft must cross the active runway. As traffic increases it will be necessary to provide

for a partial parallel taxiway to allow these crossings to occur at the end of the runway rather than at their current location.



**Figure 5-6: General Aviation Development Alternatives**

## 5.5 OTHER REQUIREMENTS

As noted in Chapter 2, Existing Conditions, fuel service at YKM is available for both Jet A and 100LL aircraft fuel. Three aboveground storage tanks each provide 12,000-gallon capacity and are located on the west General Aviation apron. There is an additional 12,000-gallon aboveground fuel

tank at the McAllister Museum. No changes were recommended to the existing fuel service at this time.

## 5.6 AIRPORT LAND USE PLAN

Combining the recommendations for each of the airport's main functional areas into a single long-term development plan provides a plan for the long-range use of the airport. The On-Airport Land Use Plan (Sheet 10 of 12) shows the on-airport land use plan for YKM. Land within the existing airport property boundary is categorized into four broad land use categories based on role or function.

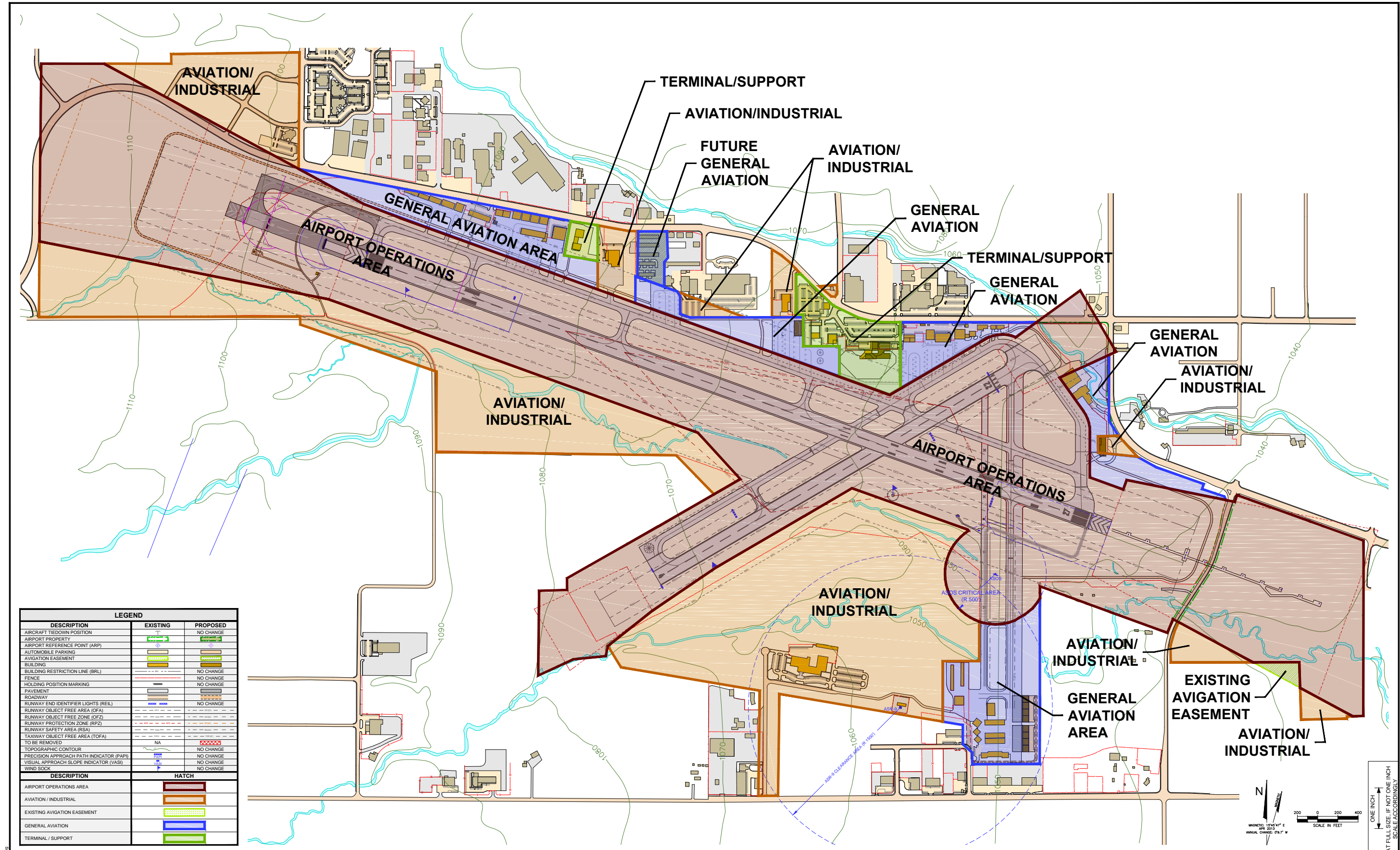
The land use categories of the Airport Land Use Plan are defined as follows:

**Aircraft Operations Area (AOA):** This area comprises the runway and taxiway system, associated aircraft movement areas, and the Object Free Area and Runway Safety Area. The Aircraft Operations Area is defined by recommendations promulgated by the Federal Aviation Administration in Advisory Circular 150/5300-13, Airport Design, and Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Surfaces. No development is allowed within these areas except that permitted by FAA and specifically required to support aircraft operations at the airport.

**Terminal/Support:** This land use category includes the passenger terminal building, the aircraft apron, auto parking areas, rental car facilities, cargo areas, airport support facilities, and other uses, activities, and services engaged in supporting the commercial facilities and passengers at the airport.

**General Aviation:** The general aviation uses include FBO services, aircraft storage and tie-down facilities, T-hangars, conventional hangars, aircraft maintenance and repair hangars, specialty aviation services, and corporate and aviation activities and businesses.

**Aviation/Industrial:** This category accommodates commercial and industrial activities that are compatible with airport operations and noise levels. The uses may or may not be aviation oriented but should be limited to those that specifically benefit from their proximity to the airport, or that are able to operate without adverse impacts to airport operations.



LEGEND		
DESCRIPTION	EXISTING	PROPOSED
AIRCRAFT TIEDOWN POSITION		
AIRPORT PROPERTY		
AIRPORT REFERENCE POINT (ARP)		
AUTOMOBILE PARKING		
AVIGATION EASEMENT		
BUILDING		
BUILDING RESTRICTION LINE (BRL)		
FENCE		
HOLDING POSITION MARKING		
PAVEMENT		
ROADWAY		
RUNWAY END IDENTIFIER LIGHTS (REIL)		
RUNWAY OBJECT FREE AREA (OFZ)		
RUNWAY OBJECT FREE ZONE (OFZ)		
RUNWAY PROTECTION ZONE (RPZ)		
RUNWAY SAFETY AREA (RSA)		
TAXIWAY OBJECT FREE AREA (TOFA)		
TO BE REMOVED		
TOPOGRAPHIC CONTOUR		
PRECISION APPROACH PATH INDICATOR (PAPI)		
VISUAL APPROACH SLOPE INDICATOR (VASI)		
WIND SOCK		
DESCRIPTION	HATCH	
AIRPORT OPERATIONS AREA		
AVIATION / INDUSTRIAL		
EXISTING AVIGATION EASEMENT		
GENERAL AVIATION		
TERMINAL / SUPPORT		

1501 4TH AVENUE, SUITE 1400  
SEATTLE, WA 98101  
PHONE: (206) 438-2700

PROJECT MANAGER:	JJY	DRAFTED BY:	RLO
DESIGNED BY:	RLO	CHECKED BY:	JJY

#	REVISION	COMPANY	BY	DATE

THE PREPARATION OF THIS AIRPORT LAYOUT PLAN (ALP) WAS FINANCED IN PART THROUGH A PLANNING GRANT FROM THE FEDERAL AVIATION ADMINISTRATION (FAA) AS PROVIDED UNDER SECTION 505 OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICIES OF THE FAA. ACCEPTANCE OF THIS ALP BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT IMPLY THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

YAKIMA AIR TERMINAL/McCALLISTER FIELD  
AIRPORT MASTER PLAN

ON-AIRPORT LAND USE PLAN

SCALE: 1" = 400'

DATE: MARCH 2015

AIP NUMBER:  
3-53-0089-32

SHEET NUMBER:  
10 OF 12

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