RETURN TO AGENDA

Platteville Airport Commission Meeting
Monday, April 10, 2023, 6:00 PM
Meeting will be held in person at
Platteville Municipal Airport
5157 Highway 80, Platteville, WI

I.	**Commission Meeting Call to Order**	**Chair**
II.	**Approval of Minutes, March 13, 2023**	**Secretary**
III.	**Citizens Comments, Observations and Petitions**	**Chair**
IV.	**Discussion and Possible Action on Pasture Fence Agreement**	**Chair**
V.	**Discussion and Possible Action on Master Plan**	**Chair**
VI.	**Discussion and Possible Action on Airport Equipment**	**Manager**
VII.	**Discussion and Possible Action on Courtesy Car**	**Manager**
VIII.	**Discussion and Possible Action on Hangar Rent Refund**	**Chair**
IX.	**Discussion and Possible Action on Main Hangar Rent**	**Chair**
X.	**Discussion and Approval of Hangar Leases** • **Review Lease Wording**	**Chair**
XI.	**Discussion on Fuel Filter Replacement and Insurance**	**Chair**
XII.	**Discussion on Community Appreciation Event**	**Chair**
IX.	**Updates** • FVTC • Minimum Standards	**Chair**
X.	**Treasurer's Report, March 31, 2023** • Monthly Income Review • Monthly Expenses Review • Monthly Invoice Payments • Status of Project Payments	**Treasurer**
XI.	**Manager's Report** ○ General Airfield Operations ○ Flight Operations ○ Fuel Sales ○ Fuel Prices	**Manager**

If attendance requires special accommodation needs, please contact (608)348-9741, ext. 2238

RETURN TO AGENDA

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XII. Motion to go into CLOSED SESSION per Wisconsin Statute 19.85(1)(e) - Deliberating or negotiating the purchasing of public properties, the investing of public funds, or conducting other specified public business, whenever competitive or bargaining reasons require a closed session – Airport Management Contract — **Chair**

XIII. Motion to return to Open Session — **Chair**

XIV. Adjournment — **Chair**

RETURN TO AGENDA

DRAFT Minutes of Mar. 13, 2023
Submitted by Danny Xiao, Mar. 17, 2023

Airport Commission Meeting
Mar. 13, 2023, 6:00 pm
Meeting held in-person, at the Platteville Airport, 5157 HWY 80, Platteville WI.

I. Commission Meeting Call to Order: by Cooley, Chair @ 6:00pm
   a. Quorum achieved.
   b. Attendance, Commission Members: Dennis Cooley (P), Doug Du Plessis (P), Joe Sener (P), Danny Xiao (P), Bill Kloster (A), Mike Dalecki (P). Others: Nicola Maurer (Administration Director), Kathy Kopp (Council Representative), Britney Boxrucker (Airport Assistant), Bob O'Brien (Consultant).

II. Approval of Minutes, February 13: Cooley, Chair
   a. Motion by Dalecki to approve the minutes of February 13, 2nd by Sener. Motion passed unanimously.

III. Citizens Comments, Observations and Petitions: Cooley, Chair
   a. None

IV. Discussion on Timeline of Master Plan: Cooley
   a. Plan to discuss and approve in April meeting.

V. Presentation on Airport Development Ideas: Boxrucker
   a. Boxrucker gave a presentation which included the following ideas:
      1) Wisconsin Dells airport, KDLL, has 6 jets in base (3 related to water parks; 3 could be easily based in Madison but they chose KDLL because of its services). Runway extension from 4000 ft to 5000 ft is significant in attracting jets.
      2) Offer 10% discount at Holiday Inn to travelers to PVB. Where to advertise?
      3) Provide runway anti-icing and deicing to keep runways open in winter
      4) Provide aircraft deicing for jets in winter
   b. Commission members discussed the possibility to explore more services. There is budget available under "Building and Grounds".
   c. O'Brien commented that the cost of deicing runway and airplanes is too much for small GA. He suggested to explore other feasible ideas such as discount on fuel during EAA and building private hangars.

VI. Discussion and Possible Action on Insurance: Cooley, Chair
   a. Under current insurance, City employee cannot move aircraft, nor fueling.
   b. There is no equipment to move aircraft nor fueling.
   c. The Commission hopes to start with a contractor, who will have its own insurance, on July 1.
   d. O'Brien commented that equipment to move aircraft is definitely needed.
   e. To do: Boxrucker to find equipment options to move aircraft and report to the Commission.
   f. O'Brien commented that airport fence can be funded by FAA.

VII. Discussion on Philosophy for Fuel Pricing: Cooley, Chair
   a. O'Brien commented that there are fuel pricing models at other airports that we can learn from.

b. O'Brien suggested that we can use fuel discount during EAA as a marketing tool.
c. To do: Du Plessis will work with Boxrucker to develop a fuel pricing model.

VIII. Discussion and possible action on courtesy car: Cooley, Chair
a. Boxrucker presented the two vehicles available at the City.
b. The Commission stated that airport equipment budget is available on this task and courtesy cars are needed for the airport.
d. Motion by Du Plessis: Authorize Boxrucker to transport the two vehicles to Ford dealership for mechanical check and quote of repair. Repair can be completed with a maximum budget of $5000 for both vehicles (excluding the cost of transportation and mechanical check) without discussion with the Airport Commission representatives (Cooley and Dalecki). Second by Xiao. Motion passed unanimously.
c. To-do: Boxrucker will transport the two vehicles to Ford dealership for mechanical check and quote of repair. Repair can be completed with a maximum budget of $5000 for both vehicles (excluding the cost of transportation and mechanical check) without discussion with the Airport Commission representatives (Cooley and Dalecki).

IX. Updates: Cooley, Chair
a. FVTC discussions: no update.
b. In-floor heating: no update.
c. Minimum standards: The new hangar construction has resumed, targeted completion date: June 31, 2023

X. Treasurer's Report, February 28, 2023: Du Plessis, Treasurer
- Monthly Income Review, from Financial Report: $ 14,825.13
- Monthly Expenses Review, from Financial Report: $ 18,906.36
- Monthly Invoice Payments, from Financial Report: $ 8,938.39
- Status of Project Payments

a. Du Plessis moved to approve Treasurer's report, and pay the bills $ 18,985.76, 2nd by Dalecki. Motion passed unanimously.

Manager's Report: Airport Assistant
- General Airfield Operations
- Flight Operations

Flight activity Feb. 2022		Flight activity Feb. 2023	
Total Flights	675	Total Flights	818
Personal	104	Personal	96
Business	64	Business	83
Instruction	1042	Instruction	900

- Fuel Sales

Fuel sales for Feb. 2022			Fuel sales for Feb. 2023		
100LL	Gallons	648	100LL	Gallons	653
Jet A	Gallons	1532	Jet A	Gallons	403

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- Fuel Prices

Fuel sales for Feb. 2023	Quantity purchases	Current Price
100LL	0	$6.13
Jet A	7470	$5.75

b. To-do: Boxrucker will purchase three more cameras.

XI. Adjournment Chair

a. Du Plessis moved to adjourn, 2nd by Xiao, Motion passed unanimously at 8:21pm

End of this meeting minutes.

RETURN TO AGENDA

CITY OF PLATTEVILLE

PLATTEVILLE MUNICIPAL AIRPORT

Airport Master Plan

RETURN TO AGENDA

DRAFT

AIRPORT MASTER PLAN

PLATTEVILLE MUNICIPAL AIRPORT

Platteville, Wisconsin

Prepared for:

The City of Platteville

Prepared by:

Coffman Associates
Airport Consultants

And

STRAND ASSOCIATES®

April 2023

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CITY OF PLATTEVILLE

PLATTEVILLE MUNICIPAL AIRPORT

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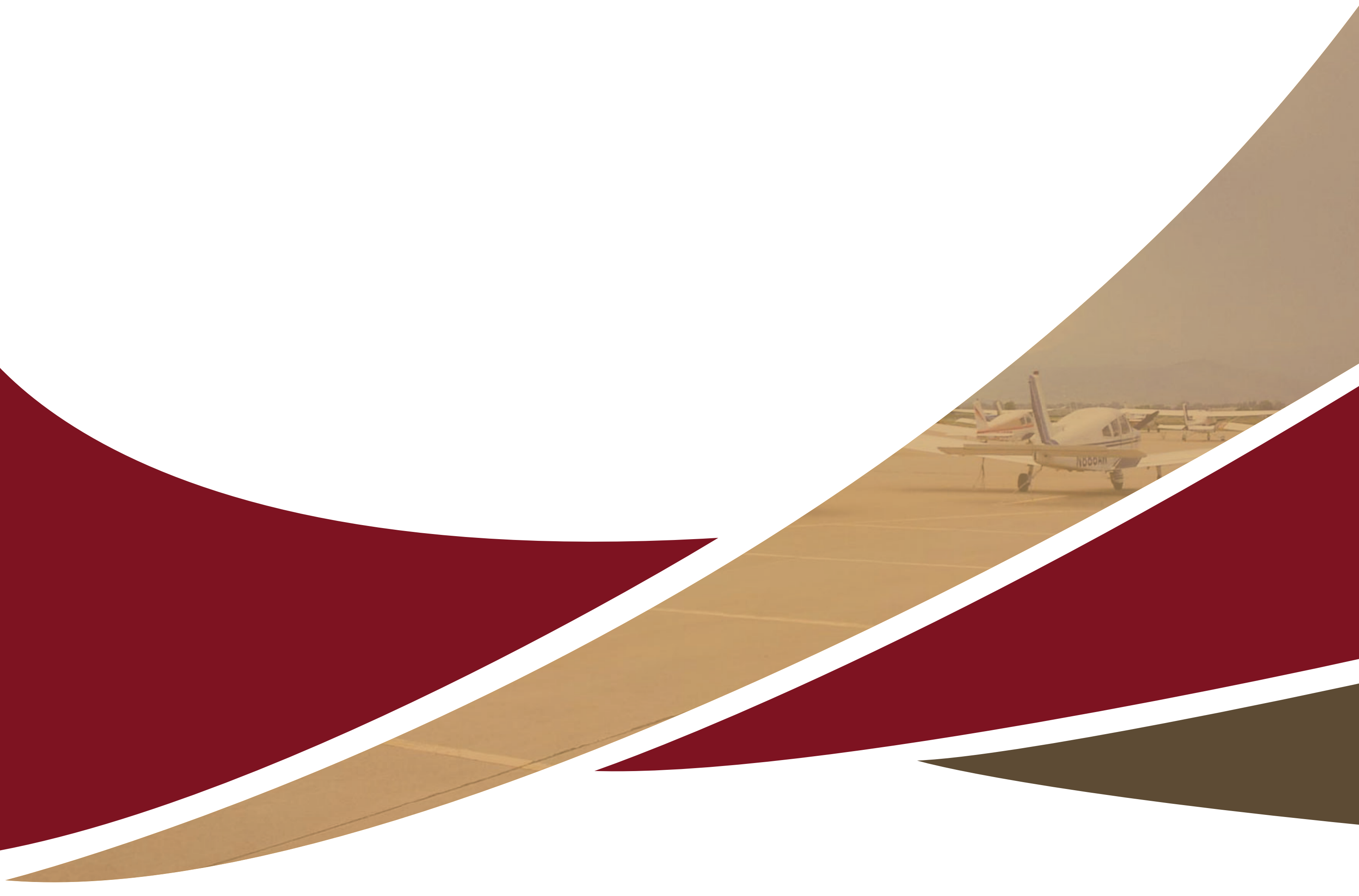

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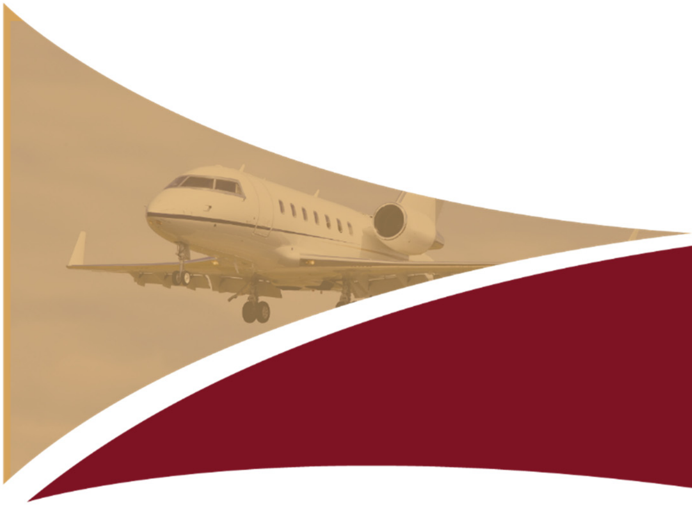
CITY OF PLATTEVILLE

PLATTEVILLE MUNICIPAL AIRPORT

Chapter 1

INTRODUCTION AND INVENTORY

RETURN TO AGENDA

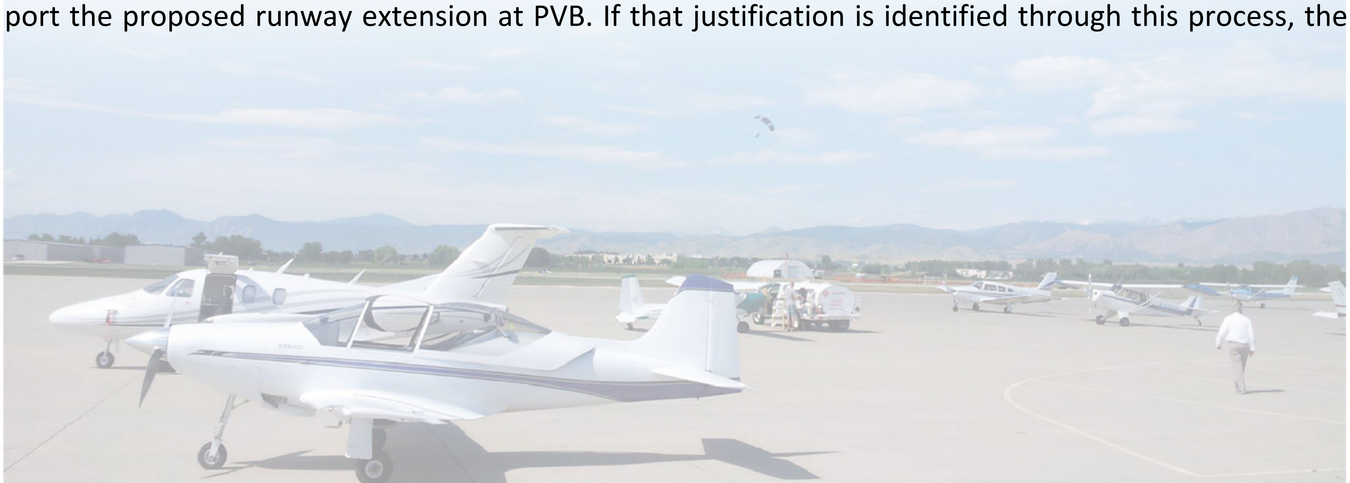


Chapter 1

INTRODUCTION AND INVENTORY

This study is intended to provide guidance to the City of Platteville, sponsor of the Platteville Municipal Airport (PVB), to determine the adequacy of the existing runway length to meet the needs of existing local and regional demand. The overarching goal of this study is to ascertain if existing demand rises to the level to justify a runway extension under State and/or Federal grant-in-aid requirements. The study process follows appropriate planning guidelines set forth within Federal Aviation Administration (FAA) Advisory Circulars (ACs) 150/5300-13A, *Airport Design*; 150/5070-6B, *Airport Master Plans*; 150/5325-4B, *Runway Length Requirements for Airport Design*; and FAA Order 5100.3D, *Airport Improvement Program (AIP) Handbook*.

As noted above, the desired outcome of this process is to determine whether there is appropriate justification, based upon FAA standards and AIP grant funding and/or Wisconsin Department of Transportation Bureau of Aeronautics (WisDOT) aviation grant funding justification requirements to financially support the proposed runway extension at PVB. If that justification is identified through this process, the



AIP and/or State Grant program(s) may fund up to 90 percent of the project capital costs; whereas, if ample justification is not identified in this study process, Federal and/or State Grant funding would not be available and the city would be responsible for all capital funds if it chose to extend the runway on its own. It is important to specify that this study is not intended to direct the city's action regarding the runway extension. This study is intended only to determine if justification for Federal and/or State grant funding exists. Federal and State funds cannot, for example, be used to lure or attract demand in a "if you build it, they will come" manner. Funds may only be used to support existing needs generated by demonstrated demand levels.

As the airport owner and proprietor, the city may choose to fund any or all capital expenditures at the airport on its own. Those improvements, however, can be expensive and are more practically achieved with the aid of Federal and/or State grants. As such, the term "justification" here simply means that aviation demand meets the threshold to warrant Federal and/or State grant funding participation.

This overall planning process for airport planning improvements at PVB has been structured in a multi-phase approach. The approach was designed to allow the city an opportunity to forgo or redirect the focus of the later phases if ample justification for a runway extension is not found. The first phase provided a brief inventory of existing facilities and forecasts of aviation demand, identifying the existing and ultimate critical design aircraft (i.e., the most physically demanding aircraft conducting 500 annual itinerant operations or more each year), and then determining the appropriate runway length needed to serve these aircraft. This analysis was a key in determining if justification for a runway extension existed. The analysis indicated that a runway extension cannot be supported by existing and short-term demand potential. The BOA and City of Platteville did choose to continue the master planning process to develop a long-term plan for the airport to include a runway extension should demand factors indicate the need.

INVENTORY OF EXISTING FACILITIES

Airport facilities can be categorized into two separate classifications: airside facilities and landside facilities. The airside facilities are directly associated with aircraft operations. These facilities generally include runways, taxiways, airport lighting, and navigational aids. Landside facilities pertain to facilities necessary to provide safe and efficient transition from surface transportation to air transportation, as well as support aircraft servicing, storage, maintenance, and safe operation. The existing airside and landside facilities are presented on **Exhibit 1A.**

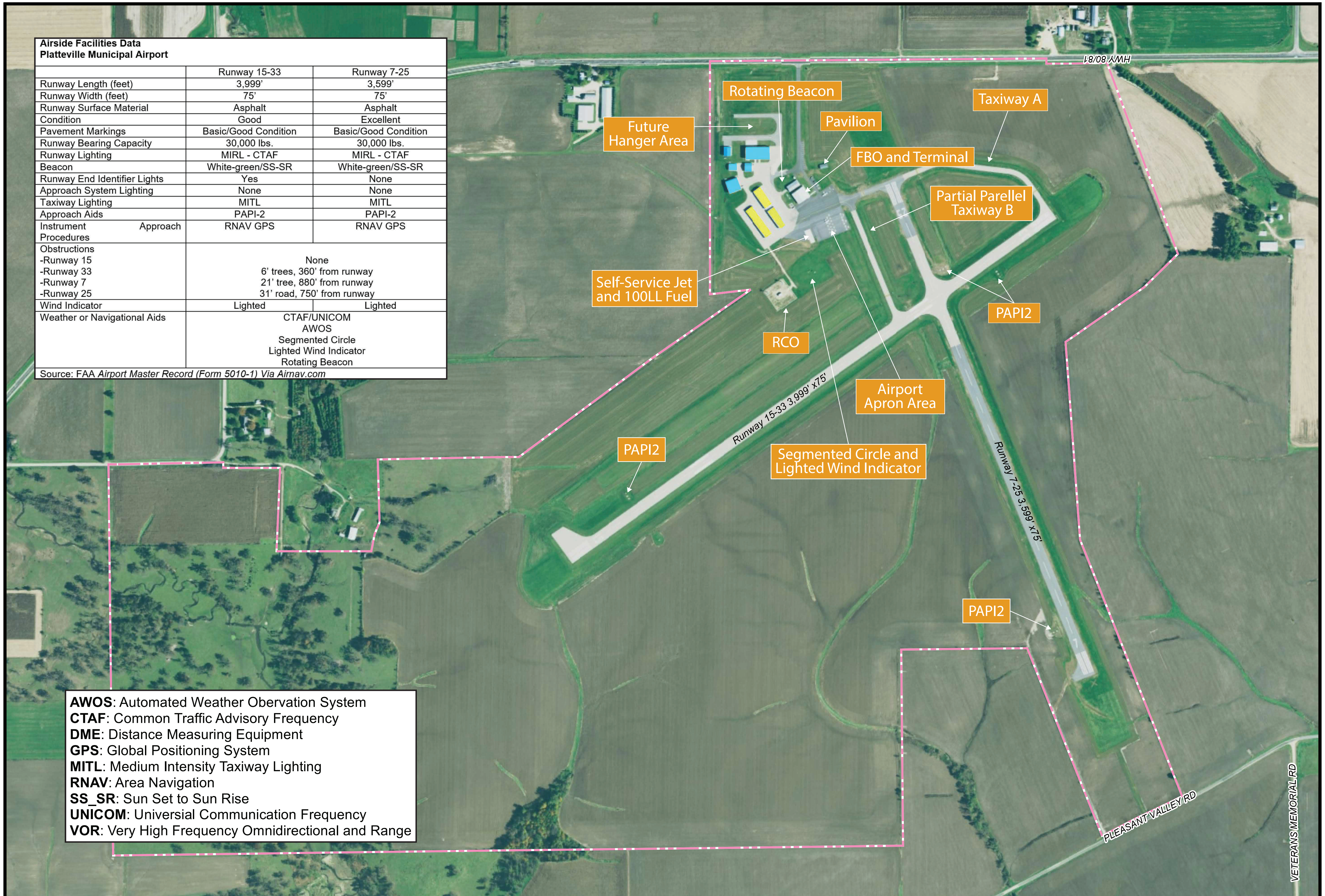
AIRSIDE FACILITIES

PVB is served by a two-runway configuration oriented in a northwest-southeast and southwest-northeast manner. Runway 15-33 is considered the primary runway and is 3,999 feet long by 75 feet wide with basic runway markings. Runway 15-33 is noted in FAA publications as being in good condition, having recently been reconstructed in 2012 and crack sealed in 2018 for the first time since reconstruction. Runway 7-25 is 3,599 feet long by 75 feet wide with basic runway markings. Runway 7-25 is noted in FAA publications as being in excellent condition having been reconstructed in the summer of 2018. The eastern approximately 800 feet of Runway 7-25 is served by a partial parallel taxiway, Taxiway B, which also

Airside Facilities Data
Platteville Municipal Airport

	Runway 15-33	Runway 7-25
Runway Length (feet)	3,999'	3,599'
Runway Width (feet)	75'	75'
Runway Surface Material	Asphalt	Asphalt
Condition	Good	Excellent
Pavement Markings	Basic/Good Condition	Basic/Good Condition
Runway Bearing Capacity	30,000 lbs.	30,000 lbs.
Runway Lighting	MIRL - CTAF	MIRL - CTAF
Beacon	White-green/SS-SR	White-green/SS-SR
Runway End Identifier Lights	Yes	None
Approach System Lighting	None	None
Taxiway Lighting	MITL	MITL
Approach Aids	PAPI-2	PAPI-2
Instrument Approach Procedures	RNAV GPS	RNAV GPS
Obstructions -Runway 15 -Runway 33 -Runway 7 -Runway 25	 None 6' trees, 360' from runway 21' tree, 880' from runway 31' road, 750' from runway	
Wind Indicator	Lighted	Lighted
Weather or Navigational Aids	CTAF/UNICOM AWOS Segmented Circle Lighted Wind Indicator Rotating Beacon	

Source: FAA *Airport Master Record (Form 5010-1) Via Airnav.com*



AWOS: Automated Weather Obervation System
CTAF: Common Traffic Advisory Frequency
DME: Distance Measuring Equipment
GPS: Global Positioning System
MITL: Medium Intensity Taxiway Lighting
RNAV: Area Navigation
SS_SR: Sun Set to Sun Rise
UNICOM: Universial Communication Frequency
VOR: Very High Frequency Omnidirectional and Range

LEGEND
- Airport Property Line
- Executive Box Hangers
- T-Hangers

N

0 600
SCALE IN FEET

EXISTING FACILITIES

WISCONSIN BUREAU OF AERONAUTICS CITY OF PLATTEVILLE GRANT COUNTY, WISCONSIN

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provides access from Runway 15-33 to the apron, fixed-base operator (FBO), terminal, and fuel farm areas. Taxiway A provides access from the apron, FBO, terminal, and fuel farm area to Runway 25 and Runway 33. Hold position markings are present and in good condition on Taxiway A and B 200 feet from the centerlines of Runways 7-25 and 15-33. Both runways at PVB are marked with non-precision white dashed centerlines to assist pilots to maintain proper clearance from pavement edges and objects near the runway edges. The markings on both runways were re-marked in 2018 and are considered to be in good condition. PVB also has a federally owned, remote communications outlet (RCO) on the airfield.

Runway 25

Runway 7-25 has a gradient of 0.6 percent, sloping up from southwest to northeast. Runway 15-33 has a gradient of 0.04 percent, sloping up from southeast to northwest. Both runways are equipped with medium intensity runway lighting (MIRL) and two-light precision approach path indicator (PAPI-2) systems serving both ends of both runways. Runway 15-33 has runway end identifier lights (REIL). Runway 7-25 does not have REIL's but does h[illegible]ghting. The pavement strength for both runways is published as 30,000 pounds single-wheel gear loading (S). **Table 1A** and **Exhibit 1A** detail airside facilities for PVB.

Table 1A | Airside Facilities Data - Platteville Municipal Airport

	Runway 15-33		Runway 7-25	
Runway Length (feet)	3,999'		3,599'	
Runway Width (feet)	75'		75'	
Runway Surface Material	Asphalt		Asphalt	
Condition	Good		Excellent	
Pavement Markings	Basic/Good Condition		Basic/Good Condition	
Runway Bearing Capacity	30,000 lbs.		30,000 lbs.	
Runway Lighting	MIRL - CTAF		MIRL - CTAF	
Beacon	White-green/SS-SR		White-green/SS-SR	
Runway End Identifier Lights	Yes		None	
Approach System Lighting	None		None	
Taxiway Lighting	MITL		MITL	
Approach Aids	PAPI-2		PAPI-2	
Instrument Approach Procedures	RNAV GPS		RNAV GPS	
Wind Indicator	Lighted		Lighted	
Weather or Navigational Aids	CTAF/UNICOM AWOS Segmented Circle Lighted Wind Indicator Rotating Beacon			
Obstructions	**Rwy 15**	**Rwy 33**	**Rwy 7**	**Rwy 25**
	None	6' trees, 360' from runway	21' tree, 880' from runway	31' road, 750' from runway

AWOS: Automated Weather Observation System
CTAF: Common Traffic Advisory Frequency
DMS: Distance Measuring Equipment
GPS: Global Positioning System
MIRL: Medium Intensity Runway Lighting
MITL: Medium Intensity Taxiway Lighting
PAPI: Precision Approach Path Indicator
RNAV: Area Navigation
SS-SR: Sun set to sun rise
UNICOM: Universal Communication Frequency
VOR: Very High Frequency Omnidirectional an Range

Source: FAA Airport Master Record (Form 5010-1) Via Airnav.com.

LANDSIDE FACILITIES

Apron area is available for itinerant and based aircraft. Aircraft hangars are available for based aircraft with limited itinerant hangar space available. Building and facility footprint measurements are summarized in **Table 1B** with locations depicted on **Exhibit 1A**. The airport has 11 marked tie-down positions which were just constructed in 2018 and measure approximately 12,000 square yards (sy) of aircraft apron and movement area. Currently, PVB has approximately 54,440 square feet of hangar space on the airfield including the FBO hanger. Hangar styles available include T-hangars and executive box hangars. An electrified and lighted event pavilion is also located adjacent to the landside parking areas.

Table 1B | Landside Facilities Data

	Total Footprint Area
Terminal Area	1,200 sf
FBO Area	5,600 sf
T-Hangars	26,000 sf
Executive Box Hangars	21,240 sf
Marked Tie-Down Spaces	11
Total Apron and Movement Area	12,000 sy

Source: 2017 Airport Layout Plan Insert.

PVB has one FBO, A&A Aviation (A&A), offering an on-site A&P mechanic for aircraft repair and services. A&A also offers aircraft rental and flight instruction. A&A operates and maintains the FBO/itinerant hangar and terminal facility, which offers a pilot's lounge and flight planning spaces. PVB also expanded the apron inw 2018, and a new self-service fuel farm providing both 100-LL and Jet Fuel was installed in 2019.

Pilots Lounge Area at Terminal Building

SOCIOECONOMIC CHARACTERISTICS

Socioeconomic characteristics can provide valuable information and insight regarding growth and economic well-being of the study area. This information can contribute to the understanding and determination of the aviation service level requirements, as well as forecasting future operation and based aircraft levels.

POPULATION

Trends in population can provide an indication of the potential for the region to sustain growth in aviation activity. Population trends for the City of Platteville, Grant County, Lafayette County, State of Wisconsin, and the United States are outlined in **Table 1C**.

TABLE 1C | Historical Population

	1990	2010	2018	CAGR (1990 – 2018)	CAGR (2010 – 2018)
City of Platteville	9,860	11,224	12,015	0.68%	0.76%
Grant County	49,335	51,235	52,205	0.20%	0.21%
Lafayette County	16,049	16,809	16,753	0.15%	-0.04%
State of Wisconsin	4,904,562	5,690,403	5,821,128	0.59%	0.25%
United States	249,622,802	309,338,364	328,094,150	0.95%	0.66%
CAGR: Compound Annual Growth Rate					

Sources: The Complete Economic and Demographic Data Source, Woods and Poole 2019; U.S. Census Bureau – City of Platteville, WI; https://www.census.gov/en.html

Population projections through 2039, retrieved from 2019 Woods and Poole Complete Economic and Demographic Data Source (CEDDS), are identified in **Table 1D**. As presented, the State of Wisconsin is projected to grow at a compound annual growth rate (CAGR) of 0.33 percent through 2039, reaching a population total of approximately 6.2 million. The Grant County population is forecasted to grow at a CAGR of 0.24 percent, resulting in a population of 54,931 by 2039; while the population of Lafayette County is forecasted to grow at a CAGR of 0.07 percent to a population of 17,018. As a point of comparison, the United States is projected to grow at a CAGR of 0.63 percent throughout the planning horizon.

TABLE 1D | Forecast Populations

	2018	2024	2029	2039	CAGR (2018 – 2039)
Grant County	52,205	53,281	54,037	54,931	0.24%
Lafayette County	16,753	16,829	16,891	17,018	0.07%
State of Wisconsin	5,821,128	5,963,110	6,071,924	6,240,796	0.33%
United States	328,094,150	341,996,829	353,468,845	374,692,158	0.63%
CAGR: Compound Annual Growth Rate					

Source: The Complete Economic and Demographic Data Source, Woods and Poole 2019.

EMPLOYMENT AND PERSONAL INCOME

An overview of the community's employment and personal income base can provide pertinent information regarding the economic health of the community. The economic well-being of the community is influenced by variety and availability of employment opportunities, as well as wages offered by local employers. **Table 1E** summarizes employment and income data obtained from Woods and Poole CEDDS since 1990 for Grant County, Lafayette County, the State of Wisconsin, and the United States.

As presented in **Table 1E**, total employment in Grant County increased by 4,390 over a 28-year period, equating to a CAGR of 0.55 percent, a slower rate than Lafayette County (0.71 percent) and the State of Wisconsin (0.99 percent). During the same time period, the United States experienced employment growth at a CAGR of 1.27 percent. Over this 28-year timeframe, Grant County grew at a greater rate in per capita personal income than the State of Wisconsin and the Unites States, at a CAGR of 1.66 percent, while Lafayette County and the United States grew at 1.63 percent. The mean household income for Grant County grew at a CAGR of 1.19 percent and was outpaced by Lafayette County, the State of Wisconsin, and the United States.

TABLE 1E | Historical Employment and Income Populations

	1990	2010	2018	CAGR (1990 – 2018)
Grant County				
Total Employment	25,345	28,415	29,735	0.55%
PCPI (2012 Dollars)	23,708	34,991	38,198	1.66%
Mean Household Income (2012 Dollars)	64,535	86,786	90,848	1.19%
Lafayette County				
Total Employment	6,838	7,671	8,400	0.71%
PCPI (2012 Dollars)	24,599	36,585	39,308	1.63%
Mean Household Income (2012 Dollars)	66,555	92,630	95,214	1.24%
State of Wisconsin				
Total Employment	2,814,233	3,426,437	3,746,792	0.99%
PCPI (2012 Dollars)	29,103	40,745	46,817	1.65%
Mean Household Income (2012 Dollars)	76,365	99,460	108,666	1.22%
United States				
Total Employment	138,330,914	172,901,697	199,425,624	1.27%
PCPI (2012 Dollars)	30,970	42,364	49,448	1.63%
Mean Household Income (2012 Dollars)	81,939	109,737	124,604	1.46%

CAGR: Compound Annual Growth Rate
PCPI: Per Capita Personal Income

Source: CEDDS, Woods and Poole 2019.

Table 1F presents forecasts for employment, PCPI, and mean household income in Grant County, Lafayette County, the State of Wisconsin, and the United States. If realized, the projected employment growth could provide a base for increased aviation demand in the region. Moreover, PCPI is determined by dividing the total income by population. For PCPI to grow, income growth must outpace population growth significantly.

TABLE 1F | Forecast Employment and Income Populations

	2018	2024	2029	2039	CAGR (2018-2039)
Grant County					
Total Employment	29,735	31,119	32,053	33,377	0.40%
PCPI (2012 Dollars)	38,198	41,415	43,848	47,400	0.75%
Mean Household Income (2012 Dollars)	90,848	95,969	101,534	111,312	0.70%
Lafayette County					
Total Employment	8,400	8,906	9,274	9,995	0.60%
PCPI (2012 Dollars)	39,308	43,265	46,259	51,256	0.92%
Mean Household Income (2012 Dollars)	95,214	102,231	109,319	123,105	0.89%
State of Wisconsin					
Total Employment	3,746,792	3,962,979	4,132,534	4,414,918	0.57%
PCPI (2012 Dollars)	46,817	51,135	54,635	60,507	0.89%
Mean Household Income (2012 Dollars)	108,666	115,749	123,679	139,171	0.86%
United States					
Total Employment	199,425,624	215,040,115	227,983,784	251,866,173	0.81%
PCPI (2012 Dollars)	49,448	54,146	57,973	64,483	0.92%
Mean Household Income (2012 Dollars)	124,604	133,969	144,268	164,935	0.97%

CAGR: Compound Annual Growth Rate
PCPI: Per Capita Personal Income

Source: CEDDS, Woods and Poole 2019.

Over the planning period, Grant County's total employment is anticipated to grow at 0.40 percent CAGR, a rate slower than Lafayette County, the State of Wisconsin, and the United States, which are projected to grow at 0.60 percent, 0.57 percent, and 0.81 percent CAGR, respectively. PCPI and mean household income for the Grant County are projected to grow at 0.75 percent and 0.70 percent CAGR, while Lafayette County is projected to grow at 0.92 percent and 0.89 percent CAGR. PCPI and mean household income for the United States is projected to grow at 0.92 percent and 0.97 percent CAGR, while the State of Wisconsin is projected to grow at 0.89 percent and 0.86 percent, respectively.

RETURN TO AGENDA

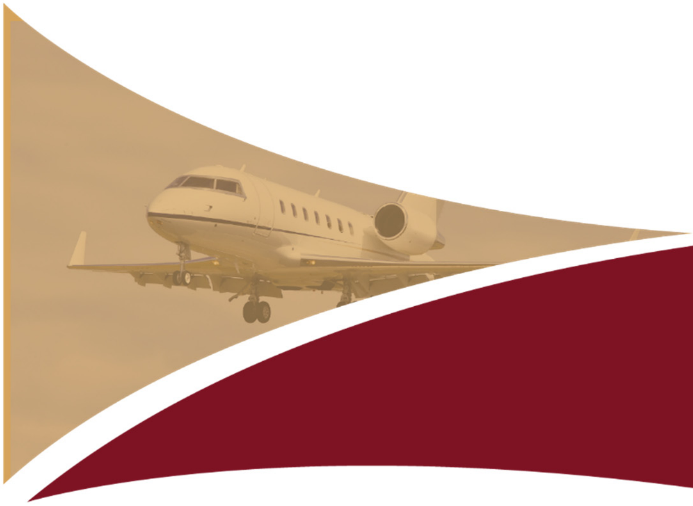
CITY OF PLATTEVILLE

PLATTEVILLE MUNICIPAL AIRPORT

Chapter 2

FORECASTS

RETURN TO AGENDA



CITY OF PLATTEVILLE

Chapter 2

FORECASTS

FORECASTS OF AVIATION DEMAND

Facility planning requires a definition of demand that may be expected to occur during the useful life of the facility’s crucial components. For PVB, this involves projecting aviation demand for a 20-year timeframe. In this report, forecasts of registered aircraft, based aircraft, based aircraft fleet mix, annual airport operations, and forecasts of airport peaking characteristics are projected.

The forecasts generated may be used for a multitude of purposes, including facility needs assessments and environmental evaluations. The forecasts will be submitted to the FAA and WisDOT – Bureau of Aeronautics for review and approval to ensure accuracy and reasonable projection of aviation activity. The intent of the projections is to enable the City of Platteville and PVB to make facility improvements to meet demand in the most efficient and cost-effective manner possible.

It should be noted that aviation activity can be affected by numerous outside influences on local, regional, and national levels. As a result, forecasts of aviation demand should be used only for advisory purposes. It is recommended that planning strategies remain flexible enough to accommodate any unforeseen facility needs.

FORECASTING APPROACH

Typically, the most accurate and reliable forecasting approach is derived from multiple analytical forecasting techniques. Analytical forecasting methodologies typically consist of regression analysis, trend analysis and extrapolation, market share or ratio analysis, and smoothing. Using multiple forecasting techniques based upon each aviation demand indicator, an envelope of aviation demand projections can be generated. Ultimately, the preferred planning forecast can consist of a combination of forecasts, or it is possible to use just one forecast result.

Regression analysis can be described as a forecasting technique that correlates certain aviation demand variables (such as passenger enplanements or operations) with economic measures. When using regression analysis, the technique should be limited to relatively simple models containing independent variables for which reliable forecasts are available (such as population or income forecasts).

Trend analysis and *extrapolation* is a forecasting technique that records historical activity (such as airport operations) and projects this pattern into the future. Oftentimes, this technique can be beneficial when local conditions of the study area are differentiated from the region or other airports.

Market share or *ratio analysis* can be described as a forecasting technique that assumes the existence of a top-down relationship between national, regional, and local forecasts. The local forecasts are presented as a market share of regional forecasts, and regional forecasts are presented as a market share of national forecasts. Typically, historical market shares are calculated and used as a base to project future market shares.

Smoothing is a statistical forecasting technique that can be applied to historical data, giving greater weight to the most recent trends and conditions. Generally, this technique is most effective when generating short-term forecasts.

NATIONAL AVIATION TRENDS AND FORECASTS

The forecasts developed for the airport must consider national, regional, and local aviation trends. The following section describes trends in aviation. This information is utilized both in statistical analysis and to aid the forecast preparer in making any manual adjustments to the forecasts as necessary.

Each year, the FAA updates and publishes a national aviation forecast. Included in this publication are national forecasts for the large air carriers, regional/commuter air carriers, general aviation, and FAA workload measures. The forecasts are prepared to meet budget and planning needs of the FAA and to provide information that can be used by state and local authorities, the aviation industry, and the general public. The current edition when this chapter was prepared was *FAA Aerospace Forecast – Fiscal Years 2019-2039*, published in April 2019. The FAA primarily uses the economic performance of the United States as an indicator of future aviation industry growth. Similar economic analyses are applied to the outlook for aviation growth in international markets. The following discussion is summarized from the FAA Aerospace Forecasts.

Since its deregulation in 1978, the U.S. commercial air carrier industry has been characterized by boom-to-bust cycles. The volatility associated with these cycles was thought by many to be a structural feature of an industry that was capital intensive but cash poor. However, the great recession of 2007-09 marked a fundamental change in the operations and finances of U.S airlines. Since the end of the recession in 2009, U.S. airlines revamped their business models to minimize losses by lowering operating costs, eliminating unprofitable routes, and grounding older, less fuel-efficient aircraft. To increase operating revenues, carriers initiated new services that customers were willing to purchase and started charging separately for services that were historically bundled in the price of a ticket. The industry experienced an unprecedented period of consolidation with three major mergers in five years. The results of these efforts have been impressive: 2018 marks the tenth consecutive year of profitability for the U.S. airline industry. Looking forward, there is confidence that U.S. airlines have finally transformed from a capital intensive, highly cyclical industry to an industry that generates solid returns on capital and sustained profits.

ECONOMIC ENVIRONMENT

According to the FAA forecast report, as the economy recovers from the most serious economic downturn and slow recovery since the Great Depression, aviation will continue to grow over the long run. Fundamentally, demand for aviation is driven by economic activity. As economic growth picks up, so will growth in aviation activity. The FAA forecast calls for passenger growth over the next 20 years to average 1.8 percent annually. The uptick in passenger growth in 2017-2018 will continue into 2019, spurred on by favorable economic conditions in the U.S. and the world. Oil prices averaged $64 per barrel in 2018, edging down to $61 in 2019, and the forecast assumes they will increase beginning in the early 2020s to reach $98 by the end of the forecast period in 2039.

U.S. economic performance in 2018 was estimated to have grown in real gross domestic product (GDP) to 18.4 billion (inflation adjusted to 2012 dollars) and was forecast to grow at an average annual growth rate of 1.8 percent through 2039. The U.S. economy is forecast to be supported by improved financial conditions but restrained by reduced government spending, while European growth is pressured by weakness in manufacturing and widespread political uncertainty. Japan's economic growth is projected to suffer from trade concerns and an increase in the consumption tax later in 2019. In emerging markets, China's growth rate continues to gradually decelerate through six percent, though supported by government stimulus, while other countries such as Brazil and Russia suffer from political uncertainties and relatively weak export demand. India is expected to post growth rates of about seven percent as consumer spending slows and fiscal stimulus is reduced.

FAA GENERAL AVIATION FORECASTS

The FAA forecasts the fleet mix and hours flown for single engine piston aircraft, multi-engine piston aircraft, turboprops, business jets, piston and turbine helicopters, light sport, experimental, and others (gliders and balloons). The FAA forecasts “active aircraft,” not total aircraft. An active aircraft is one that is flown at least one hour during the year. From 2010 through 2013, the FAA undertook an effort to have all aircraft owners re-register their aircraft. This effort resulted in a 10.5 percent decrease in the number of active general aviation aircraft, primarily in the piston category.

The long-term outlook for general aviation is favorable, led by gains in turbine aircraft activity. The active general aviation fleet is forecast to decline in the next 20 years, with a reduction of 1,085 aircraft by 2039. While steady growth in both GDP and corporate profits results in continued growth of the turbine and rotorcraft fleets, the largest segment of the fleet – fixed-wing piston aircraft – continues to shrink over the FAA’s forecast.

In 2018, the FAA estimated there were 146,260 piston-powered aircraft in the national fleet. The total number of piston-powered aircraft in the fleet is forecast to decline by 0.9 percent from 2019-2039, resulting in 122,230 by 2039. This includes -1.0 percent annually for single engine pistons and -0.4 percent for multi-engine pistons.

Total turbine aircraft are forecast to grow at an annual growth rate of 1.8 percent through 2039. The FAA estimates there were 31,880 turbine-powered aircraft in the national fleet in 2018, and there will be 46,085 by 2039. This includes annual growth rates of 1.3 percent for turboprops, 2.2 percent for business jets, and 1.6 percent for turbine helicopters.

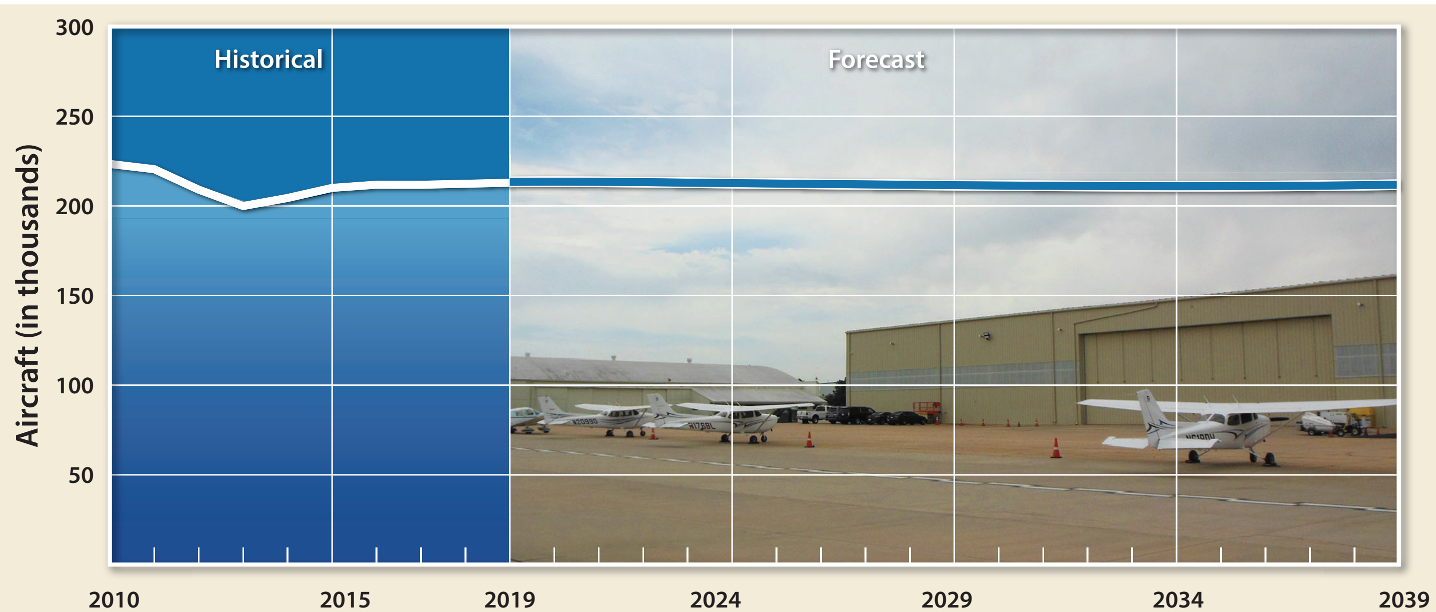
While comprising a much smaller portion of the general aviation fleet, experimental aircraft, typically identified as home-built aircraft, are projected to grow annually by 0.9 percent through 2039. The FAA estimates there were 27,365 experimental aircraft in 2018, and these are projected to grow to 33,040 by 2039. Sport aircraft are forecast to grow 3.5 percent annually through the long-term, growing from 2,665 in 2018 to 5,555 by 2039. **Exhibit 2A** presents the historical and forecast U.S. active general aviation aircraft.

The FAA also forecasts total operations based upon activity at control towers across the U.S. Operations are categorized as air carrier, air taxi/commuter, general aviation, and military. General aviation operations, both local and itinerant, declined significantly with the 2008-2009 recession and subsequent slow recovery. Through 2039, total general aviation operations are forecast to grow 0.3 percent annually.

GENERAL AVIATION AIRCRAFT SHIPMENTS AND REVENUE

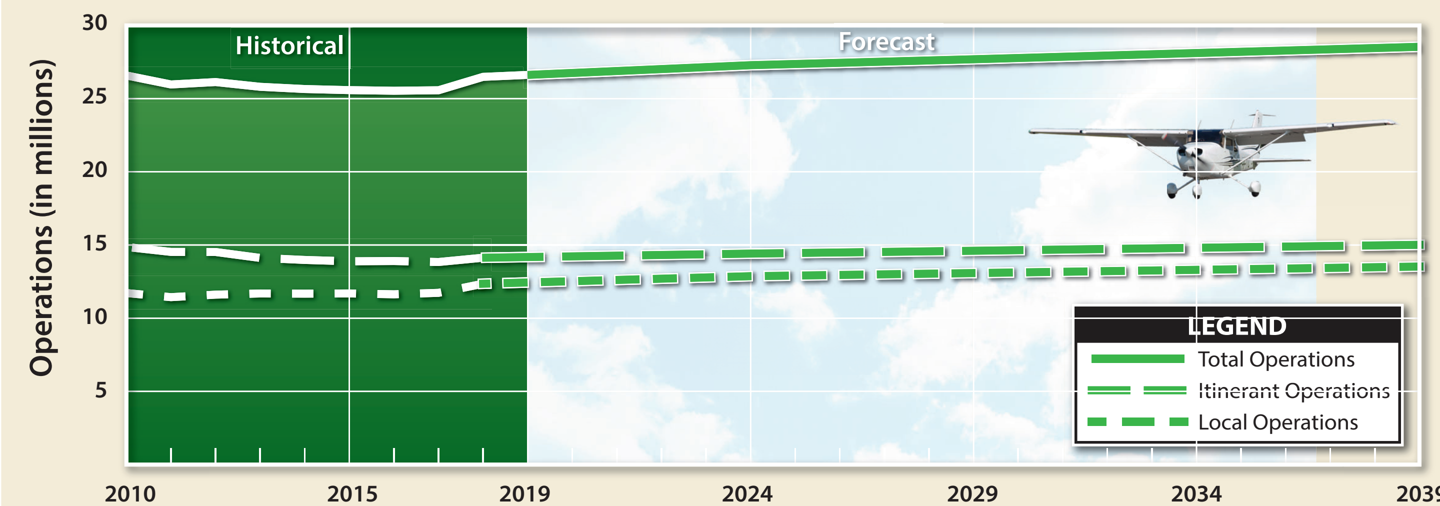
The 2008-2009 economic recession had a negative impact on general aviation aircraft production, and the industry has been slow to recover. Aircraft manufacturing declined for three straight years from 2008 through 2010. Since this time, aircraft manufacturing has stabilized and returned to growth. According to the General Aviation Manufacturers Association (GAMA), there is optimism that aircraft manufacturing will continue to show gains in the coming years especially in the turbine aircraft market. **Table 2A** presents currently available historical data related to general aviation aircraft shipments.

	2019 Estimate	2024	2029	2039	AAGR 2020-2039
Fixed Wing					
Piston					
Single Engine	129,885	123,145	116,360	105,195	-1.0%
Multi-Engine	13,040	12,805	12,575	12,085	-0.4%
Turbine					
Turboprop	9,925	10,135	10,770	12,810	1.3%
Turbojet	14,585	17,025	19,110	23,050	2.2%
Rotorcraft					
Piston	3,335	3,775	4,150	4,950	1.9%
Turbine	7,370	8,075	8,700	10,225	1.6%
Experimental					
	27,365	29,465	30,880	33,040	0.9%
Sport Aircraft					
	2,665	3,420	4,100	5,555	3.5%
Other					
	4,715	4,820	4,865	4,890	0.2%
Total Pistons	**146,260**	**139,725**	**133,085**	**122,230**	**-0.9%**
Total Turbines	**31,880**	**35,235**	**38,580**	**46,085**	**1.8%**
Total Fleet	**212,885**	**212,665**	**211,510**	**211,800**	**0.0%**



Note: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.
Source: *FAA Aerospace Forecast - Fiscal Years 2020-2039*

	2019 Estimate	2024	2029	2039	AAGR 2020-2039
Itinerant					
	14,130,000	14,412,000	14,606,000	15,012,000	0.3%
Local					
	12,354,000	12,870,000	13,081,000	13,526,000	0.3%
Total GA Operations	**26,485,000**	**27,282,000**	**27,687,000**	**28,538,000**	**0.3%**



U.S. AIR TAXI

	2019 Estimate	2024	2029	2039	AAGR 2020-2039
Air Taxi/Commuter Operations					
Itinerant	7,126,000	5,484,000	5,752,000	6,361,000	-0.6%

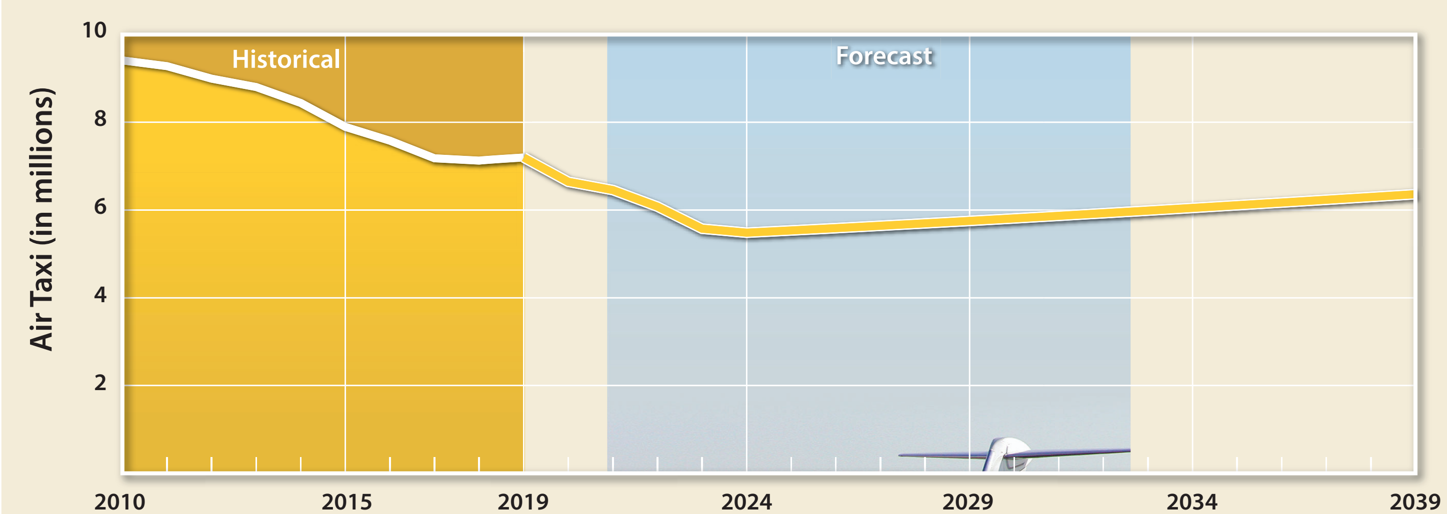


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TABLE 2A | Annual General Aviation Airplane Shipments - Manufactured Worldwide and Factory Net Billings

Year	Total	SEP	MEP	TP	J	Net Billings ($millions)
1994	1,132	544	77	233	278	3,749
1995	1,251	605	61	285	300	4,294
1996	1,437	731	70	320	316	4,936
1997	1,840	1043	80	279	438	7,170
1998	2,457	1508	98	336	515	8,604
1999	2,808	1689	112	340	667	11,560
2000	3,147	1,877	103	415	752	13,496
2001	2,998	1,645	147	422	784	13,868
2002	2,677	1,591	130	280	676	11,778
2003	2,686	1,825	71	272	518	9,998
2004	2,962	1,999	52	319	592	12,093
2005	3,590	2,326	139	375	750	15,156
2006	4,054	2,513	242	412	887	18,815
2007	4,277	2,417	258	465	1,137	21,837
2008	3,974	1,943	176	538	1,317	24,846
2009	2,283	893	70	446	874	19,474
2010	2,024	781	108	368	767	19,715
2011	2,120	761	137	526	696	19,042
2012	2,164	817	91	584	672	18,895
2013	2,353	908	122	645	678	23,450
2014	2,454	986	143	603	722	24,499
2015	2,331	946	110	557	718	24,129
2016	2,268	890	129	582	667	21,092
2017	2,324	936	149	563	676	20,197
2018	2,443	954	185	601	703	20,564

SEP - Single Engine Piston; MEP - Multi-Engine Piston; TP - Turboprop; J - Turbofan/Turbojet

Source: General Aviation Manufacturers Association, 2018 Annual Report.

Worldwide shipments of general aviation airplanes increased in 2018 with a total of 2,443 units delivered around the globe, compared to 2,324 units in 2017. Worldwide general aviation billings were also higher than the previous year. In 2018, $20.56 billion in new general aviation aircraft were shipped as compared to $20.20 billion in 2017. North America continues to be the largest market for general aviation aircraft and leads the way in the manufacturing of piston, turboprop, and jet aircraft. The Asian-Pacific region is the second largest market for piston-powered and turboprop aircraft.

Business Jets: Business jet deliveries grew from 676 units in 2017 to 703 units in 2018. The North American market accounted for 65.1 percent of business jet deliveries, which is a 1.3 percent increase in market share compared to 2017.

Turboprops: Turboprop shipments were up from 563 in 2017 to 601 in 2018. North America's market share of turboprop aircraft dropped by 4.4 percent in the last year, while the European, Asian-Pacific, and Middle East/African markets increased their market share.

Pistons: In 2018, piston airplane shipments grew to 1,139 units over last year's shipment of 1,085 units. However, North America's market share of piston aircraft deliveries dropped by approximately four percent during this timeframe. The Asian-Pacific and European markets experienced the largest increase in market share during the past year.

U.S. PILOT POPULATION

After several consecutive years of decline, the U.S. pilot population grew by four percent in 2018 to over 633,300. The largest driver of the increase in pilots was a 12 percent increase in the number of student pilot certificate holders, which reached nearly 168,000. The number of air transport pilots increased by 1.8 percent. The active private pilot population, defined as those holding an FAA-issued medical certificate, increased by nearly one percent to approximately 163,700 persons in 2018.

RISKS TO THE FORECASTS

While the FAA is confident that its forecasts for aviation demand and activity can be achieved, this hinges on a number of factors, including the strength of the global economy, security (including the threat of international terrorism), and the level of oil prices. Higher oil prices could lead to further shifts in consumer spending away from aviation, dampening a recovery in air transport demand. In the long term, the FAA foresees a competitive and profitable industry characterized by increasing demand for air travel and airfares growing more slowly than inflation.

AIRPORT SERVICE AREA

In determining aviation demand for an airport, it is necessary to identify the role of that airport. PVB is classified as a local general aviation airport in the NPIAS. According to the NPIAS, Local airports are those that supplement local communities by providing access to markets within the state or immediate region. These airports should be designed to accommodate a full range of general aviation activity ranging from single engine aircraft up to and including small- to medium-sized corporate aircraft.

The primary role of the airport is to serve the needs of general aviation in the service area. General aviation is a term used to describe a diverse range of aviation activities, which includes all segments of the aviation industry except commercial air carriers and the military. General aviation is the largest component of the national aviation system and includes activities such as pilot training, recreational flying, and the use of sophisticated turboprop and jet aircraft for business and corporate use.

The initial step in determining the general aviation demand for an airport is to define its generalized service area. The airport service area is a generalized geographical area where there is a potential market for airport services, particularly based aircraft. Access to general aviation airports and transportation networks enter the equation to determine the size of a service area, as well as the quality of aviation facilities, distance, and other subjective criteria.

As in any business enterprise, the more attractive the facility is in terms of service and capabilities, the more competitive it will be in the market. If an airport's attractiveness increases in relation to nearby airports, so will the size of its service area. If facilities and services are adequate and/or competitive, some level of aviation activity might be attracted to an airport from more distant locales.

Typically, the service area for a local general aviation airport can range from a minimum of 30 miles, extending up to approximately 50 miles. The proximity and level of general aviation services are largely the defining factors when describing the general aviation service area. There are currently four public-use airports located within 30 nautical miles (nm) of PVB. Beyond 30 nm, there are an additional 19 airports within 50 nm of PVB.

Of the four public-use airports within 30 nm of PVB, one is a non-NPIAS airport and does not receive funding through the FAA's Airport Improvement Program (AIP). Dubuque Regional Airport's (DBQ) primary function is to serve scheduled commercial passenger and cargo airline services; however, the airport also caters to general aviation operators including a wide array of corporate aviation activity. The two other NPIAS airports in the region provide various levels of general aviation services. **Table 2B** presents comparative summary information related to PVB and the four airports in proximity. Each airport's level of services and facilities available will play a role in limiting PVB's service area.

TABLE 2B | Regional Airports

Airport	Distance from PVB (nm)	NPIAS Service Level	Based Aircraft	Annual Operations	Longest Runway (feet)	Lowest Visibility Minimums
Platteville Municipal (PVB)	**-**	**GA**	**21**	**20,550**	**4,000'**	**1-mile**
Lancaster Municipal (73C)	11.8 WNW	GA	12	8,400	3,300'	None
Iowa County (MRJ)	15.0 NE	GA	36	6,750	5,001'	¾-mile
Dubuque Regional (DBQ)	20.8 SW	PCS	65	55,990	6,502'	½-mile
Cassville Municipal (C74)	23.0 W	NA	8	3,100	3,000	None

GA: General Aviation; PCS: Primary Commercial Service; NA: not applicable nm: nautical mile

Source: FAA Form 5010-1, Airport Master Record; www.airnav.com

The service area for PVB is fundamentally limited by Iowa County Airport (MRJ) and DBQ to the northeast and southwest, respectively. While MRJ primarily caters to the general aviation community, DBQ offers an array of corporate and general aviation services, including aircraft fuel, aircraft maintenance, hangar storage, etc. As previously mentioned, DBQ also caters to commercial airline services. Combined, it is estimated that 110 aircraft are based at DBQ and MRJ.

The remaining airports situated between 10 nm and 30 nm from PVB are Lancaster Municipal and Cassville Municipal Airports. These two airports also provide an array of general aviation services and have runway lengths ranging between 3,000 and 3,300 feet. They also somewhat limit the PVB service area, however, are not as competitive as DBQ and MRJ.

PVB has remained a very important aviation facility, meeting the needs of general aviation operators in the region. The airport is a center for recreational aircraft activity and is well positioned for potential business opportunity. The potential for increased aviation demand for PVB lies in business growth and the growing population within the City of Platteville and the surrounding region as detailed in the Socioeconomic section of this report. Within its capacity as a local general aviation airport, PVB should continue to fare well in its ability to compete for general aviation activity, considering the existing and future potential services and amenities it has to offer. It should be noted, aside from DBQ and MRJ, PVB currently has the third longest primary runway length (approximately 4,000 feet) within the 30 nm primary service area.

As a local general aviation airport, PVB's service area is also driven by aircraft owners/operators and where they choose to base their aircraft. The primary consideration of aircraft owners/operators when choosing where to base their aircraft is convenience (i.e., easy access and proximity to the airport). However, some aircraft owners have other priorities, such as runway length, specific services, hangar availability, airport congestion, etc. The most effective method of defining an airport's service area is by examining based aircraft by their registered address. **Exhibit 2B** presents the number of PVB-based aircraft located within the region according to airport records. Current registered aircraft that are based at PVB are presented as the blue dots, while registered aircraft based within the region are presented as the yellow dots.

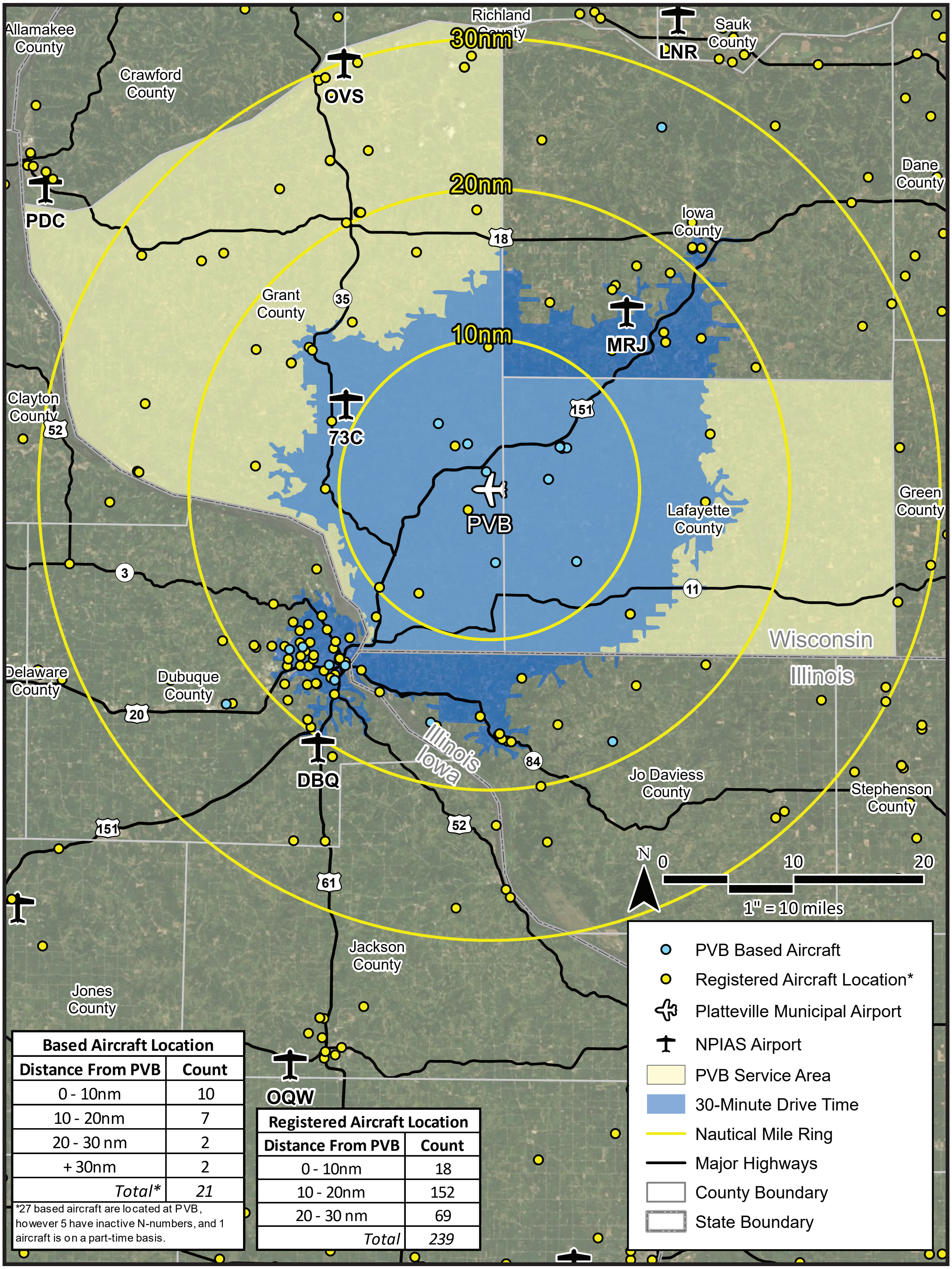
As depicted on **Exhibit 2B**, approximately 67 percent of PVB based aircraft owners reside or work within 20 miles of the airport. It should be noted that five additional aircraft are based at PVB, which have inactive registrations and one aircraft is based on a part-time basis. Ultimately, this brings the physical based aircraft count to 27. However, the official validated FAA based aircraft count does not include aircraft with inactive registrations or aircraft that have been validated as being based at another airport, which brings the FAA validated based aircraft count to 21. It is not uncommon for an aircraft based in one location to be registered in another, especially for owners with more than one residence or corporate aircraft which typically are registered by the controlling ownership entity, such as a bank. By far the most concentrated areas of based aircraft ownership are located within 20 miles of the City of Platteville, which includes the greater Dubuque metropolitan area and rural Grant, Lafayette, and Jo Daviess Counties.

As mentioned, total registered aircraft within the region are also presented on **Exhibit 2B**. The regional registered aircraft are depicted as the yellow dots and total 239 registered aircraft within 30 miles of PVB. A large cluster of these aircraft are located southwest of PVB within the 10-20 nm rings and likely base at DBQ. Many of the regional registered aircraft are also located within the 20-30 nm ring and most likely base at any of the airports surrounding PVB within (or just outside of) this range. At present, there are a total of 170 registered aircraft within 20 miles of PVB. PVB has 18 of these aircraft based at the airport, leaving a difference of 152 aircraft that have registered owners within 20 miles of the airport; many of which, are believed to be based at DBQ.

This data shows that a high percentage of based aircraft owners reside or do business near the airport. The remainder of the based aircraft owners are rurally located, surrounding the City of Platteville and Dubuque metropolitan area.

It should be noted that PVB is home to multiple business aircraft including a Cessna Citation CJ3, Embraer Phenom 300, and a Pilatus PC-12. Aircraft such as these have a direct influence on itinerant operations as well as demand for facilities required to enable corporate aviation operations. In the future, the demand for these types of operations and the airport's ability to accommodate them will have the greatest impact on the development direction for the airport.

Considering all previous factors associated with competing airports, available aviation services, and based aircraft ownership, the airport's primary service area is generally comprised of the 20 nm area surrounding City of Platteville and a portion of the Dubuque metropolitan area located on the fringe of the 30-minute drive contour. A secondary service area extends to the entirety of Grant and Lafayette Counties, which are the primary drivers of based aircraft at PVB.



Based Aircraft Location

Distance From PVB	Count
0 - 10nm	10
10 - 20nm	7
20 - 30 nm	2
+ 30nm	2
*Total**	*21*

*27 based aircraft are located at PVB, however 5 have inactive N-numbers, and 1 aircraft is on a part-time basis.

Registered Aircraft Location

Distance From PVB	Count
0 - 10nm	18
10 - 20nm	152
20 - 30 nm	69
Total	*239*

Source: ESRI Basemap Imagery, FAA Registered Aircraft Database.

REGISTERED AIRCRAFT FORECAST

Table 2C depicts the historical registered aircraft for the airport service area, which includes Grant and Lafayette Counties, for years 1999 to 2018. The registered aircraft in the area shows a fluctuating, but steadily increasing trend from years 1999 through 2015. However, after 2015, the service area has experienced a downward trend in aircraft registration. The service area is currently at a 5-year registered aircraft low, with 75 registered aircraft. Although there are no recently prepared forecasts for the airport service area regarding registered aircraft, one was prepared for this study using market share projection, ratio projection, and trendline analysis methods.

TABLE 2C | Service Area Historical Registered Aircraft

Year	Helicopter	MEP	Other[1]	SEP	Turbojet	Turboprop	Total
1999	0	3	1	57	0	0	61
2000	0	3	3	65	0	0	71
2001	0	3	3	62	0	1	69
2002	0	3	3	62	0	1	69
2003	0	3	2	64	0	1	70
2004	0	3	2	64	0	2	71
2005	0	3	2	63	0	2	70
2006	0	3	3	64	0	0	70
2007	0	3	7	66	0	0	76
2008	0	3	7	65	0	2	77
2009	0	3	8	61	0	3	75
2010	0	3	9	59	0	3	74
2011	0	3	7	65	0	3	78
2012	0	3	8	74	0	4	89
2013	0	2	8	62	0	3	75
2014	0	3	7	72	0	2	84
2015	1	4	7	75	0	3	90
2016	1	5	6	74	0	3	89
2017	1	5	2	77	1	2	88
2018	0	3	2	67	1	2	75

[1]The "Other" aircraft category refers to aircraft such as gliders, electric aircraft, balloons, and dirigibles.
MEP: Multi-Engine Piston
SEP: Single Engine Piston
Source: FAA Registered Aircraft

When projecting the registered aircraft, it is helpful to calculate the service area's market share of the total active general aviation aircraft in the U.S. In conducting this market share analysis, comparison of service area aircraft ownership trends against the nation's ownership trends can be carried out. **Table 2D** details the market share analysis, which shows the service area market share of the U.S. active general aviation aircraft fleet has held a consistent increasing trend, ranging from a low of 0.028 percent in 1999 to a high of 0.043 percent as recent as 2015; however, a declining trend has prevailed over the past three years. Holding the 2018 market share of 0.035 percent constant, the market share can be applied to the forecast of U.S. active general aviation aircraft to generate the forecast registered aircraft in the airport service area. According to this projection, 74 aircraft could be registered in the service area by 2039, yielding a CAGR of -0.06 percent. In addition, an increasing market share percentage was also applied.

TABLE 2D | Registered Aircraft Forecast - Airport Service Area of Grant and Lafayette Counties

Year	Service Area Registered Aircraft	U.S. Active GA Aircraft	% of U.S. Active GA Aircraft	Service Area Population	Aircraft per 1,000 Residents
1999	61	219,464	0.028%	65,871	0.93
2000	71	217,533	0.033%	65,784	1.08
2001	69	211,446	0.033%	66,042	1.04
2002	69	211,244	0.033%	66,103	1.04
2003	70	209,606	0.033%	66,441	1.05
2004	71	219,319	0.032%	66,758	1.06
2005	70	224,257	0.031%	66,947	1.05
2006	70	221,942	0.032%	66,836	1.05
2007	76	231,606	0.033%	67,214	1.13
2008	77	228,664	0.034%	67,602	1.14
2009	75	223,876	0.034%	67,767	1.11
2010	74	223,370	0.033%	68,044	1.09
2011	78	220,453	0.035%	68,047	1.15
2012	89	209,034	0.043%	67,683	1.31
2013	75	199,927	0.038%	67,660	1.11
2014	84	204,408	0.041%	68,459	1.23
2015	90	210,031	0.043%	68,857	1.31
2016	89	211,794	0.042%	68,769	1.29
2017	88	211,757	0.042%	68,740	1.28
2018	75	212,885	0.035%	68,958	1.09
Constant Market Share Projection of U.S. Active GA Aircraft (CAGR -0.06%)					
2024	74	212,665	0.035%	70,110	1.06
2029	74	211,510	0.035%	70,928	1.04
2039	74	211,800	0.035%	71,949	1.03
Increasing Market Share Projection of U.S. Active GA Aircraft (CAGR 1.17%)					
2024	79	212,665	0.037%	70,110	1.12
2029	85	211,510	0.040%	70,928	1.19
2039	96	211,800	0.045%	71,949	1.33
Constant Ratio Projection Per 1,000 Residents (CAGR 0.21%)					
2024	76	212,665	0.036%	70,110	1.09
2029	77	211,510	0.037%	70,928	1.09
2039	78	211,800	0.037%	71,949	1.09
Increasing Ratio Projection Per 1,000 Residents (CAGR 1.24%)					
2024	81	212,665	0.038%	70,110	1.15
2029	89	211,510	0.042%	70,928	1.25
2039	97	211,800	0.046%	71,949	1.35
Historical Ratio Projection to the 10-Year Average Per 1,000 Residents (CAGR 0.67%)					
2024	79	212,665	0.037%	70,110	1.12
2029	82	211,510	0.039%	70,928	1.15
2039	86	211,800	0.041%	71,949	1.20
Trendline Analysis at the 20-Year Growth Rate (CAGR 1.04%)—Selected					
2024	80	212,665	0.038%	70,110	1.14
2029	84	211,510	0.040%	70,928	1.18
2039	93	211,800	0.044%	71,949	1.30

Sources: Historical Registered Aircraft – FAA Aircraft Registry; Historical and Forecast U.S. Active GA Aircraft – FAA Aerospace Forecast, Fiscal Years 2019-2039; Historical and Forecast Population – Woods and Poole Complete Economic and Demographic Data Source, 2019.

Despite the recent declining market share trend, there could be potential for increased market share capturing slightly above historical values should the service area experience economic growth as projected. Utilizing this forecasting technique, registered aircraft within the service area could reach 96 by 2039 and grow at a CAGR of 1.17 percent.

Population trends have also been used to analyze and project aircraft registrations within the service area. This projection method analyzes the service area population as a ratio of the historical registered aircraft per 1,000 residents. In 2018, the population of the service area was calculated by *Woods and Poole Complete Economic and Demographic Data Source* to be approximately 68,598. Population within the service area is forecasted to increase to 71,949 by 2039. Over a 20-year period, the ratio of registered aircraft per 1,000 residents has generally been trending upward from a ratio of 0.93 in 1999 to a high of 1.31 in 2015. Similar to the historic market share, the ratio of registered aircraft per 1,000 service area residents has also declined in recent years. A constant ratio projection maintaining the 2018 ratio of 1.09 yields 78 aircraft in the service area by 2039, growing at a CAGR of 0.21 percent.

Like the market share analysis, an increasing ratio projection was also utilized, which applies an increasing ratio of registered aircraft to the forecast population of the service area. By increasing the ratio to the 1.35 over the planning horizon, a total of 97 aircraft could be registered by 2039, growing at a CAGR of 1.24 percent. Similarly, an increasing ratio to the 10-year historical average ratio projection was also applied to the projected population for the service area, reflecting a return to historic average ratio levels. This forecast method examined a ratio up to 1.20 aircraft per 1,000 people, yielding a total of 86 registered aircraft and a CAGR of 0.67 percent.

Finally, a trendline analysis examined the historic 20-year growth rate from 1999 to 2018. Applying the historic 20-year growth rate to the 2018 base year and holding it constant through the 2039 planning horizon yields a forecast of 93 registered aircraft and a CAGR of 1.04 percent.

The registered aircraft forecast produced a high range of 97 and a low of 74 registered aircraft for the service area by 2039. Recent declines in registered aircraft and U.S. active aircraft following the 2008-2009 recession have slowly leveled off and are projected to return to growth over time, although at a lower rate than what has been projected in the past. Ultimately, the trendline analysis at the 20-year growth rate is considered the most reasonable forecast as it maintains historic trends that have been realized in the past and reflects a return to a ratio of registered aircraft per 1,000 service area residents experienced as recently as 2015. In 2024, registered aircraft are forecast to increase to 80. By 2039, registered aircraft for the county are forecast to reach 93. Over the next 20 years, registered aircraft within the county are forecast to grow at a CAGR of 1.04 percent annually.

The registered aircraft projection is one variable to be used in the development of a based aircraft forecast for PVB. The following section will present several potential based aircraft forecasts, as well as the selected based aircraft forecast, to be utilized in this study.

BASED AIRCRAFT FORECAST

According to airport records, there are currently 21 aircraft based at the airport that are validated within the FAA's National Based Aircraft Inventory Program. As previously noted, there are an additional five aircraft located at PVB with inactive registrations as well as one aircraft on a part-time basis. Given the part-time and deregistered status of these particular aircraft, they do not qualify as validated based aircraft in the FAA's National Based Aircraft Inventory Program. Historical based aircraft data prior to 2018 was not readily available; therefore, the FAA's TAF historical based aircraft count for PVB was used to analyze historical based aircraft trends. Building upon the projections previously developed, market share analysis and trend line projection forecasting approaches were used to generate forecasts for the future based aircraft totals at PVB.

As presented in **Table 2E**, the PVB market share of registered aircraft within the service area has experienced a fluctuating, but generally increasing trend from 1999 to 2018, reaching a high of 38.67 percent in 2009. Since 2009, the PVB based aircraft market share has fluctuated between a low of 25.84 percent and a high of 36.90 percent in 2014. In 2018, PVB's based aircraft market share was 28.00 percent.

Holding the current market share constant at 28.00 percent, future based aircraft projections were calculated by applying the service area registered aircraft projection to the market share of registered aircraft. This approach results in a projection of 26 based aircraft by the year 2039. The second projection assumes the airport's market share will increase throughout the planning period, reflecting the overall increasing trend experienced during the course of the previous 20 years. An increasing market share projection results in 36 based aircraft by 2039 and a CAGR of 2.65 percent.

Additional projections were prepared by examining the ratio of based aircraft to population. Historic data shows the ratio of based aircraft per 1,000 residents has followed a trend like the PVB based aircraft market share, generally increasing over the past 20 years. The 20-year high of 0.45 based aircraft per 1,000 service area residents was reached in 2014, while the second highest ratio of 0.44 was achieved in 2015 and 2016. Since 2016, the ratio has decreased to 0.30 in 2018. Holding the current value of 0.30 based aircraft per 1,000 residents constant results in a projection of 22 based aircraft by 2039. An increasing ratio of based aircraft per 1,000 residents at the 20-year historic growth rate was also applied to the forecast service area population. Given that the service area population is projected to increase at a CAGR of 0.21 percent over the planning horizon, it is reasonable to assume that based aircraft within the service area could also experience some growth. The increasing ratio projection at the 20-year growth rate results in a based aircraft count of 32 and growth rate of 1.97 percent CAGR by year 2039.

The forecasts summarized in **Table 2E** represent a reasonable planning envelope. The selected forecast considers the airport experiencing an increase in market share by 5.97 percent to a total of 33.97 percent and an increase in the ratio of the service area population by 0.14 to a total of 0.44. The selected forecast is similar to the PVB based aircraft market share and ratio of based aircraft per 1,000 service area residents last experienced in 2014. By 2039, 32 aircraft are projected to be based at PVB. This forecast results in a 1.97 percent CAGR through the long-term planning period, which returns to a similar based aircraft market share and ratio of the service area population experienced historically.

TABLE 2E | Based Aircraft Forecast - Platteville Municipal Airport

Year	PVB Based Aircraft	Service Area Registrations	PVB Market Share	Service Area Population	Aircraft per 1,000 Residents
1999	14	61	22.95%	65,871	0.21
2000	14	71	19.72%	65,784	0.21
2001	14	69	20.29%	66,042	0.21
2002	14	69	20.29%	66,103	0.21
2003	14	70	20.00%	66,441	0.21
2004	14	71	19.72%	66,758	0.21
2005	14	70	20.00%	66,947	0.21
2006	25	70	35.71%	66,836	0.37
2007	25	76	32.89%	67,214	0.37
2008	27	77	35.06%	67,602	0.40
2009	29	75	38.67%	67,767	0.43
2010	22	74	29.73%	68,044	0.32
2011	22	78	28.21%	68,047	0.32
2012	23	89	25.84%	67,683	0.34
2013	23	75	30.67%	67,660	0.34
2014	31	84	36.90%	68,459	0.45
2015	30	90	33.33%	68,857	0.44
2016	30	89	33.71%	68,769	0.44
2017	28	88	31.82%	68,740	0.41
2018	21	75	28.00%	68,958	0.30
Constant Market Share Projection of Registered Aircraft (CAGR 1.04%)					
2024	22	80	28.00%	70,110	0.32
2029	24	84	28.00%	70,928	0.33
2039	26	93	28.00%	71,949	0.36
Increasing Market Share Projection of Registered Aircraft (CAGR 2.65%)					
2024	25	80	31.00%	70,110	0.35
2029	29	84	35.00%	70,928	0.41
2039	36	93	39.00%	71,949	0.51
Constant Ratio Projection Per 1,000 Residents (CAGR 0.13%)					
2024	21	80	26.36%	70,110	0.30
2029	21	84	25.32%	70,928	0.30
2039	22	93	23.16%	71,949	0.30
Increasing Ratio Projection per 1,000 Residents at the 20-Year Growth Rate (CAGR 1.97%)—Selected					
2024	24	80	29.87%	70,110	0.34
2029	26	84	31.23%	70,928	0.37
2039	32	93	33.97%	71,949	0.44

Note: Historical based aircraft totals are derived from the FAA's *Terminal Area Forecast*.

Sources: Historical Registered Aircraft – FAA Aircraft Registry; Historical and Forecast U.S. Active GA Aircraft – FAA Aerospace Forecast, Fiscal Years 2019-2039; Historical and Forecast Population – Woods and Poole Complete Economic and Demographic Data Source, 2019.

Future aircraft basing at the airport will depend on several factors, including the state of the economy, fuel costs, available facilities, competing airports, and adjacent development potential. Forecasts assume a reasonably stable and growing economy, as well as reasonable development of airport facilities necessary to accommodate aviation demand. Competing airports will play a role in deciding demand; however, PVB should fare well in this competition given the proximity of registered aircraft located near the airport and the potential for improved services and facilities offered at PVB.

BASED AIRCRAFT FLEET MIX

The current fleet mix based at PVB consists of 16 single engine piston aircraft, two turboprops, two jets, and one gyrocopter which is classified in the "other" category. The "other" aircraft category consists of ultralights, electric-powered aircraft, gyrocopters, gliders, hot air balloons, etc. Given that the total number of aircraft based at the airport is projected to increase, it is important to have an idea of the type of aircraft expected to utilize the airfield. A forecast of the fleet mix will ensure that adequate facilities are planned to accommodate these aircraft in the future.

The projection for the fleet mix of based aircraft was generated by comparing the existing fleet mix of based aircraft at PVB with the U.S. GA fleet trends. The forecast for the active U.S. GA fleet shows declining trends in the single and multi-engine categories; however, the larger and more sophisticated aircraft, such as turboprop and turbojet, are forecast to increase. In addition, both piston and turbine rotorcraft are projected to increase through 2039. Taking the national trends and airport communication into consideration, a projected based aircraft fleet mix has been prepared and is detailed in **Table 2F**.

TABLE 2F | Based Aircraft Fleet Mix

Aircraft Type	2018	%	2024	%	2029	%	2039	%
Single Engine Piston	16	76.19%	18	74.00%	18	71.00%	22	67.50%
Multi-Engine Piston	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Turboprop	2	9.52%	2	9.50%	3	10.00%	3	10.50%
Jet	2	9.52%	3	11.50%	3	12.00%	4	13.00%
Helicopters	0	0.00%	0	0.00%	1	2.00%	2	5.00%
Other	1	4.76%	1	5.00%	1	5.00%	1	4.00%
Total	**21**	**100.00%**	**24**	**100.00%**	**26**	**100.00%**	**32**	**100.00%**

Sources: Airport records; Coffman Associates' analysis.

GENERAL AVIATION ANNUAL OPERATIONS

General aviation operations are classified as either local or itinerant. A local operation is a take-off or landing performed by an aircraft that operates within sight of the airport, or which executes simulated approaches or touch-and-go operations at the airport. Generally, local operations are characterized by training operations. Itinerant operations are those performed by aircraft with a specific origin or destination away from the airport. Typically, itinerant operations increase with business and commercial use, since business aircraft are not typically used for large scale training activities.

The FAA TAF estimated operational levels for PVB in the current TAF is 20,550 total operations, and the forecast is a flat-line forecast through the planning horizon. For non-towered general aviation airports, the FAA recommends applying an approved forecast model specifically developed for small non-towered general aviation airports. The report entitled, *Model for Estimating General Aviation Operations at Non-Towered Airports Using Towered and Non-Towered Airport Data* (GRA, Inc. 2001), presents the methodology and formula for the model. Independent variables used in the model include airport characteristics, demographics, and geographic features. The model was derived using a combined data set for small towered and non-towered general aviation airports and incorporates a dummy variable to distinguish the two airport types. Specifically, the model utilizes the following variables:

- Based aircraft;
- Percent of aircraft based at the airport among general aviation airports within 100 miles;
- Number of FAR 141 flight training schools at the airport;
- Population within 100 miles;
- Ratio of population within 25 miles and within 100 miles.

The model factors each of these variables so that both local and national factors are considered when estimating operations. The results of the model show an annual general aviation operation estimate of 9,890, which is believed to be a more accurate representation of air traffic activity occurring at PVB when compared to the FAA TAF. **Table 2G** presents the calculations of general aviation operations for the airport in 2018.

TABLE 2G | Model for Estimating Operations at Non-Towered Airports - Platteville Municipal Airport

Function	Category	2018
	775	775
+	241 x BA	5,061
-	0.14 x BA^2	62
+	31,478 x %100mi	334
+	5,577 x VITFSnum	0
+	.001 x Pop100	3,202
-	3,736 x WACAORAK	0
+	12,121 x Pop25/100	578
=	**Total**	**9,890[1]**

[1]Estimated Operations have been rounded to the nearest ten.
Function Definitions:
- BA – Validated Based Aircraft: 21
- BA^2 - Based Aircraft Squared: 441
- %100mi - % Based aircraft among based GA aircraft within 100 miles: 1.06%
- VITFSnum - # of FAR 141 flight schools on airport: 0
- Pop100 - Population within 100 miles: 3,202,493
- WACAORAK - 1 if WA, CA, OR, AK; 0 otherwise: 0
- Pop20/100 - Ratio of Pop 25 to Pop 100 (proportion between 1 and 0): 0.047698

Sources: 2018 Estimate of operations – Derived from Model for Estimating General Aviation Operations at Non-Towered Airports, Equation #15, FAA Statistics and Forecast Branch (July 2001).

In addition, PVB is currently home to multiple tenants operating turbine powered aircraft for business purposes. At present, corporate aircraft based at PVB include a Pilatus PC-12, Embraer Phenom 300, and Cessna CJ3+. Moreover, other businesses such as Freight Runners LLC, have been observed by the FBO operating at the airport. Based upon the existing corporate aviation activities occurring at PVB and continuing efforts to cater to corporate aircraft operators, it is important to recognize this operational segment at PVB.

The FAA maintains the Traffic Flow Management System Count (TFMSC) database which documents aircraft operations at most NPIAS airports. Information is added to the TFMSC database when pilots file flight plans and/or when flights are detected by the National Airspace System, usually via radar. The database includes documentation of commercial traffic (air carrier and air taxi), general aviation, and military aircraft. Due to more frequent flight plan filings of turbine powered aircraft, TFMSC operational data is generally more complete for the turbine aircraft segment. Based upon historical turbine operations found in an examination of TFMSC data over the course of 2018, it was determined that PVB experienced approximately 461 annual turbine operations, which has been added to the annual estimate of 9,890 for a total general aviation operations estimate of 10,351.

The FAA TAF and Airport Master Record 5010 estimate that the current general aviation operational split is 50 percent itinerant and 50 percent local. Given that turbine aircraft typically operation on an itinerant basis, the turbine operations identified through TFMSC have been included in the itinerant category, bringing the operational split to approximately 55 percent itinerant and 45 percent local. It is estimated that this trend will continue to remain through the forecast period. For planning purposes, operations forecasts to follow have been rounded to the nearest hundred.

General Aviation Operations Forecast

Utilizing the operations estimate derived from the model described above, forecasts of general aviation operations have been developed and are presented in **Table 2H**. The forecasts presented examine and/or manipulate variables, such as PVB's operations per based aircraft and forecast growth rates in the FAA's *Aerospace Forecast 2019-2039*. As shown in the table, the estimated 10,351 annual general aviation operations equate to approximately 490 operations per based aircraft. Typically, general aviation airports will experience between 250 and 500 operations per based aircraft. It is projected that the operational split between itinerant and local operations will continue at 55 and 45 percent, respectively throughout the forecast period. As previously mentioned, all operations forecasts have been rounded to the nearest hundred for planning purposes.

TABLE 2H | General Aviation Operations Forecast

Year	PVB GA Operations	Itinerant GA Operations	Local GA Operations	PVB Based Aircraft	GA Operations per Based Aircraft
2018	10,351	5,406	4,945	21	490
Constant Operations per Based Aircraft (CAGR 2.00%)—Selected					
2024	11,800	6,340	5,460	24	490
2029	12,700	6,850	5,850	26	490
2039	15,700	8,450	7,250	32	490
Increasing Operations per Based Aircraft (CAGR 2.56%)					
2024	12,000	6,600	5,400	24	500
2029	13,700	7,540	6,170	26	525
2039	17,600	9,680	7,920	32	550
FAA TAF National Forecast Growth Rate (CAGR 0.40%)					
2024	10,100	5,050	5,050	24	421
2029	10,300	5,150	5,150	26	396
2039	10,800	5,400	5,400	32	338

Sources: FAA Aerospace Forecast 2019-2039; FAA Form 5010; FAA Terminal Area Forecast; FAA National Based Aircraft Inventory Program.

The first projection maintains the existing general aviation operations per based aircraft of 490 through the long-term planning period, resulting in 15,700 operations by year 2039 and a CAGR of 2.00 percent. Applying an increasing growth rate of up to 550 operations per based aircraft by year 2039 results in an annual operations forecast of 17,600 with a CAGR of 2.56 percent. The high growth model is unlikely unless significant aircraft pilot training operations were to base at the airport. If a large volume training operation were to base at the airport, operations could jump in a very short period. Those operations, however, would likely be primarily local (training) by small aircraft.

The national general aviation operations forecasts presented in the FAA's 2019 TAF were also examined. Using the base year of 2018, the TAF's national forecasted growth rate of 0.40 percent was carried forward throughout the planning horizon. This projection yields 10,800 annual general aviation operations by 2039.

Ultimately, the constant operations per based aircraft projection has been selected. The potential for additional based aircraft at PVB could drive local as well as itinerant demand. The selected forecast maintains a reasonable level of operations per based aircraft, while increasing itinerant and local general aviation annual operations. It is believed that the higher growth model represents the top end of the planning envelope without evidence of reasonable expectation.

AIR TAXI OPERATIONS FORECAST

The air taxi category can be classified as a sub-set of the itinerant operations category and includes aircraft involved in on-demand passenger charter, fractional ownership aircraft operations, small parcel transport, and air ambulance activity. While not typically a large percentage of total airport operations, air taxi operations can be conducted via more sophisticated aircraft, ranging from multi-engine piston aircraft up to large business jet aircraft. As a result, it is important to factor these types of operations at airports that experience air taxi operations.

The FAA national air taxi forecast projects a 2.2 percent decrease in air taxi operations through 2029, followed by modest increases thereafter. The primary reason for this decrease is the transition by commuter airlines to larger aircraft with more than 60 passenger seats, which are then counted as air carrier operations. While air taxi operations that are represented by commuter airlines using aircraft with fewer than 60 seats are decreasing, the business jet segment of the air taxi category is expected to continue to grow nationally.

As previously mentioned, PVB is currently home to multiple tenants operating turbine powered aircraft for business purposes. However, the reporting of air taxi operations is voluntary in nature and the FAA currently does not have any validated air taxi operations on file. Thus, turbine and business aircraft operations identified within TFMSC have been included within the itinerant general aviation operations forecast as discussed above.

Military Operations Forecast

Military aircraft can and do utilize civilian airports across the country. Current operational data reported in the FAA TAF identifies 50 military operations occurring at PVB. Forecasting of military activity is inherently difficult because of the national security nature of their operations and the fact that missions can change often. Thus, it is typical for the FAA to utilize a flat-line forecast number for military operations.

At PVB, the FAA TAF reflects virtually no change in military operations at the airport through the long-term planning horizon. For planning purposes, annual military operations are forecast to remain at 50 through the 20-year planning period.

PEAKING CHARACTERISTICS

Peaking characteristics are an important aspect in generating airport capacity and facility requirements. It should be noted that because PVB does not have a control tower, the generalized peaking characteristics of other non-towered general aviation airports have been used for the purposes of this study. The peaking periods used to develop the capacity analysis and facility requirements are described below.

- Peak Month – The calendar month in which traffic activity is highest.
- Design Day – The average day in the peak month. This indicator is derived by dividing the peak month by the number of days in the month.
- Busy Day – The busy day of a typical week in the peak month.
- Design Hour – The peak hour within the design day.

For the purposes of this study, the peak month was estimated at ten percent of the annual operations. By 2039, the estimated peak month is projected to reach 1,575 operations. The design day is estimated by dividing the peak month by its number of days, and the busy day is calculated at 1.25 times the design day. The design hour is then calculated at 15 percent of the design day. These projections can be viewed in **Table 2J**.

TABLE 2J | Peak Operations Forecast

	2018	2024	2029	2039
Annual Operations	10,401	11,850	12,750	15,750
Peak Month	1,040	1,185	1,275	1,575
Design Day	34	38	41	51
Busy Day	42	48	51	64
Design Hour	5	6	6	8

Source: Coffman Associates analysis.

ANNUAL INSTRUMENT APPROACHES

An instrument approach, as defined by the FAA, is "an approach to an airport with the intent to land by an aircraft in accordance with an Instrument Flight Rule (IFR) flight plan, when visibility is less than three miles and/or when the ceiling is at or below the minimum initial approach altitude." To qualify as an instrument approach, aircraft must land at the airport after following one of the published instrument approach procedures in less than visual conditions. Forecasts of annual instrument approaches (AIAs) provide guidance in determining an airport's requirements for navigational aid facilities, such as an instrument landing system. It should be noted that practice or training approaches do not count as annual AIAs, nor do instrument approaches conducted in visual conditions.

During poor weather conditions, pilots are less likely to fly and rarely would perform training operations. As a result, an estimate of the total number of AIAs can be made based on a percentage of itinerant operations regardless of the frequency of poor weather conditions. An estimate of two percent of total itinerant (general aviation and military) operations is utilized to forecast AIAs at PVB, as presented in **Table 2K**.

TABLE 2K | Annual Instrument Approaches

Year	Annual Instrument Approaches	Itinerant Operations	Ratio
2018	109	5,456	2.00%
2024	128	6,390	2.00%
2029	138	6,900	2.00%
2039	170	8,500	2.00%

Source: Coffman Associates analysis.

FORECAST COMPARISON TO THE FAA TAF

The FAA will review the forecasts presented in this report for consistency with the *Terminal Area Forecast*. Typically, the local FAA Airport District Office (ADO) or Regional Airports Division (RO) are responsible for forecasting. When reviewing a sponsor's forecast, FAA must ensure the forecast is based on reasonable planning assumptions, uses current data, and is developed using appropriate forecast methods. Forecasts of operations and based aircraft are considered consistent with the TAF if they differ by less than 10 percent in the five-year period and 15 percent in the 10-year forecast period. If the forecast is not consistent with the TAF, differences must be resolved if the forecast is to be used for FAA decision-making. **Table 2L** presents the direct comparison of planning forecasts with the TAF published in February 2019.

The reason the FAA allows this differential is because the TAF forecasts are not meant to replace forecasts developed locally (i.e., in this report). While the TAF can provide a point of reference or comparison, their purpose is much broader in defining FAA national workload measures.

In examining this planning effort and FAA TAF projections of itinerant operations, the forecast developed for this study differs from the TAF by 35.66 percent in the five-year forecast and 29.98 percent in the 10-year forecast. Thus, the forecast of itinerant operations is not considered to be consistent with the FAA TAF; however, the base year itinerant operations are estimated at a 47.47 difference from the TAF. The difference is largely due to the use of the *Model for Estimating General Aviation Operations at Non-Towered Airports Using Towered and Non-Towered Airport Data* for the base year general aviation operations at PVB, as detailed earlier. The same is also true for the local and total operations forecasts selected for this report. The local operations forecast differs from the TAF by 43.40 percent in the five-year forecast and 38.25 percent in the 10-year forecast, while the total operations forecast differs from the TAF by 39.32 percent in the five-year forecast and 33.88 percent in the 10-year forecast.

For based aircraft, the TAF identifies a total of 28 based aircraft in 2018; however, this planning effort identified 21 based aircraft at PVB that are currently validated within the National Based Aircraft Inventory Program. As a result, the base year count has a 20.00 percent difference from the TAF. Ultimately, the based aircraft forecast increases to 10.53 percent difference from the TAF in the five-year forecast period and climbs to 5.00 percent difference in the 10-year forecast.

TABLE 2L | Forecast Comparison to the *Terminal Area Forecast* - Platteville Municipal Airport

	BASE YEAR 2018	FORECAST			CAGR 2018-2039
		2024	2029	2039	
Itinerant Operations					
Study Forecast	5,456	6,390	6,900	8,500	2.24%
2019 FAA TAF	10,550	10,550	10,550	10,550	0.00%
% Difference	47.47%	35.66%	29.98%	14.88%	
Local Operations					
Study Forecast	4,945	5,460	5,850	7,250	1.93%
2019 FAA TAF	10,000	10,000	10,000	10,000	0.00%
% Difference	50.83%	43.40%	38.25%	22.45%	
Total Operations					
Study Forecast	10,401	11,850	12,750	15,750	2.10%
2019 FAA TAF	20,550	20,550	20,550	20,550	0.00%
% Difference	49.09%	39.32%	33.88%	18.44%	
Based Aircraft					
Study Forecast	21	24	26	32	2.13%
2019 FAA TAF	28	28	28	28	0.00%
% Difference	20.00%	10.53%	5.00%	8.70%	

CAGR - Compound annual growth rate

Source: Coffman Associates analysis

FORECAST SUMMARY

This section has provided demand-based forecasts of aviation activity at PVB over the next 20 years. An attempt has been made to define the projections in terms of short (1-5 years), intermediate (6-10 years), and long (11-20 years) term planning horizons. **Exhibit 2C** presents a 20-year forecast summary as previously detailed in this section. Elements such as local socioeconomic and activity indicators, anticipated regional development, historical aviation data, and national aviation trends were all considered when determining future conditions.

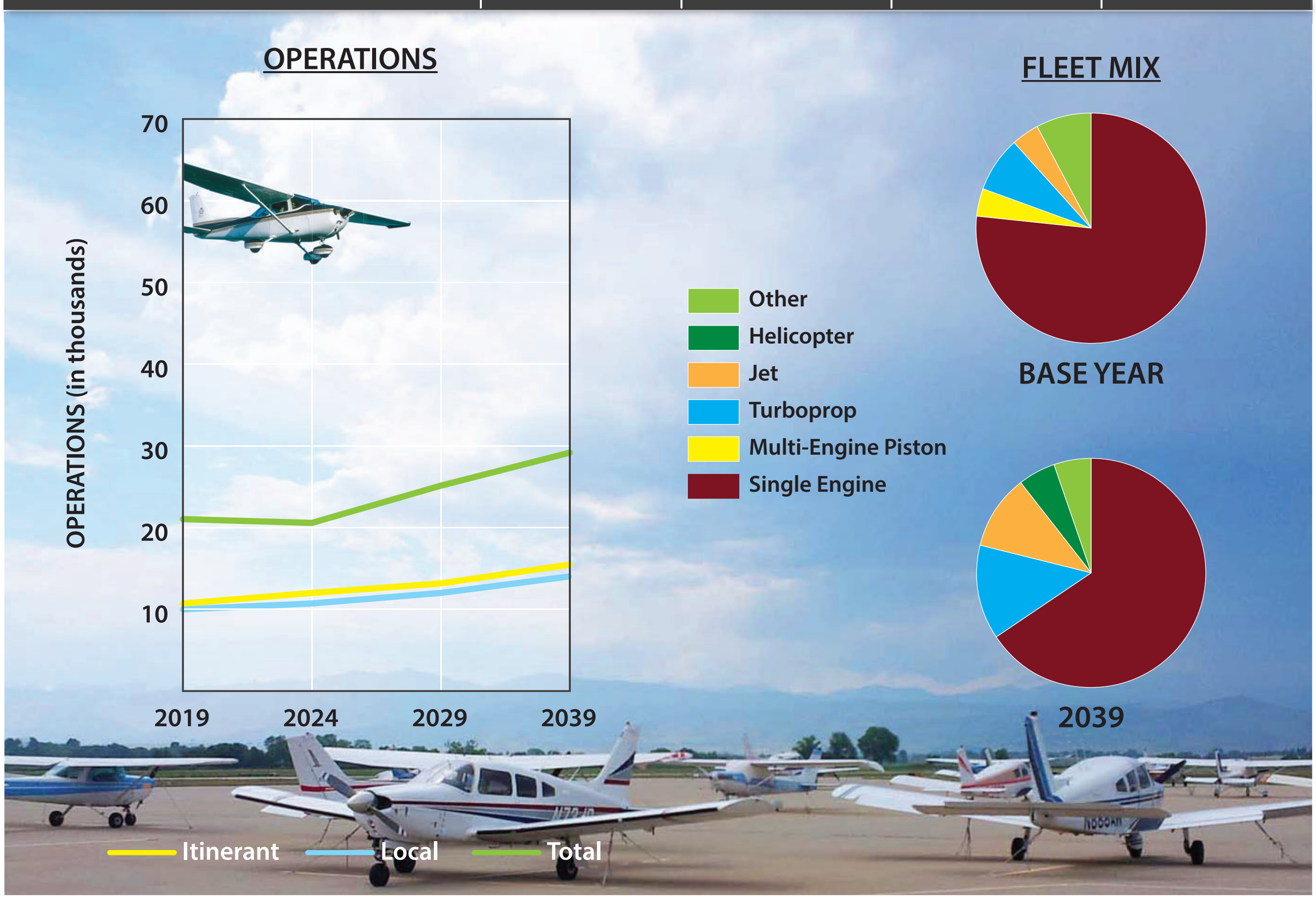
AIRPORT/AIRCRAFT/RUNWAY CLASSIFICATION

The FAA has established multiple aircraft classification systems that group aircraft based upon performance (approach speed in landing configuration) and on design characteristics (wingspan and landing gear configuration). These classification systems are used to design certain airport elements, such as separation standards, safety areas, runways, taxiways, and aprons, based upon the aircraft expected to use the airport facilities most frequently.

AIRCRAFT CLASSIFICATION

The use of appropriate FAA design standards is generally based upon the characteristics of aircraft commonly using, or expected to use, the airport facilities. The aircraft used to design the airport is designated as the critical aircraft. The design criteria used in the aircraft classification process are presented in **Exhibit 2D**. An airport's critical aircraft can be a single aircraft or a collection of multiple aircraft commonly

	BASE YEAR	2024	2029	2039
ANNUAL OPERATIONS				
Itinerant				
Air Carrier	-	-	-	-
Air Taxi	-	-	-	-
General Aviation	5,406	6,340	6,850	8,450
Military	50	50	50	50
Total Itinerant	***5,456***	***6,390***	***6,900***	***8,500***
Local				
General Aviation	4,945	5,460	5,850	7,250
Military	-	-	-	-
Total Local	***4,945***	***5,460***	***5,850***	***7,250***
TOTAL ANNUAL OPERATIONS	***10,401***	***11,850***	***12,750***	***15,750***
BASED AIRCRAFT				
Single Engine	16	18	18	22
Multi-Engine Piston	0	0	0	0
Turboprop	2	2	3	3
Jet	2	3	3	4
Helicopter	0	0	1	2
Other	1	1	1	1
BASED AIRCRAFT TOTAL	***21***	***24***	***26***	***32***
ANNUAL INSTRUMENT APPROACHES	***109***	***128***	***138***	***170***



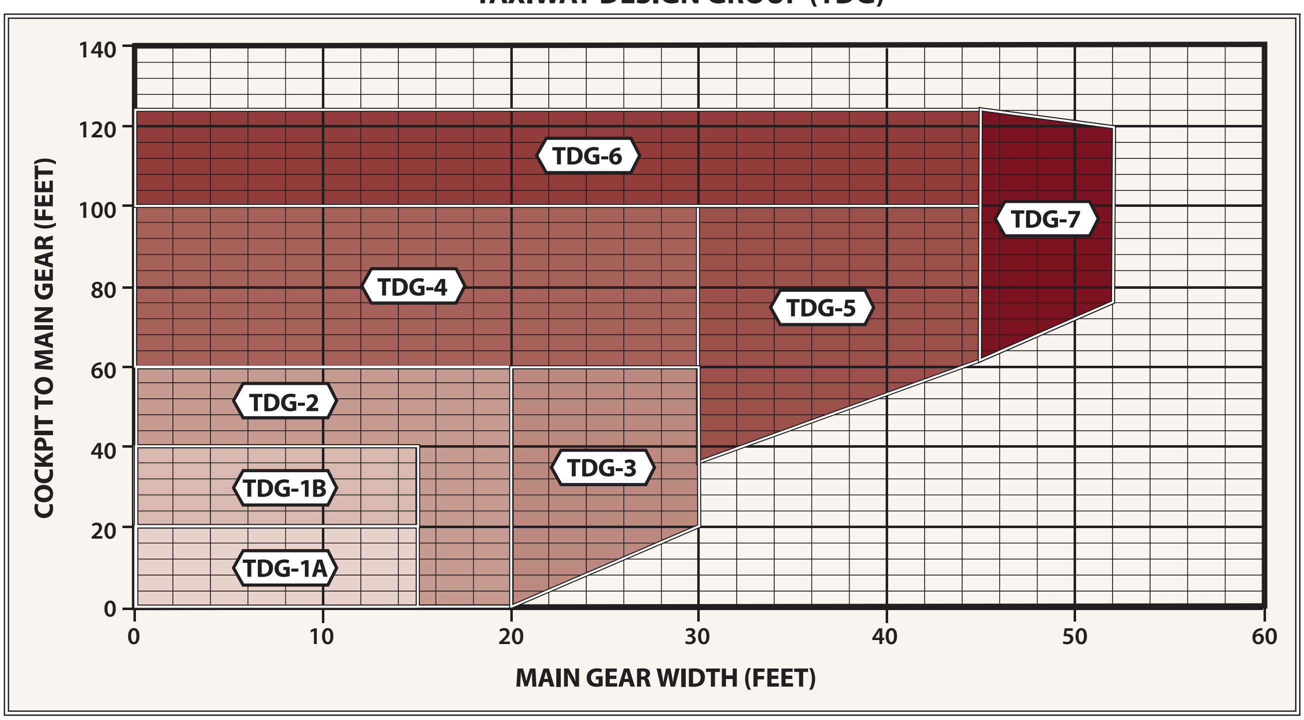
AIRCRAFT APPROACH CATEGORY (AAC)	
Category	**Approach Speed**
A	less than 91 knots
B	91 knots or more but less than 121 knots
C	121 knots or more but less than 141 knots
D	141 knots or more but less than 166 knots
E	166 knots or more

AIRPLANE DESIGN GROUP (ADG)		
Group #	**Tail Height (ft)**	**Wingspan (ft)**
I	<20	<49
II	20-<30	49-<79
III	30-<45	70-<118
IV	45-<60	118-<171
V	60-<66	171-<214
VI	66-<80	214-<262

VISIBILITY MINIMUMS	
RVR* (ft)	**Flight Visibility Category (statute miles)**
VIS	3-mile or greater visibility minimums
5,000	Not lower than 1-mile
4,000	Lower than 1-mile but not lower than ¾-mile
2,400	Lower than ¾-mile but not lower than ½-mile
1,600	Lower than ½-mile but not lower than ¼-mile
1,200	Lower than ¼-mile

***RVR**: Runway Visual Range

TAXIWAY DESIGN GROUP (TDG)



Source: FAA AC 150/5300-13A, Airport Design using the airport that fit into a single aircraft category. The design aircraft or collection of aircraft is classified by three different categories: Aircraft Approach Category (AAC), Airplane Design Group (ADG), and Taxiway Design Group (TDG). The FAA Advisory Circular (AC) 150/5300-13A, *Airport Design,* describes the following classification systems and parameters.

Aircraft Approach Category (AAC): A grouping of aircraft based on a reference landing speed (V_{REF}), if specified, or if V_{REF} is not specified, 1.3 times stall speed (V_{SO}) at the maximum certificated landing weight. V_{REF}, V_{SO}, and the maximum certificated landing weight are those values as established for the aircraft by the certification authority of the country of registry. The AAC generally refers to the approach speed of an aircraft in landing configuration. The higher the approach speed is, the more restrictive the design standards become. The AAC, depicted by letters A-E, represents the approach category and relates to the approach speed of the aircraft (operational characteristics). The AAC typically applies to runways and runway-related facilities, such as runway width, runway safety area (RSA), runway object free area (ROFA), runway protection zone (RPZ), and separation standards.

Airplane Design Group (ADG): The ADG, depicted by a Roman numeral I through VI, is a classification of aircraft which relates to the aircraft wingspan or tail height (physical characteristics). If the aircraft wingspan or tail height fall under two different classifications, the higher category is used. The ADG is used to establish design standards for taxiway safety area (TSA), taxiway obstacle free area (TOFA), taxilane object free area, apron wingtip clearance, and various other separation standards.

Taxiway Design Group (TDG): A classification of airplanes based on outer-to-outer main gear width (MGW) and cockpit to main gear (CMG) distance. The TDG relates to the dimensions of the under-carriage of the design aircraft. The taxiway design elements determined by the application of the TDG include the taxiway width, taxiway edge safety margin, taxiway shoulder width, taxiway fillet dimensions, and, in some cases, the separation distance between parallel taxiway/taxilanes. Other taxiway elements, such as the taxiway safety area (TSA), taxiway/taxilane object free area (TOFA), taxiway/taxilane separation to parallel taxiway/taxilanes or fixed or movable objects, and taxiway/taxilane wingtip clearances are determined solely based on the wingspan (ADG) of the design aircraft utilizing those surfaces. It is appropriate for a taxiway to be planned and built to different taxiway design standards based on expected use.

Exhibit 2E presents the aircraft classification of common aircraft in operation today.

AIRPORT AND RUNWAY CLASSIFICATION

The airport and runway classifications, along with the aircraft classifications defined above, are used to determine the appropriate FAA design standards to which the airfield facilities are to be designed and built.

Airport Reference Code (ARC): An airport designation that signifies the airport's highest runway design code (RDC), minus the third (visibility) component of the RDC. The ARC is used for planning and design purposes only and does not limit the aircraft's capability of operating safely on the airport.

A-I

- Beech Baron 55
- Beech Bonanza
- Cessna 150
- Cessna 172
- Cessna Citation Mustang
- Eclipse 500/550
- Piper Archer
- Piper Seneca

C-II, D-II

- Cessna Citation X (750)
- Gulfstream 100, 200,300
- Challenger 300/600
- ERJ-135, 140, 145
- CRJ-200/700
- Embraer Regional Jet
- Lockheed JetStar
- Hawker 800

B-I

- Beech Baron 58
- Beech King Air A90/100
- Cessna 402
- Cessna 421
- Piper Navajo
- Piper Cheyenne
- Swearingen Metroliner
- Cessna Citation I (525)

less than 100,000 lbs. C-III, D-III

- ERJ-170
- CRJ 705, 900
- Falcon 7X
- Gulfstream 500, 550, 650
- Global Express, Global 5000
- Q-400

B-II

- Super King Air 200
- Cessna 441
- DHC Twin Otter
- Super King Air 350
- Cessna Caravan
- Citation Excel (560), Sovereign (680)
- Falcon 50, 900, 2000
- Citation Bravo (550)
- Embraer 120

over 100,000 lbs. C-III, D-III

- ERJ-90
- Boeing Business Jet
- B-727
- B-737-300, 700, 800
- MD-80, DC-9
- A319, A320

A-III, B-III

- DHC Dash 7
- DHC Dash 8
- DC-3
- Convair 580
- Fairchild F-27
- ATR 72
- ATP

C-IV, D-IV

- B-757
- B-767
- C-130 Hercules
- DC-8-70
- MD-11

C-I, D-I

- Beech 400
- Lear 31, 35, 45, 60
- Israeli Westwind

D-V

- B-747-400
- B-777
- B-787
- A-330, A-340

Exhibit 2E
AIRCRAFT REFERENCE CODES

Runway Design Code (RDC): A code signifying the design standards to which the runway is to be built. The RDC is based upon planned development and has no operational component.

The AAC, ADG, and runway visual range (RVR) are combined to form the RDC of a runway. The RDC provides the information needed to determine certain design standards that apply. The first component, depicted by a letter, is the AAC and relates to aircraft approach speed (operational characteristics). The second component, depicted by a Roman numeral, is the ADG and relates to either the aircraft wingspan or tail height (physical characteristics), whichever is most restrictive. The third component relates to the visibility minimums expressed by RVR values in feet of 1,200 (⅛-mile), 1,600 (¼-mile), 2,400 (½-mile), 4,000 (¾-mile), and 5,000 (1-mile). The RVR values approximate standard visibility minimums for instrument approaches to the runways. The third component should read "VIS" for runways designed for visual approach use only.

Numerous airfield design standards are based upon the RDC. The RDC of any given runway is used to determine specific airfield design standards, which include imaginary surfaces established by the FAA to protect aircraft operational areas in order to keep them free of obstructions that could possibly affect the safe operation of aircraft. Airfield design standards at PVB are further described later in the report.

Approach Reference Code (APRC): A code signifying the current operational capabilities of a runway and associated parallel taxiway regarding landing operations. Like the RDC, the APRC is composed of the same three components: the AAC, ADG, and RVR. The APRC describes the current operational capabilities of a runway under meteorological conditions where no special operating procedures are necessary, as opposed to the RDC, which is based upon planned development with no operational component. The APRC for a runway is established based upon the minimum runway to taxiway centerline separation.

Given that Runway 15-33 does not have a parallel taxiway and is served by instrument approach visibility minimums not lower than one mile to each end of the runway, Runway 15-33 meets standards for APRC B/I(S)/5000.

Currently, the runway-to-partial parallel taxiway centerline separation for Runway 7-25 is 300 feet. Given that Runway 7-25 is served by non-precision instrument approach procedures with minimums not lower than 1-mile, Runway 7-25 meets standards for APRC B/III/5000 and D/II/5000.

Departure Reference Code (DPRC): A code signifying the current operational capabilities of a runway and associated parallel taxiway regarding take-off operations. The DPRC represents those aircraft that can take off from a runway while any aircraft are present on adjacent taxiways, under meteorological conditions with no special operating conditions. The DPRC is like the APRC but is composed of two components: AAC and ADG. A runway may have more than one DPRC depending on the parallel taxiway separation distance.

As mentioned, the runway to partial parallel taxiway centerline separation for Runway 7-25 is currently 300 feet, which meets FAA DPRC standards for B/III and D/II. Runway 15-33 meets FAA design standards for DPRC B/I(S) as a runway with no parallel taxiway.

CRITICAL DESIGN AIRCRAFT

The selection of airport design criteria is based upon the aircraft currently using, or expected to use, the airport. The critical aircraft is used to establish the design parameters of the airport. These criteria are typically based upon the most demanding aircraft using the airfield facilities on a relatively frequent basis. The critical design aircraft can be a single aircraft or a composite of multiple aircraft that represent a collection of aircraft characteristics. Upon the selection of multiple aircraft, the most demanding aircraft characteristics are used to establish the design criteria of the airport based upon the AAC, ADG, and TDG. If the airport contains multiple runways, a critical design aircraft will be established for each runway.

The primary consideration for a critical design aircraft is to ensure safe operation of the aircraft using the airport. If an aircraft larger than the critical design aircraft is to operate at the airport, it may result in reduced safety margins, or an unsafe operation. However, airports typically do not establish design criteria based solely upon the largest aircraft using the airfield facilities if it operates on an infrequent basis.

The critical design aircraft can be defined as an aircraft, or grouping of aircraft with similar characteristics, conducting at least 500 itinerant annual operations at an airport or the most regularly scheduled aircraft in commercial service. When planning for future airport facilities, it is extremely important to consider the demands of aircraft operating at the airport in the future. As a result of the separation standards based upon the critical aircraft, caution must be exercised to ensure that short-term development does not preclude the long-term needs of the airport. Thus, it is important to strike a balance between the facility needs of aircraft currently operating at the airport and the facility needs of aircraft projected to operate at the airport. Although precautions must be taken to ensure long-term airport development, airports with critical aircraft that do not use the airport facilities on a regular basis are unable to operate economically due to added development and maintenance expenses.

CURRENT CRITICAL DESIGN AIRCRAFT

It is imperative to have an accurate understanding of what type of aircraft operate at the airport both now and in the future. The type of aircraft utilizing airport facilities can have a significant impact on numerous design criteria. Thus, an aircraft activity study by type and aircraft category can be beneficial in determining future airport standards that must be met in order to accommodate certain aircraft.

As previously discussed, the FAA maintains the TFMSC database which documents aircraft operations at most NPIAS airports. Information is added to the TFMSC database when pilots file flight plans and/or when flights are detected by the National Airspace System, usually via radar. The database includes documentation of commercial traffic (air carrier and air taxi), general aviation, and military aircraft. Due to factors such as incomplete flight plans and limited radar coverage, TFMSC data does not account for all aircraft activity at an airport by a given aircraft type. Some VFR and non-enroute IFR traffic are excluded. Therefore, it is likely there are more operations at an airport than are captured by this methodology. TFMSC data is available for activity occurring at PVB and was utilized in this analysis.

Exhibit 2F presents the TFMSC operational mix at the airport for piston and turbine aircraft operations for the last 10 years. As can be seen, the airport experiences activity by a full range of piston as well as turbine powered aircraft, including a multitude of business jets.

Numerous aircraft classified within ARCs A-I through B-II were reported by TFMSC as operating at PVB. Furthermore, there are limited reports of aircraft within ARC C-I and C-II operating at PVB; however, aircraft within AAC C have not operated at the airport since 2012, according to TFMSC. Currently, ARC A-II and B-I aircraft make up the most demanding category of aircraft operating at PVB on a semi-frequent basis. According to TFMSC, ARC A-II aircraft (primarily the Pilatus PC-12) conducted 212 operations at PVB in 2018 and have averaged 285 annual operations over the past 10 years. Operations conducted by AAC B aircraft in 2018 total 222 operations, 184 of which were conducted by ARC B-I aircraft. Of the total ARC B-I operations for 2018, most were conducted by the Citation M2.

As previously noted, the critical aircraft is defined as the most demanding aircraft or group of aircraft conducting at least 500 annual itinerant operations at the airport. If the single most demanding aircraft does not account for 500 annual operations, that aircraft's operations can be added to the operations of the next most demanding aircraft until a sum of 500 operations is achieved. **Table 2M** presents the operational totals of the most demanding aircraft that conducted 500 operations collectively at PVB in 2018. When analyzing the 2018 operational totals, it should be noted that 434 operations were conducted by aircraft within ARC A-II and larger.

TABLE 2M | Critical Aircraft Summary

	ARC	2018 Operations
Beech Barron 55	A-I	2
Cessna 310	A-I	2
Diamond Twinstar	A-I	2
Eclipse 400/500	A-I	10
Lancair Evolution/Legacy	A-I	24
Piper Malibu/Meridian	A-I	4
Piper Seneca	A-I	14
Socata TBM 700/850/900	A-I	8
Pilatus PC-12	A-II	212
Beech Barron 58	B-I	4
Cessna 340	B-I	2
Citation CJ1	B-I	14
Citation M2	B-I	158
Citation Mustang	B-I	2
King Air 90/100	B-I	4
Cessna Conquest	B-II	2
Citation CJ2/CJ3/CJ4	B-II	2
Citation II/SP/Latitude	B-II	2
Citation XLS	B-II	2
King Air 200/300/350	B-II	8
Phenom 300	B-II	22
	Total	500

At present, there is an Embraer Phenom 300 and Cessna CJ3+ based at PVB, which are category B-II aircraft due their operating characteristics and MTOW greater than 12,500 pounds. According to the TFMSC, the Phenom 300 and CJ3+ have conducted a total of 24 operations in 2018. Although the Phenom 300 and CJ3+ are not operating more than 500 times annually, these aircraft are based at PVB. As noted, several other B-II aircraft operate at the airport during the year. Moreover, the previously mentioned Pilatus PC-12 (ARC A-II), which has averaged 285 annual operations, is also based at PVB. Combined, AAC B operations occurring at PVB totaled 222, while ADG II operations totaled 250. Based upon the current mix of AAC A and B and ADG II aircraft operating at PVB as well as based aircraft including the Phenom 300, Cessna CJ3+, and the Pilatus PC-12, there is a need to maintain ADG II design criteria, which is consistent with the currently approved ALP. **Thus, the existing airport design aircraft is best described as the Pilatus PC-12 and the existing ARC is A-II.**

ARC	Aircraft	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
A-I	A36 Bonanza	0	0	0	0	0	0	0	0	2	0
	Aero Commander 100 Series	0	0	0	2	0	2	0	0	0	0
	American AA-1/AA-5	0	0	4	0	6	2	0	4	4	0
	American Traveler	0	2	0	0	0	0	0	0	0	0
	Beech 65 Queen Air	0	0	0	0	0	0	0	0	0	0
	Beech B76 Duchess	0	0	0	2	0	0	0	0	0	0
	Beech Baron 55	0	0	12	4	4	0	0	0	0	2
	Beech Bonanza	4	14	20	26	16	16	22	48	20	10
	Beech Sierra	0	0	0	0	0	0	2	0	0	0
	Beech Sundowner	0	2	0	0	0	0	0	0	0	0
	Bellanca Viking	0	2	0	0	0	0	0	0	0	0
	Cessna 150/152	2	2	2	0	2	2	8	0	0	0
	Cessna 170/172/177	22	24	28	22	30	18	20	10	14	44
	Cessna 182/185	20	24	58	32	36	10	24	10	14	44
	Cessna 195	0	0	0	0	2	2	0	0	0	0
	Cessna 206/207/210	18	2	18	6	16	8	10	2	6	2
	Cessna 310	2	2	8	0	6	2	0	0	2	2
	Cessna 400 Corvalis	56	28	0	6	6	4	2	0	2	8
	Cessna 402	0	0	0	4	0	0	0	0	0	0
	Cessna TTx Model T240	0	0	0	0	0	0	2	0	0	0
	Cirrus SR-20/22	18	50	34	100	114	114	122	112	66	14
	Diamond DA 20/40/Twinstar	0	0	0	2	2	4	2	0	4	2
	Eclipse 400/500	0	0	0	0	0	18	38	38	62	10
	Express 2000	0	0	0	0	2	0	0	0	0	0
	Flight Design CT	0	14	6	2	2	2	4	0	0	0
	Grumman Cougar	0	0	0	0	0	0	0	2	2	0
	Lancair 4	0	0	0	0	0	0	0	2	2	0
	Lancair Evolution/Legacy	0	0	0	0	0	4	14	40	44	24
	Mooney	4	16	28	20	14	26	26	10	4	8
	Piper Apache/Aztec	0	0	6	2	2	0	0	0	0	0
	Piper Cherokee	78	22	12	16	20	48	96	50	58	32
	Piper Comanche	18	4	10	10	8	6	14	8	32	36
	Piper Cub	0	0	2	0	0	0	0	0	0	0
	Piper Lance	24	8	4	6	6	18	0	4	0	0
	Piper Malibu/Meridian	18	8	8	26	20	20	8	2	8	4
	Piper Navajo	0	2	6	4	0	2	8	6	2	0
	Piper Seminole	0	0	2	2	0	2	0	0	0	0
	Piper Seneca	2	2	0	2	2	6	26	18	20	14
	Piper Tomahawk	0	0	2	0	0	0	0	0	0	0
	Piper Twin Comanche	12	0	0	4	4	8	10	2	0	0

ARC	Aircraft	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
A-I	Socata TB-21 Trinidad	0	2	2	2	4	2	0	0	0	0
	Socata TBM 7/850/900	0	2	2	16	2	4	2	6	4	8
	T-34 Mentor	0	0	0	2	0	0	0	0	0	0
	Taylorcraft Seabird	0	0	0	0	0	0	4	0	0	0
	Vans RV Series	0	0	0	4	2	0	4	0	2	0
	TOTAL	298	230	274	324	332	350	468	374	380	246
A-II	Cessna Caravan	0	0	6	0	0	0	0	0	0	0
	Pilatus PC-12	250	256	390	272	324	314	276	324	228	212
	TOTAL	250	256	396	272	324	314	276	324	228	212
B-I	Aerostar 600	0	0	0	0	0	0	0	0	4	0
	Beech B60 Duke	0	0	0	4	0	0	0	0	0	0
	Beech Baron 58	0	0	0	2	8	4	0	4	4	4
	Cessna 340	0	0	40	38	82	28	0	0	0	2
	Cessna 411/414/421	6	0	0	4	8	14	10	0	0	0
	Cessna 425 Corsair	0	4	2	0	0	0	0	0	2	0
	Citation CJ1	6	2	4	2	0	2	0	6	24	14
	Citation M2	0	0	0	0	0	0	0	8	116	158
	Citation Mustang	0	0	0	0	2	10	0	0	2	2
	King Air 90/100	2	4	8	4	12	8	4	0	2	4
	Mitsubishi MU-2	6	2	0	0	0	0	0	0	0	0
	Piaggio Avanti	0	2	0	0	0	0	0	0	0	0
	Piper Cheyenne	0	0	0	0	0	2	0	0	2	0
	TOTAL	20	14	54	54	112	68	14	18	156	184
B-II	Aero Commander 1000 Series	0	0	0	2	0	0	0	0	0	0
	Cessna Conquest	2	4	4	2	0	2	2	0	4	2
	Citation CJ2/CJ3/CJ4	0	0	2	0	0	0	12	34	0	2
	Citation II/SP/Latitude	2	2	10	0	2	0	0	0	0	2
	Citation V/Sovereign	2	0	0	2	0	0	2	0	0	0
	Citation XLS	0	0	2	2	0	0	0	0	0	2
	King Air 200/300/350	8	18	60	64	10	14	6	2	12	8
	Phenom 300	0	0	0	0	0	0	0	0	0	22
	Shorts 360	0	0	0	0	0	0	0	0	2	0
	TOTAL	14	24	78	72	12	16	22	36	18	38
C-I	Learjet 60 Series	0	0	0	2	0	0	0	0	0	0
	TOTAL	0	0	0	2	0	0	0	0	0	0
C-II	Challenger 600/604	0	2	0	0	0	0	0	0	0	0
	Embraer ERJ-135/140/145	2	0	0	2	0	0	0	0	0	0
	Hawker 800 (Formerly Bae-125-800)	0	2	0	0	0	0	0	0	0	0
	TOTAL	2	4	0	2	0	0	0	0	0	0

Exhibit 2F
TFMSC

AIRPORT REFERENCE CODE (ARC) SUMMARY

ARC	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
A-I	298	230	274	324	332	350	468	374	380	246
A-II	250	256	396	272	324	314	276	324	228	212
B-I	20	14	54	54	112	68	14	18	156	184
B-II	14	24	78	72	12	16	22	36	18	38
C-I	0	0	0	2	0	0	0	0	0	0
C-II	2	4	0	2	0	0	0	0	0	0
TOTAL	584	528	802	726	780	748	780	752	782	680

APPROACH CATEGORY

AC	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
A	548	486	670	596	656	664	744	698	608	458
B	34	38	132	126	124	84	36	54	174	222
C	2	4	0	4	0	0	0	0	0	0
TOTAL	584	528	802	726	780	748	780	752	782	680

DESIGN GROUP

DG	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
I	318	244	328	380	444	418	482	392	536	430
II	266	284	474	346	336	330	298	360	246	250
TOTAL	584	528	802	726	780	748	780	752	782	680

Exhibit 2F
TFMSC

SHORT-TERM CRITICAL DESIGN AIRCRAFT

The short-term critical design aircraft can be defined as the aircraft or family of aircraft that can be reasonably anticipated to conduct 500 or more annual itinerant operations at PVB within the next five years. For this task, an extensive survey effort was undertaken of local, regional, and national aircraft operators to identify potential users of PVB that might require a runway extension.

Business Aircraft Survey

The first target market for the survey effort included business aircraft operators that have conducted at least 10 operations at Iowa County Airport (MRJ), Dubuque Regional Airport (DBQ), and Boscobel Airport (OVS) within calendar year 2018. These airports were selected as they are within, or in close proximity to, the PVB service area and have runway lengths of at least 5,000 feet. Of these airports, DBQ is most frequently utilized by business aircraft within the regional area. Ultimately, DBQ and MRJ are PVB's most direct competitor for business aircraft due to their close proximity and longer runway lengths.

Records for business aircraft operators were obtained from the AirportIQ, a database maintained and operated by GCR, Inc, which pairs aircraft ownership data with aircraft operations occurring at specific airports utilizing flight plans and radar data. This database revealed nearly 90 different aircraft owners from across the U.S. that have operated business aircraft at least 10 times annually at MRJ, DBQ, and OVS from January 1, 2018 through December 31, 2018. In addition to the aircraft operators identified at DBQ, MRJ, and OVS, business aircraft owners within the airport service area were identified and mailed a survey as well. Email surveys were also sent to specific aircraft owners and operators whose contact information was provided by PVB airport management. Each operator received a survey to ascertain whether that operator would consider utilizing PVB in the future if it were to have its runway extended to their aircraft's ideal runway length.

Of the 108 surveys sent, 11 surveys were returned for a response rate of 10 percent. It should be noted that four of the returned surveys came from the same operator, bringing the response rate per operator down to approximately seven percent. Turbine powered aircraft operated by the respondents included: Beechcraft King Air 90GTx, Pilatus PC-12, Phenom 300, multiple Cessna Citation jet aircraft, and one operator that indicated a turboprop or jet aircraft could be in their future. The respondents indicated that an ideal runway length for their aircraft ranged from 5,000 feet to 6,500 feet. When asked how many operations each operator would conduct at PVB if the runway were extended to their aircraft's ideal length, respondents estimated a total of 336 annual operations. At total of 120 of those operations were from one respondent who operates the King Air 90GTx and indicated a need for 5,000 feet of runway length. It should be noted that an additional 120 operations were indicated by another operator who currently operates a single engine piston aircraft, however, is considering acquiring a turboprop or jet in the future.

Aside from runway length, respondents also indicated that there are additional factors at PVB that limit or prevent them from operating at PVB. These factors include:

- Existing instrument approach minimums of not lower than one mile.
- Jet fuel availability.
- No runway de-ice capability.
- No aircraft de-ice capability.

Regional Business Survey

The surveying effort also explored the potential or local and regional business operators as future users of PVB if it were to receive a runway extension. For this portion of the study, a "draft letter of support" was prepared and delivered to the PVB Airport Commission and airport management for distribution as they saw fit. This letter was prepared in a format that could be edited by each individual business or airport user based upon their specific needs to operate at PVB. Unfortunately, this effort did not result in any completed responses.

Short-Term Critical Design Aircraft Summary

The aviation demand forecasts, presented earlier, indicate the potential for growth in activity at the airport. The short-term based aircraft forecast includes 18 based single engine piston-powered aircraft, two based turboprops, three jets, and one aircraft in the "other" category. Additionally, the short-term operations forecast projects a modest increase in operational activity totaling 11,850 operations by year 2024. The type and size of aircraft using the airport regularly can impact the design standards to be applied to the airport system. Therefore, it is important to understand what type of aircraft may use the airport in the future. Factors such as population and employment growth in the airport service area, the proximity and level of service of other regional airports, and development at the airport can influence future activity.

In total, surveys were distributed to 108 known aircraft owners and operators (many of which operate multiple aircraft) and eight completed responses per operator were received. The results of the surveying effort identified a potential for 336 additional annual operations (120 of these operations were indicated for an unknown aircraft type as it has yet to be acquired by the aircraft operator). Although some operators of smaller piston driven aircraft also filled out the survey, many of them did not indicate that they would conduct additional operations should the runway be extended as it already meets their current needs. The makeup of respondents and estimated operations by aircraft classification is as follows:

- Unknown turboprop or jet yet to be acquired by operator: 120
- ARC A-I (Piper Cherokee; Mooney M-20): 0 additional annual operations
- ARC B-I (Cessna CitationM2): 0 additional annual operations
- ARC B-II (King Air 90GTx; Phenom 300): 216 additional annual operations

Based upon the survey responses and TFMSC analysis, there is not a single aircraft make or category of aircraft that indicates an operational level satisfying the FAA's requirement of 500 annual itinerant operations to be considered the critical design aircraft. According to these results, most operations throughout the short-term planning period are expected to continue to be conducted by aircraft within AACs A and B, and within ADGs I and II. Given that aircraft larger than ARC A-II and B-II are not expected to conduct at least 500 annual operations by the short-term planning period, the next most demanding aircraft must be considered, which is the Pilatus PC-12. **As such, this study will maintain ARC A-II as the short-term design standard as well as the Pilatus PC-12 as the short-term critical aircraft.** However, the airport should continue to monitor the operational and based aircraft fleet mix trends as forecast potential for based aircraft and itinerant operations growth, including increased turboprop and business jet activity, could materialize over the long-term planning horizon. Long-term planning should maintain B-II as the ultimate ARC, which is consistent with the current ALP.

RUNWAY LENGTH ANALYSIS

Runway length requirements for an airport typically are based on factors including airport elevation, mean daily maximum temperature of the hottest month, runway gradient (difference in runway elevation of each runway end), critical aircraft type expected to use the airport, and stage length (average distance flown per aircraft departure) of the longest non-stop trip destination. For aircraft with maximum certificated takeoff weights of less than 12,500 pounds, adjustments for runway gradient are not taken into account.

Aircraft performance declines as each of these factors increase. Summertime temperatures and stage lengths are the primary factors in determining runway length requirements. For calculating runway length requirements at PVB, the airport's elevation is 1,024.8 feet above mean sea level (MSL) and the mean maximum temperature of the hottest month (July) is 82.3 degrees Fahrenheit (F). The maximum difference in runway end elevation for primary Runway 15-33 is 1.9 feet for a gradient of 0.04 percent.

Using the site-specific data described above, runway length requirements for the various classifications of aircraft that may operate at the airport were examined using FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*. The FAA runway analysis groups general aviation aircraft into several categories, reflecting the percentage of the fleet within each category. The runway design should be based upon the most critical aircraft (or group of aircraft) performing at least 500 annual itinerant operations. Future plans should be realistic and supported by the FAA-approved forecasts and should be based on the critical design aircraft (or family of aircraft).

The first step in evaluating runway length is to determine general runway length requirements for the majority of aircraft operating at the airport. The majority of operations at PVB are conducted using smaller single engine piston-powered aircraft weighing less than 12,500 pounds.

Table 2N summarizes the FAA's generalized recommended runway lengths determined for PVB based upon runway design criteria outlined in FAA AC 150/5325-4B. The advisory circular further defines the fleet categories as follows:

- 95 Percent of Small Airplane Fleet: Applies to airports that are primarily intended to serve medium-sized population communities with a diversity of usage and a greater potential for increased aviation activities. This category also includes airports that are primarily intended to serve low-activity locations, small population communities, and remote recreational areas.

- 100 Percent of Small Airplane Fleet: This type of airport is primarily intended to serve communities located on the fringe of a metropolitan area or a relatively large population community that is remote from a metropolitan area.

TABLE 2N | Small Aircraft Runway Length Requirements

AIRPORT AND RUNWAY DATA	
Airport elevation	1,024.8 feet
Mean daily maximum temperature of the hottest month	82.3° F
Maximum difference in runway elevation	1.9 feet
RUNWAY LENGTHS RECOMMENDED FOR AIRPORT DESIGN	
Small airplanes with less than 10 passenger seats:	
95 percent of small airplanes	3,300 feet
100 percent of small airplanes	3,900 feet
Small airplanes with 10 or more passenger seats	4,200 feet

Source: FAA AC 150/5325-4B, Runway Length Requirements for Airport Design.

Based upon these calculations, Runway 15-33 at PVB satisfies the length requirements for 95 and 100 percent of small airplanes with its current length of 3,999 feet. The runway length requirement for small airplanes with 10 or more passenger seats is 4,200 feet, which is approximately 200 feet longer than the existing runway length at PVB. According to the existing based aircraft list and TFMSC, the airport is also utilized by aircraft weighing more than 12,500 pounds, including small to medium business jet and turboprop aircraft. The FAA runway length AC also includes methods to calculate recommended runway length for large aircraft. Runway length requirements for business jets weighing less than 60,000 pounds have also been calculated based on FAA AC 150/5325-4B. These calculations take into consideration the runway gradient and landing length requirements for contaminated runways (wet). Business jets tend to need greater runway length when landing on a wet surface because of their increased approach speeds.

AC 150/5325-4B stipulates that runway length determinations for large aircraft consider a grouping of airplanes with similar operating characteristics. The AC provides two separate “family groupings of airplanes,” each based upon their representative percentage of aircraft in the national fleet. The first grouping is those business jets that make up 75 percent of the national fleet, and the second group is those making up 100 percent of the national fleet (75-100 percent of the national fleet). **Table 2P** presents a representative list of aircraft for each aircraft grouping. A third group includes business jets weighing more than 60,000 pounds; however, runway length determination for these aircraft types must be based on the performance characteristics of the individual aircraft.

TABLE 2P | Business Jet Fleet Mix Categories for Runway Length Determination

75% of the national fleet	MTOW	75-100% of the national fleet	MTOW	Greater than 60,000 pounds	MTOW
Lear 35	20,350	Lear 55	21,500	Gulfstream II	65,500
Lear 45	20,500	Lear 60	23,500	Gulfstream IV	73,200
Cessna 550	14,100	Hawker 800XP	28,000	Gulfstream V	90,500
Cessna 560XL	20,000	Hawker 1000	31,000	Global Express	98,000
Cessna 650 (VII)	22,000	Cessna 650 (III/IV)	22,000		
IAI Westwind	23,500	Cessna 750 (X)	36,100		
Beechjet 400	15,800	Challenger 604	47,600		
Falcon 50	18,500	IAI Astra	23,500		
MTOW: Maximum Take Off Weight					

Source: FAA AC 150/5325-4B, Runway Length Requirements for Airport Design.

Table 2Q presents the results of the runway length analysis for business jets developed following the guidance provided in AC 150/5325-4B. To accommodate 75 percent of the business jet fleet at 60 percent useful load, a runway length of 5,500 feet is recommended per the AC. This length is derived from a raw length of 4,775 feet that is adjusted, as recommended, for runway gradient, then rounded up to the nearest hundred feet (when the raw number is 30 feet or more). To accommodate 100 percent of the business jet fleet at 60 percent useful load, a runway length of 5,800 feet is recommended per the AC.

TABLE 2Q | Business Jet Runway Length Requirements

Airport Elevation	1,024.8 feet MSL
Average High Monthly Temp.	82.3 °F (July)
Runway Gradient	1.9 feet

Fleet Mix Category	Raw Runway Length from FAA AC	Runway Length With Gradient Adjustment (+19')	Wet Surface Landing Length for Jets (+15%)*	Final Runway Length
75% of fleet at 60% useful load	4,721’	4,740’	5,429’	5,400’
75% of fleet at 90% useful load	6,176’	6,195’	7,000’	7,000’
* Max 5,500' for 60% useful load in wet conditions				

Source: FAA AC 150/5325-4B, Runway Length Requirements for Airport Design.

Another method to determine runway length requirements for jet and turbine powered aircraft at PVB is to examine each aircraft’s flight planning manual under conditions specific to the airport. Several aircraft were analyzed for takeoff length required with a design temperature of 82.3 degrees Fahrenheit, at a field elevation of 1,024.8 feet MSL, and runway gradient of 0.04 percent.

Exhibit 2G provides a detailed runway takeoff length analysis for the most common business jet and turboprop aircraft in the national fleet. This data was obtained from Ultranav software which computes operational parameters for specific aircraft based on its flight manual data. The runway length data is presented in a “gradient” format, with runway length requirement values shown transitioning from green to increasingly darker shades of yellow and red depending upon the amount of runway length required. Runway length values identified in bold text are longer than the existing runway length of 4,000 feet. The analysis includes the maximum takeoff weight (MTOW) allowable and the percent useful load from 60 percent to 100 percent. This analysis shows that Runway 15-33 can generally accommodate the

Aircraft Name	MTOW (LBS)	Payload (LBS)	60% Useful Load Takeoff Field Length (ft.)	70% Useful Load Takeoff Field Length (ft.)	80% Useful Load Takeoff Field Length (ft.)	90% Useful Load Takeoff Field Length (ft.)	100% Useful Load Takeoff Field Length (ft.)
Pilatus PC-12	9,921	3,139	2,042	2,206	2,379	2,559	2,747
King Air C90B	10,100	3,030	2,546	2,736	2,934	3,142	3,360
King Air 200 GT	12,500	3,720	3,338	3,440	3,545	3,655	3,370
Citation CJ3	13,870	5,110	2,827	2,964	3,155	3,384	3,616
Citation I/SP	11,850	4,447	2,656	2,881	3,121	3,374	3,643
Citation Mustang	8,645	3,085	2,654	2,843	3,072	3,380	3,694
Citation Ultra	16,300	6,275	2,765	2,938	3,180	3,432	3,702
Citation Sovereign	30,300	12,150	3,433	3,455	3,519	3,733	3,971
Citation (525A) CJ2	12,375	4,575	3,034	3,272	3,518	3,767	**4,033**
Citation II (550)	13,300	5,100	2,846	3,128	3,430	3,750	**4,090**
King Air 350	15,000	5,115	3,303	3,444	3,584	3,809	**4,120**
Citation Encore	16,630	6,110	3,037	3,226	3,497	3,819	**4,162**
Citation 560 XLS	20,200	7,400	3,182	3,406	3,641	3,899	**4,179**
Citation Encore Plus	16,830	6,270	3,045	3,242	3,525	3,856	**4,227**
Citation Bravo	14,800	5,475	3,309	3,527	3,774	**4,081**	**4,413**
Citation (525) CJ1	10,600	3,730	2,902	3,266	3,684	**4,131**	**4,520**
Premier 1A	12,500	3,900	3,461	3,782	**4,149**	**4,575**	**5,036**
Beechjet 400A	16,300	5,315	3,835	**4,125**	**4,430**	**4,750**	**5,080**
Lear 31A	17,000	5,786	3,492	3,768	**4,065**	**4,379**	**5,195**
Citation VII	23,000	8,750	**4,436**	**4,724**	**5,038**	**5,373**	**5,743**
Challenger 300	38,850	15,000	**4,198**	**4,593**	**5,001**	**5,419**	**5,864**
Citation III	21,500	9,689	**4,220**	**4,595**	**5,000**	**5,437**	**5,905**
Citation X	35,700	13,236	**4,184**	**4,657**	**5,099**	**5,550**	**6,011**
Lear 40	21,000	7,400	**4,257**	**4,646**	**5,096**	**5,640**	**6,280**
Lear 45	21,500	7,500	**4,499**	**4,922**	**5,413**	**6,018**	**6,809**
Challenger 604/605	48,200	21,015	**4,683**	**5,162**	**5,700**	**6,271**	**6,854**
Lear 60	23,500	8,728	**4,802**	**5,257**	**5,805**	**6,333**	**6,887**
Hawker 800 (Non-T/R)	27,400	11,400	**4,917**	**5,409**	**5,930**	**6,482**	**7,066**

Note: Bolded values are longer than the existing runway length.

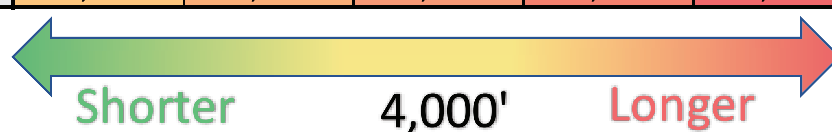


Exhibit 2G
RUNWAY LENGTH REQUIREMENTS

Aircraft Name	MLW	Landing Lengths Required for:					
		CFR Part 25		CFR Part 91K		CFR Part 135	
		Dry	Wet	Dry (.8)	Wet (.8)	Dry (.6)	Wet (.6)
King Air 200 GT	12,500	1,210	N/A	1,513	N/A	2,017	N/A
King Air C90B	9,600	1,249	N/A	1,561	N/A	2,082	N/A
Pilatus PC-12	9,921	2,311	N/A	2,889	N/A	3,852	N/A
Citation I/SP	11,350	2,401	2,761	3,001	3,451	**4,002**	**4,602**
King Air 350	15,000	2,825	3,249	3,531	**4,061**	**4,708**	**5,415**
Citation II (550)	12,700	2,434	3,529	3,043	**4,411**	**4,057**	**5,882**
Citation Mustang	8,000	2,534	3,551	3,168	**4,439**	**4,223**	**5,918**
Citation Sovereign	27,100	2,827	3,554	3,534	**4,443**	**4,712**	**5,923**
Lear 40	19,200	2,849	3,591	3,561	**4,489**	**4,748**	**5,985**
Lear 45	19,200	2,849	3,591	3,561	**4,489**	**4,748**	**5,985**
Hawker 800 (Non-T/R)	23,350	2,960	3,820	3,700	**4,775**	**4,933**	**6,367**
Citation (525) CJ1	9,800	2,914	3,942	3,643	**4,928**	**4,857**	**6,570**
Citation CJ3	12,750	2,985	**4,078**	3,731	**5,098**	**4,975**	**6,797**
Citation VII	20,000	3,132	**4,222**	3,915	**5,278**	**5,220**	**7,037**
Lear 31A	16,000	3,032	**4,245**	3,790	**5,306**	**5,053**	**7,075**
Premier 1A	11,600	3,383	**4,337**	**4,229**	**5,421**	**5,638**	**7,228**
Challenger 604/605	38,000	2,854	**4,360**	3,568	**5,450**	**4,757**	**7,267**
Citation Ultra	15,200	3,044	**4,496**	3,805	**5,620**	**5,073**	**7,493**
Citation Encore	15,200	2,998	**4,548**	3,748	**5,685**	**4,997**	**7,580**
Citation Encore Plus	15,200	3,004	**4,558**	3,755	**5,698**	**5,007**	**7,597**
Citation (525A) CJ2	11,500	3,171	**4,612**	3,964	**5,765**	**5,285**	**7,687**
Lear 60	19,500	3,633	**4,835**	**4,541**	**6,044**	**6,055**	**8,058**
Challenger 300	33,750	2,658	**5,094**	3,323	**6,368**	**4,430**	**8,490**
Citation X	31,800	3,746	**5,304**	**4,683**	**6,630**	**6,243**	**8,840**
Citation 560 XLS	18,700	3,410	**5,365**	**4,263**	**6,706**	**5,683**	**8,942**
Beechjet 400A	15,700	3,730	**5,510**	**4,663**	**6,888**	**6,217**	**9,183**
Citation Bravo	13,500	3,539	**5,550**	**4,424**	**6,938**	**5,898**	**9,250**
Citation III	19,000	**4,160**	**6,026**	**5,200**	**7,533**	**6,933**	**10,043**

N/A: No wet data available

Note: Bolded values are longer than the existing runway length.

Shorter 4,000' Longer

Exhibit 2G
RUNWAY LENGTH REQUIREMENTS

types of turbine powered and business jet aircraft identified operating at PVB when taking off with 80 percent useful load or less. These aircraft are primarily classified within AAC B and include many of the smaller Cessna Citation models as well as the King Air 90, 200, and 350. However, the aircraft analyzed will have difficulty operating on the current runway length at PVB when operating at higher useful loads and on design day temperatures. Some of the larger and faster aircraft analyzed are restricted from operating at PVB altogether when design day temperatures prevail. The average takeoff length needed for all turbine aircraft analyzed at 60 percent useful load is 3,497 feet and 4,806 feet at 100 percent useful load. At 100 percent useful load the average runway length required exceeds the existing runway length at PVB by 807 feet.

Exhibit 2G also presents the runway length required for landing under three operational categories: Title 14 CFR Part 25, CFR Part 91k, and CFR Part 135. CFR Part 25 operations are those conducted by individuals or companies which own their aircraft. CFR Part 91k includes operations in fractional ownership programs which utilize their own aircraft under direction of pilots specifically assigned to said aircraft. CFR Part 135 applies to all for-hire charter operations, including most fractional ownership operations. Similar to the runway takeoff length requirements, the landing lengths are depicted in a gradient format with runway length requirements presented in green to increasingly darker shades of yellow and red. The bold text indicates a runway length requirement that exceeds 4,000 feet. The landing length analysis shows that the majority of aircraft analyzed can land on the existing runway when operating under CFR Part 25 and 91k dry conditions. As shown on the exhibit, most of the aircraft examined will struggle to land on the existing runway length when operating under CFR Part 25 and 91k wet conditions. Essentially, none of the aircraft analyzed can land on the existing runway when operating under CFR Part 135 wet or dry conditions, with the exception of the King Air C90, King Air 200 GT, and the Pilatus PC-12. Based upon this analysis, the average landing length is 2,923 feet for aircraft operating under CFR Part 25 during dry runway conditions and 3,654 feet for awircraft operating under Part 91k during dry runway conditions. Similarly, landing length requirements of all aircraft analyzed average 4,349 and 5,436 feet for aircraft operating under CFR Part 25 and 91k wet conditions, respectively. Certain aircraft, such as Cessna Citation series aircraft, require over 10,000 feet of runway length for landing when operating at maximum landing weight under Part 135 during wet runway conditions. Accumulations of snow and ice will also dramatically increase landing length requirements. The landing length analysis shows an average landing length of 7,249 feet for aircraft operating under CFR Part 135 during wet runway conditions.

Runway 18-36 Length Summary

As previously noted, the FAA will typically only support runway length planning to the 60 percent useful load factor unless it can be demonstrated that aircraft are frequently operating fully loaded (90 percent). Some of the turbine aircraft analyzed are capable of taking off on the runway at PVB at or above 60 percent useful load. Examples of aircraft that can operate within the 60-80 percent useful load range include the smaller Cessna Citation models as well as the King Air 90, 200, and 350. For landing situations, a large majority of the aircraft analyzed require additional runway length when operating CFR Part 25, 91k, and 135 wet runway conditions. Newer generation business aircraft tend to operate more efficiently, requiring shorter runway lengths.

Many factors are considered when determining appropriate runway length for safe and efficient operations of aircraft at PVB. The airport should strive to accommodate business jets and turboprops to the greatest extent possible as demand would dictate. Runway 15-33 is currently 3,999 feet long and can accommodate a limited mix of business jets and turboprop aircraft. The analysis notes that many aircraft are subject to weight restrictions when operating at useful loads of 90 percent or during hot days.

The majority of operations taking place at PVB are conducted by smaller, single engine, fixed-wing aircraft weighing less than 12,500 pounds. Following guidance from AC 150/5325-4B, to accommodate 100 percent of these small aircraft, a runway length of at least 3,900 feet is recommended. However, the airport is also utilized by aircraft weighing more than 12,500 pounds, including small- to mid-sized business jet aircraft. As such, runway length calculations specific to PVB were generated for business jets and turboprop aircraft that were identified operating at PVB.

As discussed, the existing length of Runway 15-33 can generally accommodate the types of turbine powered and business jet aircraft identified operating at PVB when taking off with 80 percent useful load or less; however the runway does not fully provide for all turbine aircraft activity, especially during hot weather conditions (or wet runway conditions when landing) and when aircraft are carrying full useful loads. Justification for any runway extension to meet the needs of turbine powered aircraft would require regular use on the order of 500 annual operations. This is the minimum threshold required to obtain FAA grant funding assistance; however, sufficient justification was not identified in the critical design aircraft analysis to consider a larger jet or turboprop as the existing and/or short-term critical design aircraft. **Although, aircraft operations by larger turbine powered aircraft can and likely will continue into the future, the research and analysis conducted here does not indicate that aircraft requiring a runway longer than 3,999 feet will utilize the airport 500 or more times annually in the short-term.**

At this point, the analysis does not support FAA and/or State grant funding justification for a runway extension at PVB. Airport staff should continuously monitor the fleet mix of traffic, including registration numbers and operators, which may, over time, result in appropriate justification for a runway extension.

SUMMARY

The surveying effort undertaken for this project, which targeted over 108 known aircraft owners/operators and regional businesses, attempted to identify specific users to justify a runway extension. It was successful in identifying business aircraft users that would potentially utilize or increase operations at PVB; however, it failed to identify enough operations by those users to qualify an aircraft requiring a runway extension as the current or short-term critical design aircraft.

Through the analysis of the critical design aircraft, the existing and short-term critical design aircraft, or family of aircraft, was found to be within ARC A-II. As such the existing and short-term airport design aircraft is best described as the Pilatus PC-12 within ARC A-II. Ultimately, long-term planning should continue to adhere to ARC B-II design standards.

The runway length analysis conducted showed that both the current and short-term critical design aircraft are capable of operating safely and efficiently on the current runway length of 3,999 feet at PVB. **Therefore, at this time, there is not sufficient documentation to support a runway extension at PVB.**

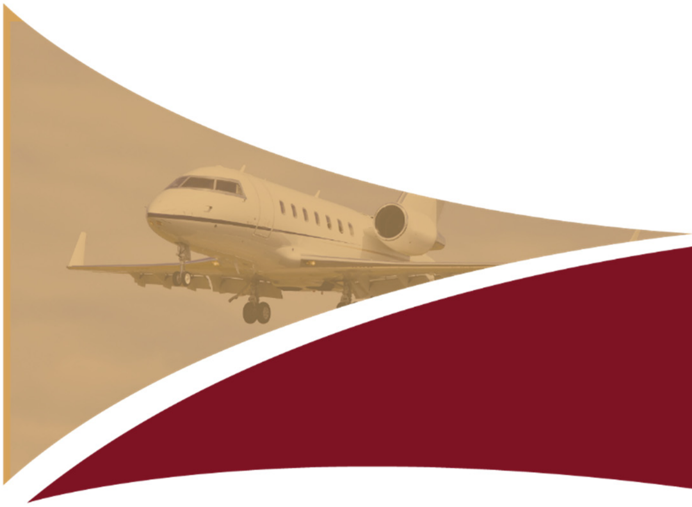
RETURN TO AGENDA

CITY OF PLATTEVILLE

PLATTEVILLE MUNICIPAL AIRPORT

Chapter 3

FACILITIES REQUIREMENTS



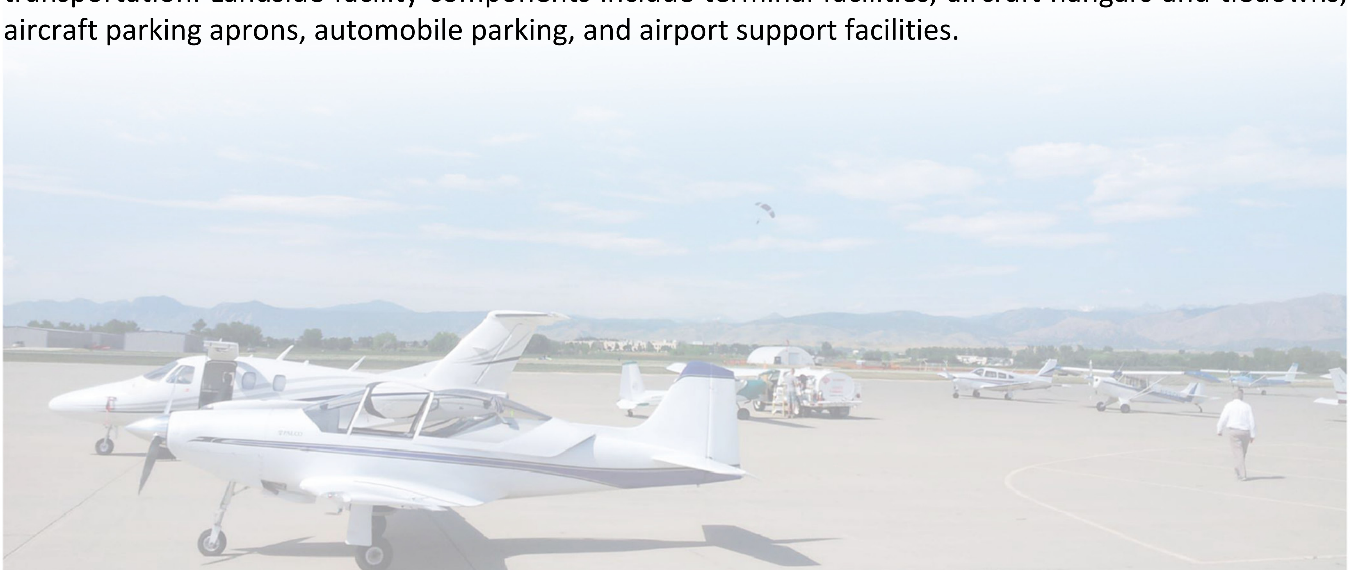
CITY OF PLATTEVILLE

Chapter 3

FACILITIES REQUIREMENTS

The objective of this effort is to identify the adequacy of existing airport facilities and outline what new facilities may be needed, and when these may be needed, to accommodate forecast demands. Having established these facility requirements, alternatives for providing these facilities will be evaluated later in this report.

To properly plan for the future of Platteville Municipal Airport, it is necessary to identify specific types and quantities of facilities required or desired to adequately serve the airport over the next 20 years. Components of an airport contain both airside and landside facilities. Airside facilities include facilities that are related to the approach, departure, and ground movement of aircraft on the airport. Airside facility components encompass runways, taxiways, navigational approach aids, airport signage, marking, and lighting. Landside facilities are needed on an airport to foster the interface of air and ground transportation. Landside facility components include terminal facilities, aircraft hangars and tiedowns, aircraft parking aprons, automobile parking, and airport support facilities.



AIRPORT DESIGN STANDARDS

The selection of appropriate FAA design standards for the development and location of airport facilities is based primarily upon the characteristics of the aircraft which are currently using, or expected to use, the airport. Based strictly upon Traffic Flow Management System Counts (TFMSC), the critical aircraft discussion in Chapter 2 identified the existing critical aircraft family as aircraft approach category (AAC) A and airplane design group (ADG) II, creating an airport reference code (ARC) of A-II. In the future, it is expected that the airport will transition to ARC B-II as larger, more sophisticated aircraft are forecast to base and operate at PVB over the planning horizon.

Since the completion of the previous ALP, the FAA published FAA Advisory Circular (AC) 150/5300-13A, *Airport Design*, which replaced the previous Airport Design AC, which was in its 19th Change. The new AC presents several substantial design changes, including the introduction of the Runway Design Code (RDC) and Taxiway Design Group (TDG), in addition to changes to revised standards for taxiway design and runway protection zones (RPZs). More recently, in February 2014, the FAA published AC 150/5300-13A, Change 1, *Airport Design*, which provides additional changes and clarifications to various airport design standards. The following sections provide details on the content in AC 150/5300-13A, Change 1, *Airport Design*.

PLANNING HORIZONS

An updated set of aviation demand forecasts for PVB was established in Chapter 2. These activity forecasts included annual operations, based aircraft, operational fleet mix, and operational peaking characteristics. With this information, specific components of the airfield and landside system can be evaluated to determine their capacity to accommodate future demand.

Cost-effective, efficient, and orderly development of an airport should rely more upon actual demand at an airport than on a time-based forecast figure. To develop a master plan that is demand-based rather than time-based, a series of planning horizon milestones has been established for the airport that takes into consideration the reasonable range of aviation demand projections. The planning horizons for the master plan are the short term (years 1-5), intermediate term (years 6-10), and long term (years 11-20).

It is important to consider that the actual activity at the airport will not follow a straight line as tends to be presented in forecast projections. More commonly, aviation activity will be higher or lower than what the annualized forecast portrays. By planning according to activity milestones, the resultant plan can accommodate unexpected shifts or changes in the area's aviation demand by allowing airport management the flexibility to make decisions and develop facilities according to need generated by actual demand levels, not based solely on dates in time. The demand-based schedule provides flexibility in development, as development schedules can be slowed or expedited according to demand at any given time over the planning period. The resultant plan provides airport management with a financially responsible and needs-based program. **Table 3A** presents the short, intermediate, and long-term planning horizon milestones for each aircraft activity level previously forecasted in Chapter 2.

TABLE 3A | Planning Horizon Activity Summary
Platteville Municipal Airport

	Base Year (2018)	Short Term (1-5 years)	Intermediate Term (6-10 years)	Long Term (11-20 years)
BASED AIRCRAFT				
Single Engine Piston	16	18	18	22
Multi-Engine Piston	0	0	0	0
Turboprop	2	2	3	3
Jet	2	3	3	4
Helicopter	0	0	1	2
Other	1	1	1	1
Total Based Aircraft	***21***	***24***	***26***	***32***
ANNUAL AIRCRAFT OPERATIONS				
Itinerant	5,456	6,390	6,900	8,500
Local	4,945	5,460	5,850	7,250
Total Operations	***10,401***	***11,850***	***12,750***	***15,750***
ANNUAL INSTRUMENT APPROACHES				
Annual Estimate	109	128	138	170
PEAKING CHARACTERISTICS				
Peak Month	1,040	1,185	1,275	1,575
Design Day	34	38	41	51
Busy Day	42	48	51	64
Design Hour	5	6	6	8

Source: Coffman Associates analysis

AIRFIELD CAPACITY

An airfield's capacity is expressed in terms of its annual service volume (ASV). ASV is a reasonable estimate of the maximum level of aircraft operations that can be accommodated in a year without incurring significant delay factors. As aircraft operations near or surpass the ASV, delay factors increase exponentially. The airport's ASV was examined utilizing the Federal Aviation Administration's (FAA) Advisory Circular (AC) 150/5060-5, *Airport Capacity and Delay*.

An intersecting runway system with less than 50 percent of operations by aircraft weighing more than 12,500 pounds has an unconstrained ASV of 200,000 annual operations. In 2018, the airport had 10,401 operations, which is approximately five percent of the airfield's estimated ASV. By the end of the long-term planning period, total annual operations are expected to represent approximately eight percent of the airfield's ASV. The ASV does not indicate a point of absolute gridlock for the airfield; however, it does represent the point at which operational delay for each aircraft operation will increase exponentially. According to FAA Order 5090.5, planning for capacity improvement projects should begin when operations reach approximately 60 percent of ASV. Since this threshold is not projected to be met over the next 20 years, no projects specifically triggered by a capacity deficiency are required.

AIRSIDE FACILITY REQUIREMENTS

As indicated earlier, airport facilities include both airside and landside components. Airside facilities are those related to the arrival, departure, and ground movement of aircraft. The FAA has established various dimensional design standards related to the airfield to ensure the safe operations of aircraft. The FAA design standards impact the design of each of the airside components to be analyzed. The following airside components are analyzed for compliance to FAA design standards in detail:

- Runway Elements
- Runway Design Standards
- Taxiways
- Navigational and Approach Aids
- Airfield Lighting and Signage

Airside facility requirements are based primarily upon the RDC for each runway. As previously discussed, the existing RDC for Runway 15-33 and 7-25 is A-II-5000. Ultimately, the RDC is anticipated to be B-II-4000 for Runways 15-33 and 7-25. However, the ultimate RDCs for each runway are dependent on potential enhancements to instrument approach procedures, as well as any necessary land acquired to maintain control over critical safety areas. It is possible for a runway to have different approach minimums, however the RDC will always be classified as the most restrictive of the available procedures.

RUNWAY ELEMENTS

In this section, the adequacy of the existing runway system at PVB will be analyzed from a number of perspectives related to adherence to safety area standards. From this information, requirements for runway improvements are determined for the airport. Runway elements, such as orientation, length, width, and strength, are now presented. It should be noted that a detailed runway length analysis was included in Chapter 2. As such, the runway length analysis presented in this section will provide a summary of the runway length analysis previously conducted.

Runway Orientation

For the operational safety and efficiency of an airport, it is desirable for the primary runway to be oriented as close as possible to the direction of the prevailing wind. This reduces the impact of wind components perpendicular to the direction of travel of an aircraft that is landing or taking off. For PVB, Runways 15-33 and 7-25 are orientated in a crosswind configuration. Primary Runway 15-33 is oriented in a northwest/southeast manner, while crosswind Runway 7-25 is oriented in a northeast/southwest manner.

FAA AC 150/5300-13A, *Airport Design,* recommends that a crosswind runway be made available when the primary runway orientation provides for less than 95 percent wind coverage for specific crosswind components. The 95 percent wind coverage is based on the crosswind component not exceeding 10.5 knots (12 mph) for Runway Design Code (RDC) A-I and B-I; 13 knots (15 mph) for RDC A-II and B-II; and 16 knots (18 mph) for RDC A-III, B-III, C-I through C-III, and D-I through D-III.

Weather data specific to the airport was obtained from the National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center. This data was collected from the on-field AWOS over a continuous period from 2011 to 2020. A total of 256,576 observations of wind speed, direction, and other data points were made.

The front side of **Exhibit 3A** presents the all-weather wind rose for the airport. A wind rose is a graphic tool that gives a succinct view of how wind speed and direction are historically distributed at a particular location. The table at the top of the exhibit indicates the percent of wind coverage for the runway and specific wind intensity. In all-weather conditions, the orientation of Runway 15-33 provides 89.43 percent coverage for the 10.5-knot component, 94.21 percent coverage for 13 knots, 97.93 percent coverage for 16 knots, and 99.41 percent coverage for the 20-knot component. Runway 7-25 provides 89.29 percent coverage for the 10.5-knot crosswind component, 94.22 percent coverage for 13 knots, 98.49 percent coverage for 16 knots, and 99.69 percent coverage for the 20-knot component. The combination of both runways provides for 98.03 percent coverage for the 10.5-knot crosswind component and over 99 percent coverage for 13 knots and greater. The IFR wind rose, presented on the backside of **Exhibit 3A**, shows a similar distribution of crosswind components on each respective runway. As a result of the combination of both runways providing greater than 95 percent coverage for the 10.5-knot condition, no additional runways or reorientation of existing runways is necessary for crosswind purposes.

Runway Length Requirements

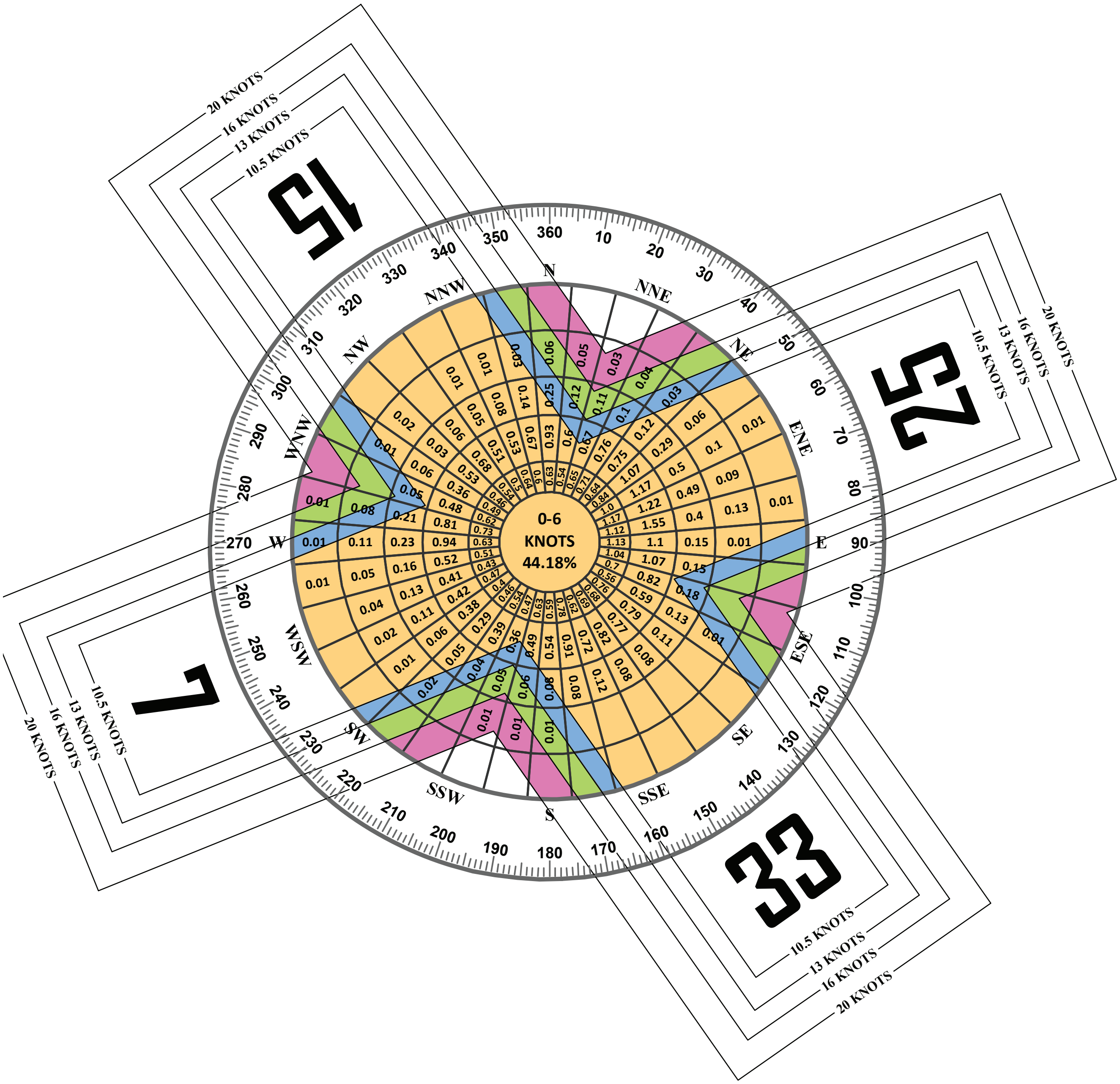
As previously detailed, runway length requirements for an airport typically are based on factors including airport elevation, mean daily maximum temperature of the hottest month, runway gradient (difference in runway elevation of each runway end), critical aircraft type expected to use the airport, and stage length (average distance flown per aircraft departure) of the longest non-stop trip destination. For aircraft with maximum certificated takeoff weights of less than 12,500 pounds, adjustments for runway gradient are not taken into account.

Aircraft performance declines as each of these factors increase. Summertime temperatures and stage lengths are the primary factors in determining runway length requirements. For calculating runway length requirements at PVB, the airport's elevation is 1,028.4 feet above mean sea level (MSL) and the mean maximum temperature of the hottest month (July) is 82.3 degrees Fahrenheit (F). The maximum difference in runway end elevation for primary Runway 15-33 is 1.9 feet with a published gradient of 0.04 percent.

Using the site-specific data described above, runway length requirements for the various classifications of aircraft that may operate at the airport were examined using FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*. The FAA runway analysis groups general aviation aircraft into several categories, reflecting the percentage of the fleet within each category. Additionally, runway length requirements for jet and turbine-powered aircraft operating at PVB were examined utilizing the flight planning manuals for specific aircraft under conditions specific to the airport. Ultimately, the runway design should be based upon the most critical aircraft (or group of aircraft) performing at least 500 annual itinerant operations. Plans should be realistic, supported by the FAA-approved forecasts, and should be based on the critical design aircraft (or family of aircraft).

Most operations taking place at PVB are conducted by smaller, single engine, fixed-wing aircraft weighing less than 12,500 pounds. Following guidance from AC 150/5325-4B, to accommodate 100 percent of these small aircraft, a runway length of at least 3,900 feet is recommended. However, the airport is also utilized by aircraft weighing more than 12,500 pounds, including small- to mid-sized business jets and turboprop aircraft that were identified operating at PVB.

IFR WIND COVERAGE				
Runways	10.5 Knots	13 Knots	16 Knots	20 Knots
Runway 15-33	83.84%	90.55%	96.27%	98.86%
Runway 7-25	87.51%	93.16%	98.25%	99.64%
All Runways	97.82%	99.46%	99.87%	99.99%

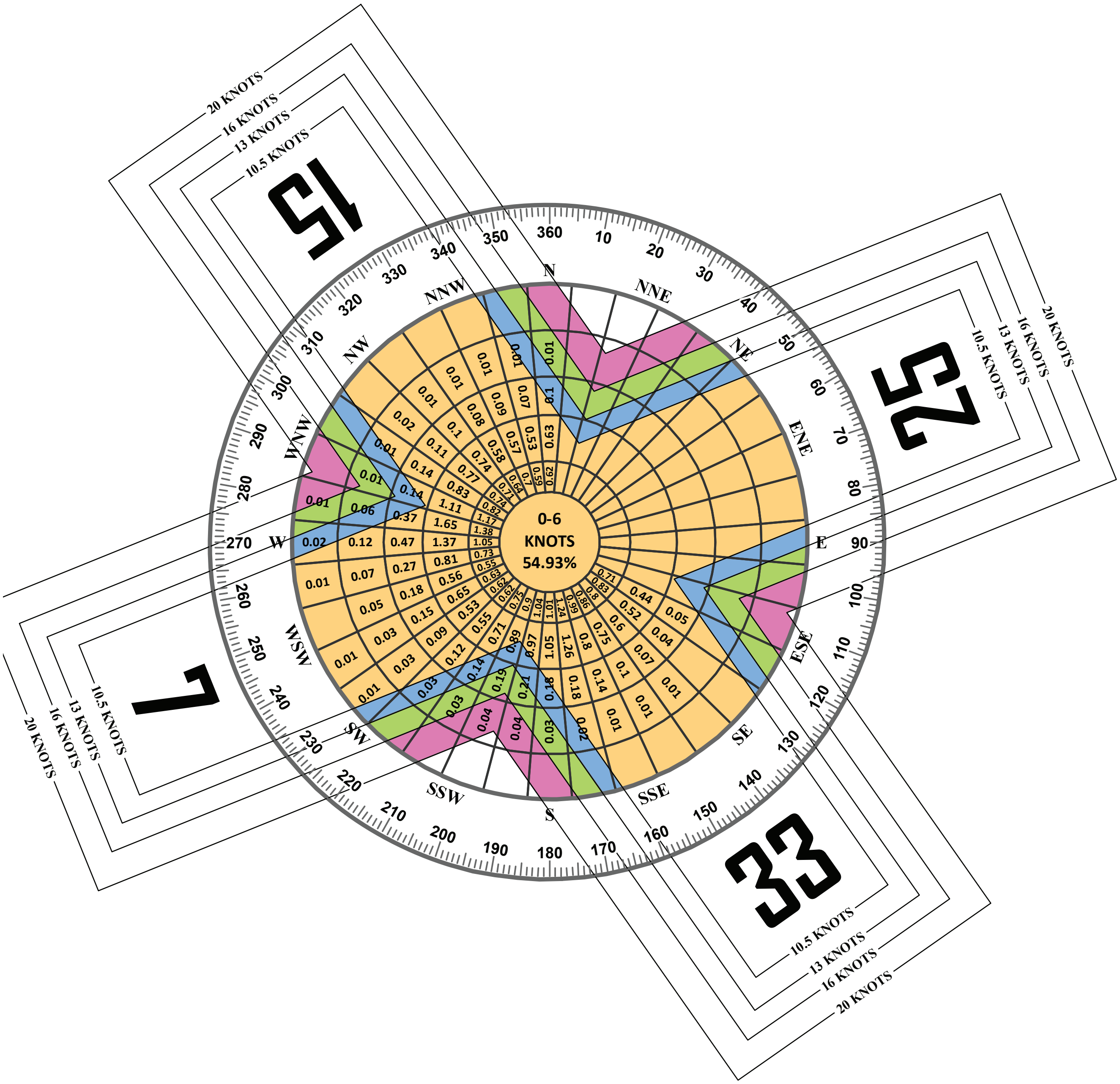


SOURCE:
NOAA National Climatic Center
Asheville, North Carolina
Platteville Municipal Airport
Platteville, Wisconsin

OBSERVATIONS:
29,899 IFR Observations
Jan. 1, 2011 - Dec, 31 2020

RETURN TO AGENDA

ALL WEATHER WIND COVERAGE				
Runways	10.5 Knots	13 Knots	16 Knots	20 Knots
Runway 15-33	89.43%	94.21%	97.93%	99.41%
Runway 7-25	89.29%	94.22%	98.49%	99.69%
All Runways	98.03%	99.50%	99.90%	99.99%



SOURCE:
NOAA National Climatic Center
Asheville, North Carolina
Platteville Municipal Airport
Platteville, Wisconsin

OBSERVATIONS:
256,576 All Weather Observations
Jan. 1, 2011 - Dec, 31 2020

As discussed, the existing length of Runway 15-33 can generally accommodate the types of turbine-powered and business jet aircraft identified operating at PVB when taking off with 80 percent useful load or less; however, the runway does not fully provide for all turbine aircraft activity, especially during hot weather conditions (or wet runway conditions when landing) and when aircraft are carrying full useful loads. Justification for any runway extension to meet the needs of turbine-powered aircraft would require regular use on the order of 500 annual operations. This is the minimum threshold required to obtain FAA grant funding assistance; however, sufficient justification was not identified in the critical design aircraft analysis to consider a larger jet or turboprop as the existing and/or short-term critical design aircraft.

However, given the forecast potential for increased air taxi and itinerant general aviation operations, as well as seven based turbine powered aircraft throughout the planning period, **runway length alternative analysis will examine potential scenarios that could be achieved at PVB to better accommodate the needs of larger aircraft during the 20-year planning period of this study**.

Runway Width

Runway width design standards are primarily based on the critical aircraft but can also be influenced by the visibility minimums of published instrument approach procedures. For Runways 15-33 and 7-25, existing A-II-5000 and ultimate RDC B-II-4000 design criteria stipulate a runway width of 75 feet. The current width of each runway is 75 feet, which meets the standard and should be maintained in the future.

Runway Pavement Strength

An important feature of airfield pavement is its ability to withstand repeated use by aircraft. The FAA reports the pavement strength for Runway 15-33 at 30,000 pounds single wheel loading (S) and 35,000 pounds dual wheel loading (D). Additionally, Runway 7-25 provides a strength rating of 30,000 pounds S and 35,000 D. These strength ratings refer to the configuration of the aircraft landing gear. For example, S indicates an aircraft with a single wheel on each landing gear and D indicates an aircraft with dual-wheel landing gear.

The strength rating of a runway does not preclude aircraft weighing more than the published strength rating from using the runway. The strength is based on design parameters which support a high volume of aircraft at or below the published weight, allowing the pavement to survive its intended useful life. Aircraft weighing more than the published weight could damage the runway in severe conditions, but more likely will simply reduce the life cycle of the pavement.

All federally obligated airports must remain open to the public, and it is typically up to the pilot of the aircraft to determine if a runway can support their aircraft safely. An airport sponsor cannot restrict an aircraft from using the runway simply because its weight exceeds the published strength rating. On the other hand, an airport sponsor has an obligation to properly maintain the runway and protect the useful life of the runway, typically for 20 years.

According to the FAA publication, *Chart Supplement*, “Runway strength rating is not intended as a maximum allowable weight or as an operating limitation. Many airport pavements are capable of supporting limited operations with gross weights in excess of the published figures.” The supplement directory goes on to say that those aircraft exceeding the pavement strength should contact the airport sponsor for permission to operate at the airport.

The strength rating of a runway can change over time. Regular usage by heavier aircraft can decrease the strength rating, while periodic runway resurfacing and other maintenance methods can increase the strength rating. The current strength on Runways 15-33 and 7-25 is adequate to accommodate a large majority of aircraft that operate at the airport. However, given the number of jet aircraft currently operating and forecast to operate at PVB, future planning should maintain the existing S pavement strength at 30,000 pounds and consider increasing the D pavement strength to 60,000 pounds on Runway 15-33. The strength rating on Runway 7-25 is adequate to serve many general aviation aircraft. The airport should maintain the runway strength rating at 30,000 pounds S and 35,000 D.

Airfield Design Standards

The FAA has established several imaginary surfaces to protect aircraft operational areas and keep them free from obstructions that could affect the safe operation of aircraft. These surfaces include the runway safety area (RSA), runway object free area (ROFA), runway obstacle free zone (ROFZ), and runway protection zone (RPZ).

The entire RSA, ROFA, and ROFZ must be under the direct ownership of the airport sponsor to ensure these areas remain free of obstacles and can be readily accessed by maintenance and emergency personnel. The RPZ should also be under airport ownership. An alternative to outright ownership of the RPZ is the purchase of avigation easements (acquiring control of designated airspace within the RPZ) or having sufficient land use control measures in place which ensure the RPZ remains free of incompatible development. The various airport safety areas are graphically presented on **Exhibit 3B**.

Dimensional standards for the various safety areas associated with the runway are a function of the type of aircraft using, or expected to use, the runway as well as the instrument approach capability. **Table 3B** presents the FAA design standards as they apply to the runways at PVB both now and in the future per the detailed analysis conducted at the end of Chapter 2.

For primary Runway 15-33, as well as crosswind Runway 7-25, the existing design standards should meet Runway Design Code (RDC) A-II-5000 and ultimate design standards should meet RDC B-II-4000. It should be noted that many of the FAA RDC standards associated with A-II-5000 runways also apply to RDC B-II-4000 runways. The primary difference in safety areas between the two standards are found in the Runway Protection Zones (RPZs). **Table 3B** presents the FAA design standards as they apply to Runways 15-33 and 7-25 at PVB.

TABLE 3B | Runway Design Standards
Platteville Municipal Airport

	Runways 15-33 and 7-25	
	Existing	**Ultimate**
RUNWAY CLASSIFICATION		
Runway Design Code	A-II-5000	B-II-4000
Visibility Minimums	1-mile	≥¾-mile
RUNWAY DESIGN		
Runway Width	75	75
Blast Pad Length x Width (If Applicable)	150 x 95 (Both Runway Ends)	150 x 95 (Both Runway Ends)
RUNWAY PROTECTION		
Runway Safety Area (RSA)		
Width	150	150
Length Beyond Departure End	300	300
Length Prior to Threshold	300	300
Runway Object Free Area (ROFA)		
Width	500	500
Length Beyond Departure End	300	300
Length Prior to Threshold	300	300
Runway Obstacle Free Zone (ROFZ)		
Width	400	400
Length Beyond Departure End	200	200
Length Prior to Threshold	200	200
Approach Runway Protection Zone (RPZ)		
Length	1,000	1,700
Inner Width	500	1,000
Outer Width	700	1,510
Departure Runway Protection Zone (RPZ)		
Length	1,000	1,000
Inner Width	500	500
Outer Width	700	700
RUNWAY SEPARATION		
Runway Centerline to:		
Hold Position	200	200
Parallel Taxiway	300[1]	240
Aircraft Parking Area	250	250

Note: All dimensions in feet
[1] Existing separation of partial parallel taxiway serving Runway 7-25, which meets 240' design standard.
Source: FAA AC 150/5300-13A, Change 1, Airport Design

Runway Safety Area (RSA)

The RSA is defined in FAA AC 150/5300-13A, *Airport Design,* as a "surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of undershoot, overshoot, or excursion from the runway." The RSA is centered on the runway and dimensioned in accordance with the approach speed of the critical design aircraft using the runway. The FAA requires the RSA to be cleared and graded, drained by grading or storm sewers, capable of accommodating the design aircraft and fire and rescue vehicles, and free of obstacles not fixed by navigational purpose, such as runway edge lights or approach lights.

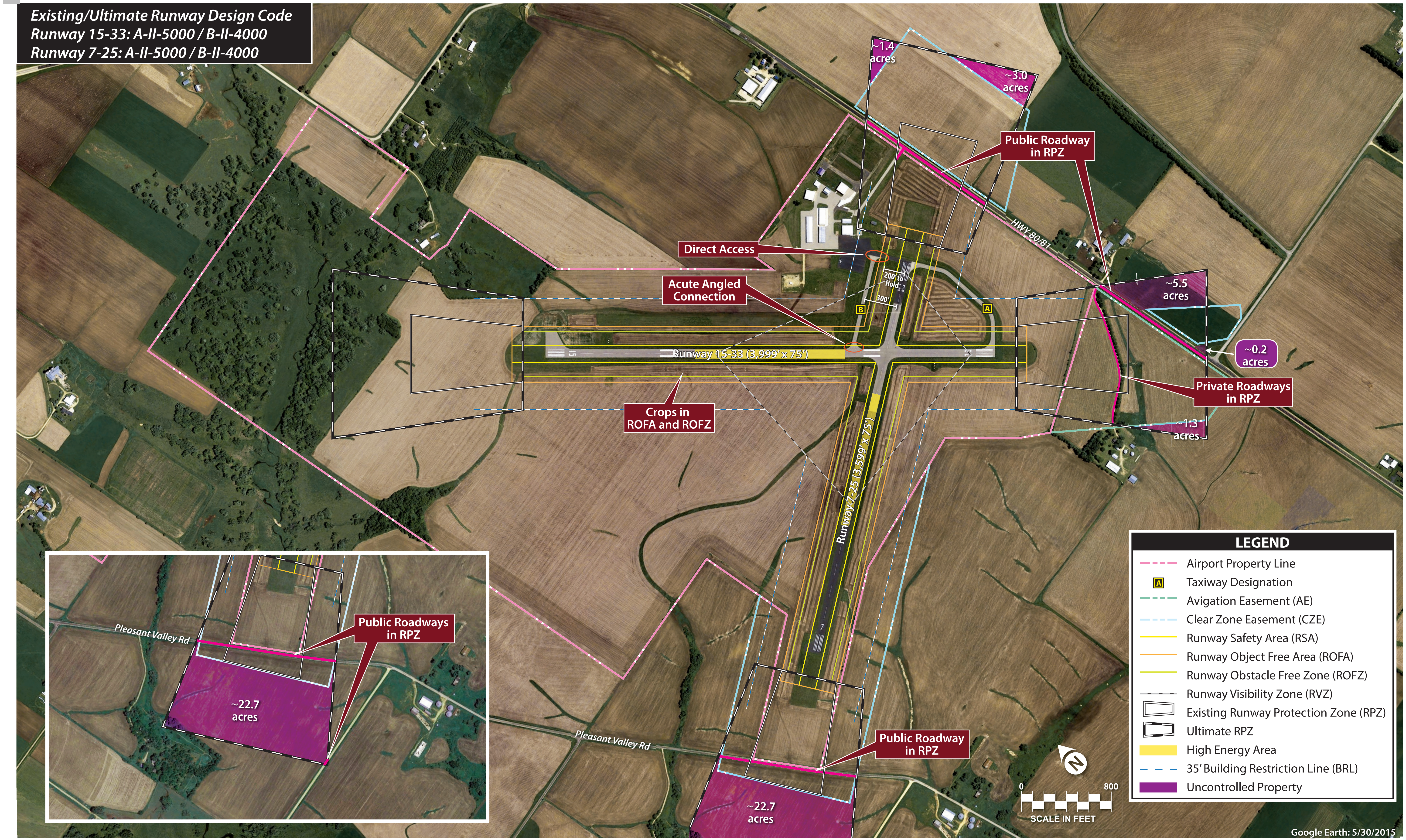


Exhibit 3B
EXISTING/ULTIMATE SAFETY AREAS

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The FAA has placed a higher significance on maintaining adequate RSA at all airports. Under Order 5200.8, effective October 1, 1999, the FAA established the *Runway Safety Area Program.* The Order states, "The objective of the Runway Safety Area Program is that all RSAs at federally obligated airports…shall conform to the standards contained in Advisory Circular 150/5300-13, *Airport Design*, to the extent practicable." Each Regional Airports Division of the FAA is obligated to collect and maintain data on the RSA for each runway at the airport and perform airport inspections.

Under existing A-II-5000 and ultimate B-II-4000 conditions, the RSA serving Runway 15-33 is 150 feet wide and extends 300 feet beyond each end of the runway. The same existing and ultimate RSA dimensions also apply to Runway 7-25. As depicted on **Exhibit 3B**, an examination of the RSA for this runway under existing and ultimate conditions did not identify any non-standard conditions and should be maintained as such throughout the planning horizon.

Runway Object Free Area (ROFA)

The ROFA is a two-dimensional surface area that surrounds all airfield runways. This area must remain clear of obstructions aside from those that are deemed "fixed by function," such as runway lighting systems. This safety area does not have to be level or graded as the RSA does. However, the ROFA must be clear of any penetrations at the lateral elevation of the RSA. Much like the RSA, the ROFA is centered upon the runway centerline and its size is determined based upon the critical design aircraft using the runway.

Under existing RDC A-II design standards with approach visibility minimums of not lower than one mile, which apply to Runways 15-33 and 7-25, the ROFA is 500 feet wide and extends 300 feet beyond each end of the runway. The FAA also calls for ROFA dimensions of 500 feet wide and extending 300 feet beyond each end of the runway for ultimate RDC B-II design standards with approach visibility minimums not lower than ¾-mile. As shown on **Exhibit 3B**, crops currently obstruct the existing and ultimate ROFA serving Runways 15-33 and 7-25. It is recommended that the airport clear the existing ROFA of all obstructing crops in accordance with FAA standards.

Runway Obstacle Free Zone (ROFZ)

An ROFZ is defined as a portion of airspace centered about the runway, and its elevation at any point is equal to the elevation of the closest point on the runway centerline. The ROFZ extends 200 feet past each end of the runway on the runway centerline. The width of the ROFZ is determined by the critical aircraft utilizing the runway. The ROFZ width for runways accommodating small aircraft is 250 feet and the width of the ROFZ for runways accommodating large aircraft is 400 feet. The function of the ROFZ is to ensure the safety of aircraft conducting operations by preventing object penetrations to this portion of airspace. Potential penetrations to this airspace also include taxiing and parked aircraft. Any obstructions within this portion of airspace must be mounted on frangible couplings and be fixed in its position by its function. If the ROFZ is obstructed, an airport's approaches could be removed, or approach minimums could be increased.

The established FAA dimensions for an A-II runway serving large aircraft (over 12,500 pounds) require the ROFZ to be 400 feet in width and extend 200 feet beyond each end of the runway. Under current conditions, the ROFZ serving Runways 15-33 and 7-25 contains crops along both sides of each respective runway. In the future, it is recommended that the airport clear all crops from the ROFZ serving each runway.

Runway Protection Zone (RPZ)

An RPZ can be described as a trapezoidal area centered on the extended runway centerline and generally begins 200 feet from the end of the runway. This safety area has been established to protect the end of the runway from airspace penetrations and incompatible land uses. The RPZ is divided into two different portions: the central portion and the controlled activity area. The central portion of the RPZ extends from the beginning to the end of the RPZ, is centered on the runway centerline, and is the same width as the ROFA. The RPZ dimensions are based upon the critical design aircraft using the runway and the visibility minimums serving the runway.

While the RPZ is intended to be clear of incompatible objects or land uses, some uses are permitted with conditions and other land uses are prohibited. According to AC 150/5300-13A, the following land uses are permissible within the RPZ:

- Farming that meets the minimum buffer requirements.
- Irrigation channels as long as they do not attract birds.
- Airport service roads, as long as they are not public roads and are directly controlled by the airport operator.
- Underground facilities, as long as they meet other design criteria, such as RSA requirements, as applicable.
- Unstaffed navigational aids (NAVAIDs) and facilities, such as required for airport facilities that are fixed-by-function in regard to the RPZ.

Any other land uses considered within RPZ land owned by the airport sponsor must be evaluated and approved by the FAA Office of Airports. The FAA has published *Interim Guidance on Land Uses within a Runway Protection Zone* (September 27, 2012), which identifies several potential land uses that must be evaluated and approved prior to implementation. The specific land uses requiring FAA evaluation and approval include:

- Buildings and structures (residences, schools, churches, hospitals or other medical care facilities, commercial/industrial buildings, etc.).
- Recreational land use (golf courses, sports fields, amusement parks, other places of public assembly, etc.).
- Transportation facilities (rail facilities, public roads/highways, vehicular parking facilities, etc.).
- Fuel storage facilities (above and below ground).
- Hazardous material storage (above and below ground).
- Wastewater treatment facilities.
- Above-ground utility infrastructure (i.e., electrical substations), including any type of solar panel installations.

The *Interim Guidance on Land within a Runway Protection Zone* states, “RPZ land use compatibility also is often complicated by ownership considerations. Airport owner control over the RPZ land is emphasized to achieve the desired protection of people and property on the ground. Although the FAA recognizes that in certain situations the airport sponsor may not fully control land within the RPZ, the FAA expects airport sponsors to take all possible measures to protect against and remove or mitigate incompatible land uses.”

Currently, the RPZ review standards are applicable to any new or modified RPZ. The following actions or events could alter the size of an RPZ, potentially introducing an incompatibility:

- An airfield project (e.g., runway extension, runway shift).
- A change in the critical design aircraft that increases the RPZ dimensions.
- A new or revised instrument approach procedure that increases the size of the RPZ.
- A local development proposal in the RPZ (either new or reconfigured).

As presented on **Exhibit 3B**, existing RPZs and ultimate RPZs associated with Runways 15-33 and 7-25 extend off airport property and include public roadway and private roadways. However, it should be noted that all property within existing RPZs that extends off airport property is owned by the airport in the form of easement. The existing RPZs serving Runways 15-33 and 7-25 are 500 feet wide at the inner portion, 700 feet wide at the outer portion, 1,000 feet long, and encompass a total of 13.77 acres. Should the airport pursue instrument approach minimums of not lower than ¾-mile, the RPZs serving each runway end would increase to a dimension of 1,000 feet wide at the inner portion, 1,510 feet wide at the outer portion, 1,700 feet in length, and encompass a total of 48.98 acres.

Under existing and ultimate conditions, the RPZ serving Runway 15 is fully contained on airport property and is free of any incompatible conditions. The existing RPZ serving Runway 33 extends off airport property to the southeast and is traversed by a private gravel roadway. As previously mentioned, the property within the existing Runway 33 RPZ that extends beyond the current airport property boundary is owned in easement. Under ultimate RDC B-II conditions with approach minimums not lower than ¾-mile, the RPZ serving Runway 33 extends beyond the existing airport property boundary, as well as the property owned in easement, and contains portions of a private roadway and Highway 80/81. As such, the Runway 33 RPZ would contain a combined total of approximately seven acres of uncontrolled property.

Exhibit 3B also depicts the existing RPZs on Runway 7-25. As shown on the exhibit, the RPZs serving each end of Runway 7-25 extend off airport property to the northeast and southwest and encompass portions of Highway 80/81 and Pleasant Valley Road, respectively. At present, the existing RPZs serving Runway 7-25 that extend beyond the airport property boundary are owned in easement. However, under ultimate conditions, the RPZs serving each end of Runway 7-25 would expand to encompass a total of 48.98 acres, of which approximately 27.1 acres are currently uncontrolled. The ultimate RPZ serving Runway 7 would include approximately 22.7 acres of uncontrolled property and would be traversed by Pleasant Valley Road. Similarly, the ultimate RPZ serving Runway 25 would encompass a combined total of approximately 4.4 acres of uncontrolled property and would be traversed by Highway 80/81.

As previously mentioned, since the interim guidance only addresses new or modified RPZs, existing incompatibilities are generally considered grandfathered conditions. For example, roads that are in the current RPZ are typically allowed to remain as grandfathered unless the runway environment changes. The airport sponsor should take reasonable actions to meet RPZ design standards, which could include relocating the roads from within the existing RPZs; however, roadways could be considered acceptable since they existed before the RPZ standards were published. Funding priority for certain actions, such as relocating existing roads in RPZs, will be determined on a case-by-case basis.

Whenever possible, the airport should maintain positive control over the RPZs through fee simple acquisition; however, avigation easements can be pursued if fee simple acquisition is not feasible. Currently, avigation easements are in place over the existing and ultimate RPZs serving each runway end. Further examination of the RPZs associated with each runway end will be undertaken later in this study.

Runway Visibility Zone (RVZ)

The RVZ is an area formed by imaginary lines connecting the line-of-sight points of intersecting runways. The purpose of the RVZ is to facilitate coordination among aircraft and between aircraft and vehicles that are operating on active runways. Having a clear line-of-sight allows departing aircraft and arriving aircraft to verify the location and actions of other aircraft and vehicles on the ground that could create a conflict. Within the RVZ, any point five feet above the runway centerline must be mutually visible with any other point five feet above the centerline of the crossing runway. The RVZ at PVB is depicted on **Exhibit 3B**. Currently, there are no obstructions to the RVZ serving the runway system.

Building Restriction Line (BRL)

The BRL identifies suitable building area locations on the airport. The BRL encompasses the RPZs, the ROFA, navigational aid critical areas, areas required for terminal instrument procedures, and other areas necessary for meeting airport line-of-sight criteria, such as the RVZ.

Two primary factors contribute to the determination of the BRL: type of runway (utility or other-than-utility) and the capability of the instrument approaches. Runways 15-33 and 7-25 are considered other-than-utility “non-precision instrument” runways with visibility minimums of not lower than one mile.

The BRL is the product of CFR Part 77 transitional surface clearance requirements. These requirements stipulate that no object be located in the primary surface, defined as being 500 feet wide for other-than-utility runways having instrument approach minimums of not lower than one mile. From the primary surface, the transitional surface extends outward at a slope of one vertical foot to every seven horizontal feet. At PVB, the 35-foot BRL is set at 495 feet from each side of the runway centerline. The BRL is depicted on **Exhibit 3B**, and all landside facilities are located beyond the 35-foot BRL. It should be noted that if the airport were to pursue instrument approach minimums as low as ¾-mile, the primary surface serving the runway with the improved approach minimum would increase to a width of 1,000 feet, thereby increasing the 35-foot BRL to 745 feet from each side of the runway centerline.

Taxiways

The taxiway system of an airport is primarily to facilitate aircraft movements to and from the runway system. While some taxiways are constructed to simply provide access from the apron to the runway, other taxiways are constructed to increase the allowable frequency of aircraft operations as air traffic increases.

The design standards associated with taxiways are determined by the Taxiway Design Group (TDG) or the Airplane Design Group (ADG) of the critical design aircraft. As determined previously, the applicable ADG for Runways 15-33 and 7-25 is ADG II for both existing and ultimate conditions. **Table 3C** presents the various taxiway design standards related to ADG II.

The table also shows those taxiway design standards related to TDG. The TDG standards are based on the Main Gear Width (MGW) and Cockpit to Main Gear (CMG) distance of the critical design aircraft expected to use those taxiways. Different taxiway and taxilane pavements can and should be planned to the most appropriate TDG design standards based on usage.

TABLE 3C | Taxiway Dimensions and Standards
Platteville Municipal Airport

STANDARDS BASED ON WINGSPAN	***ADG II***
Taxiway Protection	
Taxiway Safety Area width (feet)	79
Taxiway Object Free Area width (feet)	131
Taxilane Object Free Area width (feet)	115
Taxiway Separation	
Taxiway Centerline to:	
Fixed or Movable Object (feet)	65.5
Parallel Taxiway/Taxilane (feet)	105
Taxilane Centerline to:	
Fixed or Movable Object (feet)	57.5
Parallel Taxilane (feet)	97
Wingtip Clearance	
Taxiway Wingtip Clearance (feet)	26
Taxilane Wingtip Clearance (feet)	18
STANDARDS BASED ON TDG	***TDG 2***
Taxiway Width Standard (feet)	35
Taxiway Edge Safety Margin (feet)	7.5
Taxiway Shoulder Width (feet)	15

ADG: Airplane Design Group
TDG: Taxiway Design Group

Source: *FAA AC 150/5300-13A, Change 1, Airport Design*

The current taxiway design for Runways 15-33 and 7-25 should be TDG 2. As such, the taxiways supporting each runway should be at least 35 feet wide. The width of all taxiways serving PVB currently meets this standard, except for the portion of Taxiway A connecting the apron area to the threshold of Runway 25, which is approximately 32 feet wide. In the future, the airport should consider increasing the width of this portion of Taxiway A to 35 feet.

Taxiway Design Considerations

FAA AC 150/5300-13B, *Airport Design*, provides guidance on recommended taxiway and taxilane layouts to enhance safety by avoiding runway incursions. A runway incursion is defined as "any occurrence at an airport involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft." The following is a list of the taxiway design guidelines and the basic rationale behind each recommendation included in the current AC as well as previous FAA safety and design recommendations.

1. **Taxiing Method**: Taxiways are designed for "cockpit over centerline" taxiing with pavement being sufficiently wide to allow a certain amount of wander. On turns, sufficient pavement should be provided to maintain the edge safety margin from the landing gear. When constructing new taxiways, upgrading existing intersections should be undertaken to eliminate "judgmental oversteering," which is where the pilot must intentionally steer the cockpit outside the marked centerline in order to assure the aircraft remains on the taxiway pavement.
2. **Curve Design**: Taxiways should be designed such that the nose gear steering angle is no more than 50 degrees, the generally accepted value to prevent excessive tire scrubbing.
3. **Three-Path Concept**: To maintain pilot situational awareness, taxiway intersections should provide a pilot a maximum of three choices of travel. Ideally, these are right, left, and a continuation straight ahead.
4. **Channelized Taxiing**: To support visibility of airfield signage, taxiway intersections should be designed to meet standard taxiway width and fillet geometry.
5. **Designated Hot Spots and Runway Incursion Mitigation (RIM) Locations**: A hot spot is a location on the airfield with elevated risk of a collision or runway incursion. For areas the FAA designates as a hot spot or RIM location, mitigation measures should be prioritized.
6. **Intersection Angles**: Design turns to be 90 degrees wherever possible. For acute-angle intersections, standard angles of 30, 45, 60, 120, 135, and 150 degrees are preferred.
7. **Runway Incursions**: Design taxiways to reduce the probability of runway incursions.
   - *Increase Pilot Situational Awareness*: A pilot who knows where he/she is on the airport is less likely to enter a runway improperly. Complexity leads to confusion. Keep taxiway systems simple using the "three-path" concept.
   - *Avoid Wide Expanses of Pavement*: Wide pavements require placement of signs far from a pilot's eye. This is especially critical at runway entrance points. Where a wide expanse of pavement is necessary, avoid direct access to a runway.
   - *Limit Runway Crossings*: The taxiway layout can reduce the opportunity for human error. The benefits are twofold – through simple reduction in the number of occurrences, and through a reduction in air traffic controller workload.
   - *Avoid "High Energy" Intersections*: These are intersections in the middle third of runways. By limiting runway crossings to the first and last thirds of the runway, the portion of the runway where a pilot can least maneuver to avoid a collision is kept clear.
   - *Increase Visibility*: Right-angle intersections, both between taxiways and runways, provide the best visibility. Acute-angle runway exits provide greater efficiency in runway usage but should not be used as runway entrance or crossing points. A right-angle turn at the end of a parallel taxiway is a clear indication of approaching a runway.
   - *Avoid "Dual Purpose" Pavements*: Runways used as taxiways and taxiways used as runways can lead to confusion. A runway should always be clearly identified as a runway and only a runway.
   - *Direct Access*: Do not design taxiways to lead directly from an apron to a runway. Such configurations can lead to confusion when a pilot typically expects to encounter a parallel taxiway.
   - *Hot Spots*: Confusing intersections near runways are more likely to contribute to runway incursions. These intersections must be redesigned when the associated runway is subject to reconstruction or rehabilitation. Other hot spots should be corrected as soon as practicable.

8. **Runway/Taxiway Intersections**
    - *Right Angle*: Right-angle intersections are the standard for all runway/taxiway intersections, except where there is a need for an acute-angled exit. Right-angle taxiways provide the best visual perspective to a pilot approaching an intersection with the runway to observe aircraft in both the left and right directions. They also provide optimal orientation of the runway holding position signs so they are visible to pilots.
    - *Acute Angle*: Acute angles should not be larger than 45 degrees from the runway centerline. A 30-degree taxiway layout should be reserved for high-speed exits. The use of multiple intersecting taxiways with acute angles creates pilot confusion and improper positioning of taxiway signage. The construction of high-speed exits is typically only justified for runways with regular use by jet aircraft in approach categories C and above.
    - *Large Expanses of Pavement*: Taxiways must never coincide with the intersection of two runways. Taxiway configurations with multiple taxiway and runway intersections in a single area create large expanses of pavement, making it difficult to provide proper signage, marking, and lighting.
9. **Taxiway/Runway/Apron Incursion Prevention**: Apron locations that allow direct access into a runway should be avoided. Increase pilot situational awareness by designing taxiways in such a manner that forces pilots to consciously make turns. Taxiways originating from aprons and forming a straight line across runways at mid-span should be avoided.
    - *Wide Throat Taxiways*: Wide throat taxiway entrances should be avoided. Such large expanses of pavement may cause pilot confusion and make lighting and marking more difficult.
    - *Direct Access from Apron to a Runway*: Avoid taxiway connectors that cross over a parallel taxiway and directly onto a runway. Consider a staggered taxiway layout or no-taxi island that forces pilots to make a conscious decision to turn.
    - *Apron to Parallel Taxiway End*: Avoid direct connection from an apron to a parallel taxiway at the end of a runway.

The existing taxiway system at PVB is found to be adequate in meeting current air traffic demand. However, the direct access provided from the apron area to the Runway 25 threshold via Taxiway A and the acute-angle connection from Taxiway B to Runway 15-33, as shown on **Exhibit 3B**, conflict with the current FAA taxiway design standards established in AC 150/5300-13A, Change 1.

Alternative analysis will examine multiple taxiway layouts to mitigate existing deficiencies. The selected alternative will be presented in the Development Concept section of this report. Analysis will also consider improvements which could be implemented on the airfield to minimize runway incursion potential, improve efficiency, and conform to FAA standards for taxiway design. Any future taxiways planned will also take into consideration the taxiway design standards.

Runway/Taxiway Separation

The design standard for the required separation between runways and parallel taxiways is a function of the critical design aircraft and the instrument approach visibility minimum. Currently, the partial parallel taxiway serving the runway system is 300 feet from Runway 7-25 (centerline to centerline), which exceeds the existing and ultimate design standard of 240 feet. As such, the airport should maintain the existing runway-to-taxiway separation of the partial parallel taxiway. Alternatives in the next section will explore the possibility of full-length parallel taxiways serving the runway system.

Aircraft Parking Area Separation

For existing RDC A-II-5000 and ultimate B-II-4000, aircraft parking areas should be at least 250 feet from the runway centerline. Currently, the nearest aircraft parking area is approximately 360 feet from the Runway 7-25 centerline. As such, the airport should maintain the minimum aircraft parking position separation of at least 250 feet from the runway centerline to comply with existing and ultimate design standards.

Instrument, Navigational, and Approach Aids

Instrument approaches are categorized as either precision or non-precision. Precision instrument approach aids provide an exact course alignment and vertical descent path for an aircraft on final approach to a runway, while non-precision instrument approach aids provide only course alignment information. In the past, most existing precision instrument approaches in the United States have been the instrument landing system (ILS); however, with advances in global positioning system (GPS) technology, it can now be used to provide both vertical and lateral navigation for pilots under certain conditions.

PVB has straight-in instrument approach capabilities to Runways 15-33 and 7-25. All runway ends are served by non-precision area navigation (RNAV) GPS approaches not lower than one mile. The RNAV GPS approaches to Runway 15-33 provides cloud ceilings at 250 feet above ground level (AGL), while cloud ceilings for the approaches serving Runway 7-25 are 267 and 418 feet, respectively. It is important to note that aircraft with approach speeds between 141 and 166 knots (Category D) are not authorized to conduct a straight-in instrument approach at the airport.

As a local general aviation airport, the lowest possible visibility minimums should be considered when possible. The instrument approach capabilities currently available adequately serve the current users at PVB; however, alternative analysis will consider impacts associated with improving the instrument approach minimums to not lower than ¾-mile.

In most instances, the landing phase of any flight must be conducted in visual conditions. To provide pilots with visual guidance information during landings to the runway, electronic visual approach aids are commonly provided at airports. Currently, each end of Runways 15-33 and 7-25 are served by a two-box precision approach path indicator (PAPI-2) system. Generally, four-box precision approach path indicators (PAPI-4) are recommended for runways that are used by jet aircraft. Given the forecast potential for increased turbine aircraft operations and based turbine aircraft at PVB, the airport should consider upgrading the existing PAPI-2 systems to PAPI-4s over the long-term planning horizon.

Runway end identification lights (REILs) are flashing lights located at the runway threshold end that facilitate rapid identification of the runway end at night and during poor visibility conditions. REILs provide pilots with the ability to identify the runway thresholds and distinguish the runway end lighting from other lighting on the airport and in the approach areas. The FAA indicates that REILs should be considered for all lighted runway ends not planned for a more sophisticated approach lighting system. Currently, Runway 15-33 is served by REILs, while Runway 7-25 is not. As such, the airport should consider implementing REILs on Runway 7-25 in the future and maintain the REILs serving Runway 15-33.

Weather Reporting Aids

Platteville Municipal Airport has a lighted wind cone and wind-T on the airfield, located southwest of the aircraft apron area. The wind cone and wind-T provide information to pilots regarding wind speed and direction. These should be maintained throughout the planning period and the airport should consider a segmented circle, which consists of a system of visual indicators designed to provide traffic pattern information to pilots.

An automated weather observation system (AWOS) is also located on the airfield, which provides weather observations 24 hours per day. The system updates weather observations every minute, continuously reporting significant weather changes as they occur. This information is then transmitted at regular intervals (usually once per hour). Aircraft in the vicinity can receive this information if they have their radio tuned to the correct frequency (120.575 MHz) or by calling 608-348-3637. This system should be maintained throughout the planning horizon.

Airfield Marking, Lighting, and Signage

At present, Runways 15-33 and 7-25 are marked with non-precision instrument runway markings. As such, it is recommended that the runway markings be maintained throughout the long-term planning horizon.

Holding positions are markings on taxiways leading to runways, which provide for adequate runway clearance for holding aircraft. Currently, all holding position markings serving Runways 15-33 and 7-25 are located 200 feet from the runway centerline, which conforms to existing RDC A-II-5000 and ultimate RDC B-II-4000 design standards. Should demand warrant the construction of a full-length parallel taxiway serving Runways 15-33 or 7-25, it is recommended that any additional holding positions be placed at a minimum of 200 feet from the runway centerline to conform to RDC B-II standards.

The location of the airport at night is typically indicated by a rotating beacon. For civil airports, a rotating beacon projects two beams of light, one white and one green, 180 degrees apart. The existing beacon is centrally located in the landside development area, northeast of the terminal building and operates from sunset to sunrise. This system should be maintained throughout the planning period.

Runway and taxiway lighting systems serve as a primary means of navigation in reduced visibility and night-time operations. Currently, Runways 15-33 and 7-25 are equipped with medium intensity runway lighting (MIRL), while Taxiways A and B supporting the runway system are served by medium intensity taxiway lighting (MITL). The runway edge lighting system, as well as the PAPIs and REILs previously discussed, can be activated via the common traffic advisory frequency (CTAF).

Many airports are transitioning to light emitting diode (LED) pavement edge lighting technology. LEDs have many advantages, including lower energy consumption, longer lifespan, increased durability, reduced size, greater reliability, and faster switching. While a larger initial investment is required upfront, the energy savings and reduced maintenance costs will outweigh any additional costs in the long run. Consideration should be given to gradually replacing all edge lighting with LED systems.

Airfield identification signs assist pilots in identifying their location on the airfield and directing them to their desired location. Lighted signs are installed on the runway and taxiway systems on the airfield. The signage system includes runway and taxiway designations, holding positions, routing/directional and runway exits. All existing signs should be maintained throughout the planning period. At present, there are no distance remaining signs serving PVB. Given the forecast potential for increased operations by turbine-powered aircraft at PVB, the airport should consider implementing runway distance remaining signage upon extending the runway, should demand warrant. These lighted signs alert pilots to how much runway length remains in 1,000-foot increments.

A summary of the airside facilities previously discussed at PVB is presented on **Exhibit 3C**.

LANDSIDE FACILITY REQUIREMENTS

Landside facilities are those necessary for the handling of aircraft and passengers while on the ground. These facilities provide the essential interface between the air and ground transportation modes. The capacity of the various components of each element was examined in relation to projected demand to identify future landside facility needs. At PVB, this includes components for general aviation needs, such as:

- General Aviation Terminal Facilities and Automobile Parking
- Aircraft Storage
- Aircraft Parking Aprons
- Airport Support Facilities

TERMINAL FACILITY AND AUTOMOBILE PARKING REQUIREMENTS

General aviation terminal facilities at an airport are often the first impression of the community that corporate officials and other visitors will encounter. These facilities typically provide space for passenger waiting, pilot’s lounge, pilot flight planning, concessions, management, storage, and various other needs. This space is not necessarily limited to a single, separate terminal building, but can include space offered by FBOs and other specialty operators for these functions and services. At this time, the airport terminal building operated by A&A Aviation is the only dedicated general aviation terminal service provider located on the airfield.

The methodology used in estimating general aviation terminal facility needs was based upon the number of airport users expected to utilize general aviation facilities during the design hour. Space requirements for terminal facilities were based on providing 125 square feet per design hour itinerant passenger. A multiplier of 2.5 in the short term, increasing to 3.0 in the long term, was also applied to terminal facility needs in order to better determine the number of passengers associated with each itinerant aircraft operation. This increasing multiplier indicates an expected increase in business and recreational operations through the long term. These operations often support larger turboprop and jet aircraft, which accommodate an increasing passenger load factor.

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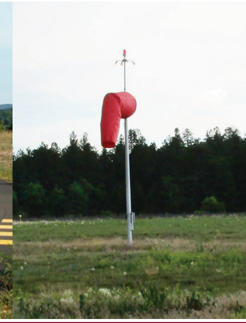


CATEGORY	EXISTING		FUTURE	
RUNWAYS	**15-33**	**7-25**	**15-33**	**7-25**
Runway Design Code (RDC)	A-II-5000	A-II-5000	B-II-4000 or 5000	B-II-4000 or 5000
Dimensions	3,999' x 75'	3,599' x 75'	Consider additional Runway length	Maintain
Pavement Strength	30,000 lbs S 35,000 lbs D	30,000 lbs S 35,000 lbs D	Maintain Consider 60,000 lbs D	Maintain Maintain
TAXIWAYS	**15-33**	**7-25**	**15-33**	**7-25**
Parallel Taxiway	No	Partial Parallel	Consider Full Length Parallel Taxiway	Consider Full Length Parallel Taxiway
Parallel Taxiway Separation from runway	-	300'	240'	Maintain at least 240'
Widths	32-35'	32-35'	35'	35'
Holding Position Locations from Runway	200'	200'	Maintain	Maintain
Taxiway Geometry	Direct Access (A) Acute Angle (B)	-	Consider mitigating	-
NAVIGATIONAL AND WEATHER AIDS	**15-33**	**7-25**	**15-33**	**7-25**
Instrument Approaches	≥ 1-mile GPS	≥ 1-mile GPS	Consider ≥ ¾-mile GPS	Consider ≥ ¾-mile GPS
Navigational and Approach Aids	AWOS, Lighted Wind Cone, Tetrahedron, and Beacon		Maintain	
LIGHTING AND MARKING	**15-33**	**7-25**	**15-33**	**7-25**
Runway Lighting	MIRL	MIRL	Maintain	Maintain
Runway Marking	NPI	NPI	Maintain	Maintain
Taxiway Lighting	MITL	MITL	Maintain	Maintain
Approach Aids	PAPI-2	PAPI-2	PAPI-4, Maintain REILs	PAPI-4 and REILs

KEY

AWOS - Automated Weather Observing System
D - Double Wheel Load
GPS - Global Positioning System
MIRL - Medium Intensity Runway Lighting
MITL - Medium Intensity Taxiway Lighting
PAPI - Precision Approach Path Indicator
REIL - Runway End Identification Lights
S - Single Wheel Load

Exhibit 3C
AIRSIDE FACILITY REQUIREMENTS

Table 3D outlines the space requirements for general aviation terminal services at PVB through the long-term planning period. Currently, PVB offers approximately 1,200 square feet of terminal space. These spaces include designated areas for flight planning areas, pilot's lounge, restroom facilities, and other amenities. As shown in the table, the existing terminal facilities are sufficient through the intermediate-term planning horizon. Approximately 300 square feet of terminal area space could be needed by the end of the long-term planning horizon.

TABLE 3D | General Aviation Terminal Area and Automobile Parking
Platteville Municipal Airport

	Currently Available	Short-Term Need	Intermediate-Term Need	Long-Term Need
Design Hour Itinerant Operations	3	3	3	4
Passenger Multiplier	2.5	2.7	2.8	3.0
Design Hour Itinerant Passengers	8	8	9	12
Terminal Facility Area (sf)[3]	1,200[1]	1,000	1,100	1,500
Vehicle Parking Spaces	8[2]	14	16	20
Total Vehicle Parking Area (sf)	2,400	4,500	5,000	6,400

[1]Includes approximate space offered by the PVB terminal building.
[2]Approximate number of vehicle parking accommodated by current space available.
[3]Forecasted Terminal Facility Area has been rounded to nearest hundred.
Source: Coffman Associates analysis

General aviation vehicular parking demands have also been determined for PVB. Space determinations for itinerant passengers were based on an evaluation of existing airport use, as well as standards set forth to help calculate projected terminal facility needs.

The parking requirements of based aircraft owners should also be considered. Although most owners prefer to park their vehicles in their hangar, safety can be compromised when automobile and aircraft movements are intermixed. For this reason, separate parking requirements, which consider one-quarter of based aircraft at the airport plus design hour itinerant passengers, are applied to general aviation automobile parking space requirements. Utilizing this methodology, parking requirements for general aviation activity call for approximately 14 spaces in the short term, increasing to approximately 20 spaces in the long-term planning horizon. At present, there is space to accommodate approximately eight vehicles at PVB. The estimated 2,400 square feet of parking currently offered serves various airport activities, including the FBO and other general aviation functions. As such, options for additional automobile parking at PVB will be examined in the Alternatives section of this study.

AIRCRAFT STORAGE HANGARS AND MAINTENANCE REQUIREMENTS

The demand for aircraft hangars typically depends on local climate, security, and owner preferences. The trend in general aviation aircraft, whether single or multi-engine, is toward more sophisticated aircraft (and, consequently, more expensive aircraft); therefore, many aircraft owners prefer enclosed hangar space to outside tiedowns.

This demand is also dependent upon the number and type of aircraft expected to be based at an airport in the future. For planning purposes, it is necessary to estimate hangar requirements based upon forecast operational activity. However, hangar development should be based upon actual demand trends and financial investment conditions.

There are a variety of aircraft storage options typically available at an airport, including shade hangars, T-hangars, linear box hangars, executive/box hangars, and bulk storage conventional hangars. Shade hangars are the most basic form of aircraft protection and are common in warmer climates. These structures provide a roof covering, but no walls or doors. There are no shade hangars at PVB, and for purposes of planning, any future shade hangars are included in the T-hangar forecast.

T-hangars are intended to accommodate one small single engine piston aircraft or, in some cases, one multi-engine piston aircraft. T-hangars are so named because they are in the shape of a "T," providing a space for the aircraft nose and wings, but no space for turning the aircraft within the hangar. Essentially, the aircraft can be parked in only one position. T-hangars are commonly "nested" with several individual storage units to maximize hangar space. In these cases, taxiway access is needed on both sides of the nested T-hangar facility. T-hangars are popular with aircraft owners with tighter budgets as they tend to be the least expensive enclosed hangar space to build and lease. Currently, PVB has a total of 26,000 square feet of T-hangar storage capacity.

The next type of aircraft hangar common for storage of general aviation aircraft is the executive/box hangar. Executive/box hangars typically provide a larger space, generally with an area between 2,500 and 10,000 square feet. This type of hangar can provide for maneuverability within the hangar, can accommodate more than one aircraft, and may have a small office and utilities. Executive/box hangars may be connected in a row of units with doors facing a taxilane. Executive box hangars may also be stand-alone hangars. These hangars are typically utilized by a corporate/business entity or to support an on-airport business. PVB currently has 26,840 square feet of aircraft storage capacity dedicated to executive style hangars, which includes the space provided by the fixed base operator (FBO).

Conventional hangars are the large, clear span hangars typically located facing the main aircraft apron at airports. These hangars provide for bulk aircraft storage and are often utilized by airport businesses, such as an FBO and/or aircraft maintenance business. Conventional hangars are generally larger than executive/box hangars and can range in size from 10,000 square feet to more than 20,000 square feet. Often, a portion of a conventional hangar is utilized for non-aircraft storage needs, such as maintenance or office space. Currently, there is no aircraft hangar storage space dedicated to conventional hangars at PVB. Although hangar storage needs are forecast to remain within the executive/box hangar size range, conventional hangar storage options will be explored in the Landside Alternatives section to be discussed. Ultimately, user/developer demand and preference will determine hangar styles and layout options.

Planning for future aircraft storage needs is based on typical owner preferences and standard sizes for hangar space. For determining future aircraft storage needs, a planning standard of 1,200 square feet per based aircraft is utilized for T-hangars. For executive/box hangars, a planning standard of 3,000 square feet is utilized for turboprop aircraft, 6,000 square feet is utilized for business jet aircraft, and 1,500 square feet is utilized for helicopter storage needs.

In total, there is approximately 52,840 square feet of hangar, maintenance, and office space provided on the airport for general aviation activities. With the trend toward aircraft owners preferring enclosed aircraft storage space, minimal growth is projected for aircraft that utilize outside tiedowns. Providing a mix of aircraft storage options is preferred when planning storage needs in order to meet the varied needs of aircraft owners. Since portions of the hangars are known to be used for aircraft maintenance servicing, requirements for maintenance/service hangar area were estimated using a planning standard of 100 square feet per based aircraft. **Table 3E** provides a summary of the aircraft storage needs through the long-term planning horizon.

TABLE 3E | Aircraft Hangar Requirements

	Currently Available	Short-Term Need	Intermediate-Term Need	Long-Term Need
Aircraft to be Hangared	21	24	26	32
Hangar Area Requirements				
T-Hangar/Linear Box Area (sf)	26,000	28,400	28,400	33,200
Executive Box/Corporate Hangar Area (sf)	33,240	32,800	37,300	44,800
Office/Maintenance Area (sf)	-	3,000	6,300	10,300
Total Hangar Area (sf)	**59,240[1]**	**64,200**	**72,000**	**88,300**

[1] Includes total hangar and maintenance area currently at the airport

Source: Coffman Associates analysis

Due to the projected increase in based aircraft, annual general aviation operations, and hangar storage needs, facility planning will consider additional hangars at PVB. The analysis indicates that there is a potential need for 29,060 square feet of additional hangar storage space to be offered through the long-term planning period. This includes a mixture of hangar, maintenance, and office areas. It is expected that the aircraft storage hangar requirements will continue to be met through a combination of hangar types.

It should be noted that hangar requirements are general in nature and based on the aviation demand forecasts. This analysis utilizes industry standards and actual need could vary based on individual user requirements and desires. The actual need for hangar space will further depend on the actual usage within hangars. For example, some hangars may be utilized entirely for non-aircraft storage, such as maintenance; yet from a planning standpoint, they have an aircraft storage capacity. Therefore, the needs of an individual user may differ from the calculated space necessary.

AIRCRAFT PARKING APRON

FAA Advisory Circular 150/5300-13A, *Airport Design*, suggests a methodology by which transient apron requirements can be determined from knowledge of busy-day operations. At PVB, the number of itinerant spaces required was determined to be approximately 15 percent of the busy-day itinerant operations for general aviation operations. A planning criterion of 800 square yards per aircraft was applied to determine future transient apron requirements for single and multi-engine aircraft. For business jets (which can be much larger), a planning criterion of 1,600 square yards per aircraft position was used.

A parking apron should also provide space for locally based aircraft that require temporary tiedown storage and space for maintenance activities. Maintenance activities would include the movement of aircraft into and out of hangar facilities and temporary storage of aircraft on the apron. Locally based tiedowns typically will be utilized by smaller single engine aircraft; thus, a planning standard of 650 square yards per position is utilized. Apron parking requirements are presented in **Table 3F**. Transient apron parking needs are divided into business jet needs and smaller single and multi-engine aircraft needs.

TABLE 3F | Aircraft Parking Apron Requirements

	Available	Short-Term	Intermediate-Term	Long-Term
Based GA Aircraft Positions	-	2	2	3
Transient Single/Multi-Engine Aircraft Positions	-	4	4	5
Transient Business Jet Positions	-	1	1	2
Total Positions	11[1]	7	7	10
Total Apron Area (sy)	12,000	6,100	6,100	9,200

[1] Only marked parking positions are being counted for this analysis.

Source: Coffman Associates analysis

The airport currently has 11 marked tiedown positions and approximately 12,000 sy of aircraft apron and movement area. The long-term forecast indicates that the existing apron area is sufficient if maintained properly throughout the planning horizon, although large transient marked tiedown positions could be needed for turbine aircraft. It should be noted, however, that local demands will ultimately dictate apron area and marked tiedown position needs.

SUPPORT REQUIREMENTS

Various other landside facilities that play a supporting role in overall airport operations have also been identified. These support facilities provide certain functions related to the overall operation of the airport and include aircraft rescue and firefighting, aviation fuel storage, airport maintenance facilities, utilities, and perimeter fencing and gates.

AIRCRAFT RESCUE AND FIREFIGHTING

Presently, there is no dedicated ARFF facility at PVB. Requirements for ARFF services at an airport are established under Title 14 CFR Part 139, which applies to the certification and operation of airports served by any scheduled or unscheduled passenger operation of an air carrier using an aircraft with more than nine seats. Since the airport is not a Part 139 facility, an on-site ARFF facility is neither required nor justified. At present, emergency services are provided by the Platteville Fire Department, which is located approximately four miles northwest of the airport.

AVIATION FUEL STORAGE

As outlined in the Landside Facilities section, fuel storage and dispensing facilities are operated by A&A Aviation. Fuel is stored in above-ground fuel storage tanks with a current useful capacity of 12,000 gallons for both 100LL and Jet A and is dispensed through a self-service system. For planning purposes, only permanent usable fuel storage facilities will be considered in the fuel capacity analysis.

Based upon historic fuel flowage records provided by airport management, in calendar year 2020, the airport pumped approximately 18,294 gallons of Jet A and 19,611 gallons of 100LL. However, it should be noted that the fuel system was completely replaced in 2019 and the global COVID-19 pandemic, which began in early 2020, caused fuel sales to decline. As a result, an average of the three highest years of fuel sales, ranging from 2015-2018, were used for this analysis. This works out to approximately 4.36 gallons per turbine operation and 2.13 per piston operation. Based upon projected operational growth, maintaining the gallons per operation ratios constant through the forecast period results in total flowage increasing to 80,300 of Jet A and 40,200 gallons of 100LL.

Maintaining a 14-day fuel supply would allow the airport to limit the impact of a disruption of fuel delivery. Future aircraft demand experienced by the FBO will determine the need for additional fuel storage capacity. According to this analysis, which is summarized in **Table 3G**, existing fuel storage capacity should be adequate through the long-term planning horizon.

TABLE 3G | Fuel Requirements

			Planning Horizon[3]		
	Available	Current	Short-Term	Intermediate - Term	Long-Term
100LL					
Daily Usage (gal.)		60	80	90	110
14-Day Supply (gal.)[2]	12,000	1,000	1,100	1,200	1,500
Annual Usage (gal.)		22,187[1]	29,200	32,900	40,200
JET A					
Daily Usage (gal.)		120	160	180	220
14-Day Supply (gal.)[2]	12,000	2,100	2,300	2,500	3,100
Annual Usage (gal.)		45,337[1]	58,400	65,700	80,300

[1] Based on average of three highest years, 2015-2018
[2] 14-Day Supply has been rounded to the nearest hundred.
[3] Forecasted Daily Usage has been rounded to the nearest ten; Annual Usage has been rounded to the nearest hundred.

Source: Airport records; Coffman Associates Analysis

MAINTENANCE FACILITIES

Currently, PVB has a building dedicated to airport maintenance and snow removal equipment (SRE) on the airfield, located directly behind the FBO facility. As such, this facility should be maintained throughout the planning horizon.

UTILITIES

The availability and capacity of the utilities serving the airport are important factors in determining the development potential of the airport property, as well as the land immediately adjacent to the facility. Ultimately, the availability of water, gas, sewer, and power sources are of primary concern when assessing available utilities. Given the forecast potential for future landside facility growth, the utility infrastructure serving the airport may need to be expanded to serve future development.

PERIMETER FENCING AND GATES

Perimeter fencing is used at airports primarily to secure the aircraft operational area and reduce wildlife incursions. The physical barrier of perimeter fencing has the following functions:

- Gives notice of the legal boundary of the outermost limits of a facility or security-sensitive area.
- Assists in controlling and screening authorized entries into a secured area by deterring entry elsewhere along the boundary.
- Supports surveillance, detection, assessment, and other security functions by providing a zone for installing intrusion-detection equipment and closed-circuit television (CCTV).
- Deters casual intruders from penetrating a secured area by presenting a barrier that requires an overt action to enter.
- Demonstrates the intent of an intruder by their overt action of gaining entry.
- Causes a delay to obtain access to a facility, thereby increasing the possibility of detection.
- Creates a psychological deterrent.
- Optimizes the use of security personnel, while enhancing the capabilities for detection and apprehension of unauthorized individuals.
- Demonstrates a corporate concern for facility security.
- Limits inadvertent access to the aircraft operations area by wildlife.

Currently, there is no perimeter fencing in place surrounding the airfield. As such, the airport should consider the addition of perimeter fencing surrounding the airfield operations area (AOA), as well as controlled access gates, to prevent inadvertent or unauthorized entry to the airfield.

SUMMARY

The intent of this section has been to outline the facilities required to meet potential aviation demands projected for PVB for the planning horizon, as well as to determine a direction of development which best meets projected needs. In an effort to provide a more flexible plan, the yearly forecasts from Chapter 2 have been converted to planning horizon levels. The short-term horizon roughly corresponds to a 5-year timeframe, the intermediate-term horizon is approximately 10 years, and the long-term horizon is 20 years. By utilizing these planning horizons, airport management can focus on demand indicators for initiating projects and grant requests rather than on specific dates in the future. A summary of the airside facility requirements is presented on **Exhibit 3C**; landside requirements are shown on **Exhibit 3D**.

CATEGORY	Available	Short Term Need	Intermediate Term Need	Long Term Need
AIRCRAFT STORAGE				
T-Hangar (s.f.)	26,000	28,400	28,400	33,200
Executive/Corporate Hangar Area (s.f.)	33,240	32,800	37,300	44,800
Office/Maintenance Area (s.f.)	-	3,000	6,300	10,300
Total Hangar Storage Area (s.f.)	59,240	64,200	72,000	88,300
AIRCRAFT APRON				
Single, Multi-engine Transient Aircraft Positions	-	4	4	5
Transient Business Jet Positions	-	1	1	2
Locally Based Aircraft Positions	-	2	2	3
Total Positions	11	7	7	10
Total Apron Area (s.y.)	12,000	6,100	6,100	9,200

CATEGORY	Available	Short Term Need	Intermediate Term Need	Long Term Need
TERMINAL FACILITY AND AUTOMOBILE PARKING REQUIREMENTS				
GA Terminal Building Space (s.f.)	1,200	1,000	1,100	1,500
GA Terminal Parking Spaces	-	8	9	12
Based Aircraft Auto Spaces	-	6	7	8
Total GA Auto Parking Spaces	8	14	16	20
Total Parking Area (s.f.)*	2,400	4,500	5,000	6,400
SUPPORT FACILITY REQUIREMENTS				
14-Day Fuel Storage Capacity (gal.) 100LL	12,000	1,100	1,200	1,500
14-Day Fuel Storage Capacity (gal.) Jet A	12,000	2,300	2,500	3,100
Security Fencing/Gates	None	Consider Fencing Enhancements		
Airport Maintenance Facilities	Yes	Maintain		

*Accounts for designated parking area only.

Exhibit 3D
LANDSIDE FACILITY REQUIREMENTS

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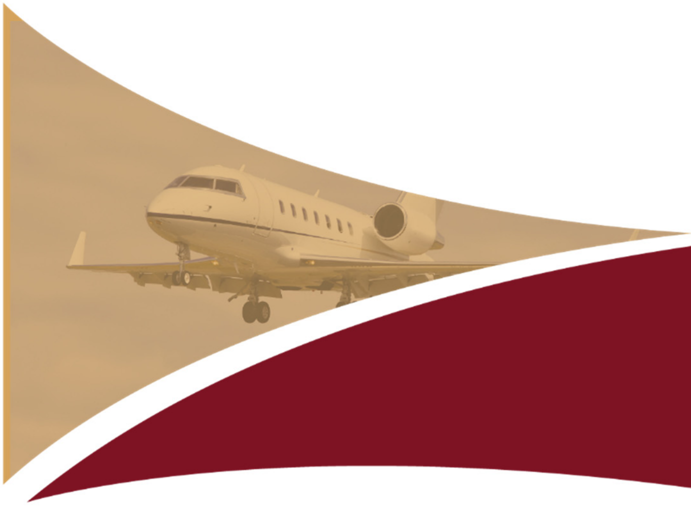
CITY OF PLATTEVILLE

PLATTEVILLE MUNICIPAL AIRPORT

Chapter 4

ALTERNATIVES



CITY OF PLATTEVILLE

Chapter 4

ALTERNATIVES

AIRFIELD ALTERNATIVES ANALYSIS

In the previous chapter, airport facilities required to satisfy the demand through the long-range planning period were identified. The next step in the planning process is to evaluate reasonable ways these facilities can be provided. The purpose of this section is to formulate and examine rational airport development alternatives that can address the short-, intermediate-, and long-term planning horizon levels. Because there are a multitude of possibilities and combinations, it is necessary to focus on those opportunities which have the greatest potential for success. Each alternative provides a differing approach to meeting current and future facility needs, and these layouts are presented for purposes of evaluation.

The goal is to develop the underlying rationale which supports the final recommended development concept. Through this process, an evaluation of the highest and best uses of airport property will be made, while also weighing local development goals, physical and environmental constraints, and appropriate airport design standards.

The development alternatives for PVB can be categorized into two functional areas: **airside** (runways, taxiways, navigational aids, etc.) and **landside** (hangars, parking aprons, terminal area, and vehicle parking, etc.). Within each of these areas, specific capabilities and facilities are required or desired. In addition, the utilization of airport property to provide revenue support for the airport, and to benefit the economic well-being of the community and surrounding region, must be considered.

Each functional area interrelates and affects the development potential of the other. Therefore, all relevant airside and landside areas are examined individually, and then combined, to ensure the final plan is functional, efficient, and cost-effective. The total impact of all these functional areas on the existing airport must be evaluated to determine if investment in the airport will meet the needs of the community, both during and beyond the 20-year planning period.

Through coordination with the City of Platteville, airport management, and WisDOT, an alternative, or combination of two or more alternatives, will be refined and modified as necessary into a recommended development concept. Therefore, the alternatives presented in this report can be considered a starting point in the evolution of a recommended development concept for the future of PVB.

AIRSIDE PLANNING CONSIDERATIONS

This section identifies and evaluates various airside development factors at PVB to meet the requirements set forth in Chapter 3. Airside facilities are, by nature, the focal point of an airport complex. Because of their primary role and the fact that they physically dominate airport land use, airfield facility needs are often the most critical factor in the determination of viable development options. A summary of the primary airside planning issues to be considered in this alternatives analysis is discussed below.

The runway length analysis, outlined in Chapter 2, concluded that 100 percent of small aircraft can readily operate at maximum takeoff weight during the hottest periods of the summer. However, based upon TFMSC analysis, PVB can and does serve turboprop and jet traffic. Furthermore, PVB currently has a Cessna Citation CJ3 and Embraer Phenom 300 based on the airfield. The existing Runway 15-33 length of 3,999 feet does not fully provide for all jet activity, especially during hot weather conditions and when jet aircraft are carrying full useful loads. As a result of potential forecast demands of increased turboprop and jet traffic, as well as the potential for four based business jets and three based turboprops, the alternatives analysis will consider potential runway extension options, should demand warrant.

AC 150/5325-4B stipulates that runway length determinations for business jets consider a grouping of airplanes with similar operating characteristics. Runway length calculations specific to PVB for business jets that make up 75 percent of the national fleet at 60 percent useful load require a 5,400-foot runway. Considering these runway length requirements, alternative options to accommodate runway extensions to 5,000 and 5,500 feet will be analyzed.

In addition, a significant runway extension would correspond with an upgrade in RDC. To justify a runway extension of this magnitude, the critical aircraft at PVB would need to fall within ARC B-II at a minimum. Thus, each runway extension option is presented under ultimate RDC B-II-5000 and -4000 standards. It is assumed that all overgrown vegetation and crops within the safety areas, which are considered incompatibilities, will be mitigated according to RDC B-II-5000 or -4000 design standards.

As presented below, a series of alternatives have been prepared to examine the potential impacts of various runway extension options. Any runway extension to the northeast, southeast, or southwest would have a considerable effect on Highway 80/81, which is a major public roadway, and Pleasant Valley Road. The costs associated with extending, paving, and mitigating the constraining factors would far outweigh those associated with a runway extension primarily to the northwest, making a runway extension to Runway 7-25 or the Runway 33 end cost prohibitive.

A substantial runway extension to the northwest will also be challenging due to various constraining issues that need to be weighed. From a physical standpoint, any runway extension alternatives need to also include the associated impacts on the taxiway system, navigational aids, and lighting systems. A runway extension also must factor in the associated safety areas and RPZs. Land within the RSA needs to be cleared and graded to meet FAA design standards, clearing standards need to be met within the ROFA and ROFZ, and RPZs need to be cleared of incompatible land uses.

Constraining factors to consider for a northwestern runway extension include clearing and grading of a large amount of property to conform with FAA design standards and the potential acquisition of property that is currently uncontrolled by the airport.

Another consideration to be examined is the ultimate instrument approach visibility minimums serving the runway system. The instrument approach capability is an important consideration that directly impacts the utility of the airport, with lower visibility minimums increasing the utility of an airport during instrument meteorological conditions (IMC). From an economic development standpoint, it is important to achieve the lowest possible visibility minimums. The best approach minimums possible will prevent aircraft from having to divert to another airport, which can create additional operating costs and time delays for aircraft operators, their passengers, as well as on-airport businesses.

Although achieving the lowest instrument approach visibility minimums is advantageous for airport operations, there are multiple safety area requirements tied to the level of instrument approach available. As a result, impacts to the airport environment imposed by the ultimate instrument approach visibility minimums need to be weighed.

PVB is currently served by RNAV GPS instrument approaches with visibility minimums not lower than one mile. Because of forecast fleet mix demands and stakeholder development considerations, the following analysis examines improved visibility minimums on each end of Runways 15-33 and 7-25 at PVB.

The dimensions of the RPZ serving each runway end will change if the instrument approach capabilities are improved with lower minimums. **Table 4A** presents the dimensions of the RPZs based upon various approach visibility minimums. Each alternative to follow presents the RPZs serving Runways 15-33 and 7-25 based upon the existing condition, as well as improving the instrument approach visibility minimums to less than one mile, but not lower than ¾-mile.

TABLE 4A | Runway Protection Zones

	Instrument Approach Capabilities	
Visibility Minimum	≥ 1-Mile	≥ ¾-Mile
Approach Runway Protection Zone		
Inner Width	500	1,000
Outer Width	700	1,510
Length	1,000	1,700

Source: FAA AC 150/5300-13A, Airport Design

As previously detailed, any change to the runway environment that includes a new or revised instrument approach procedure that increases the RPZ dimensions is subject to a further evaluation of the RPZs meeting updated guidance from the FAA. If an airport cannot fully control the entirety of the RPZ from being free of incompatible land uses, the FAA can require a change to the runway environment to properly secure the RPZs. If enhanced instrument approach procedures are pursued on either runway end at the airport, it is important that airport management properly coordinate with the FAA to ensure full use of the runway being affected.

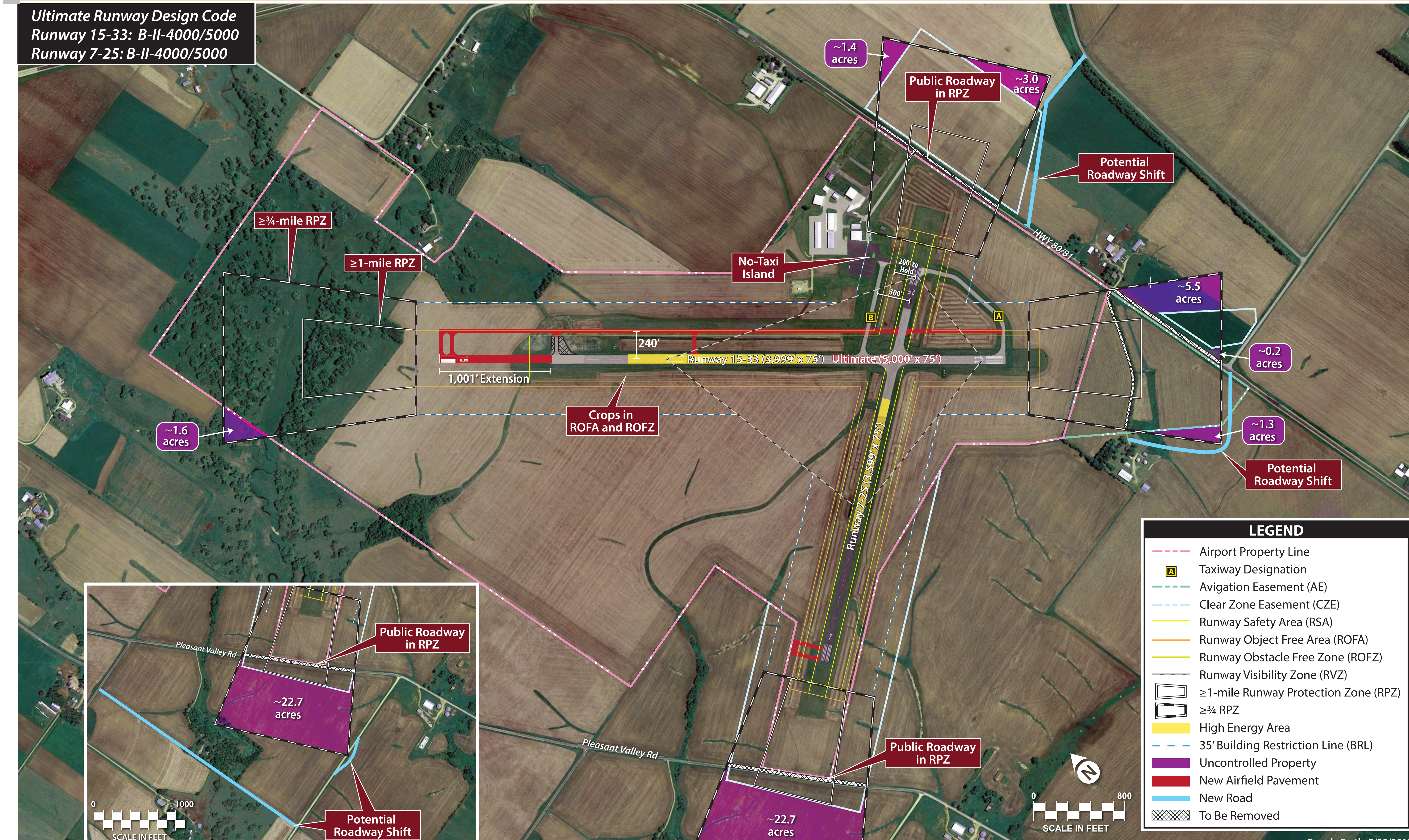
In addition to the RPZs, the determination of airspace obstructions that may be associated with improved approach procedures would need to be further evaluated. The two primary resources for determining airspace obstructions are Title 14 CFR Part 77, *Objects Affecting Navigable Airspace* and *Terminal Instrument Procedures* (TERPS). Part 77 is a filter which identifies potential obstructions, whereas TERPS is the critical tool in determining actual flight obstructions, as its analysis is used to evaluate and develop instrument approach procedures, including visibility minimums and cloud heights associated with approved approaches.

Further determination by the FAA would be needed to determine the extent of removing or lowering existing and potential obstructions that may exist to support an instrument approach procedure that could serve ultimate conditions proposed on Runways 15-33 or 7-25.

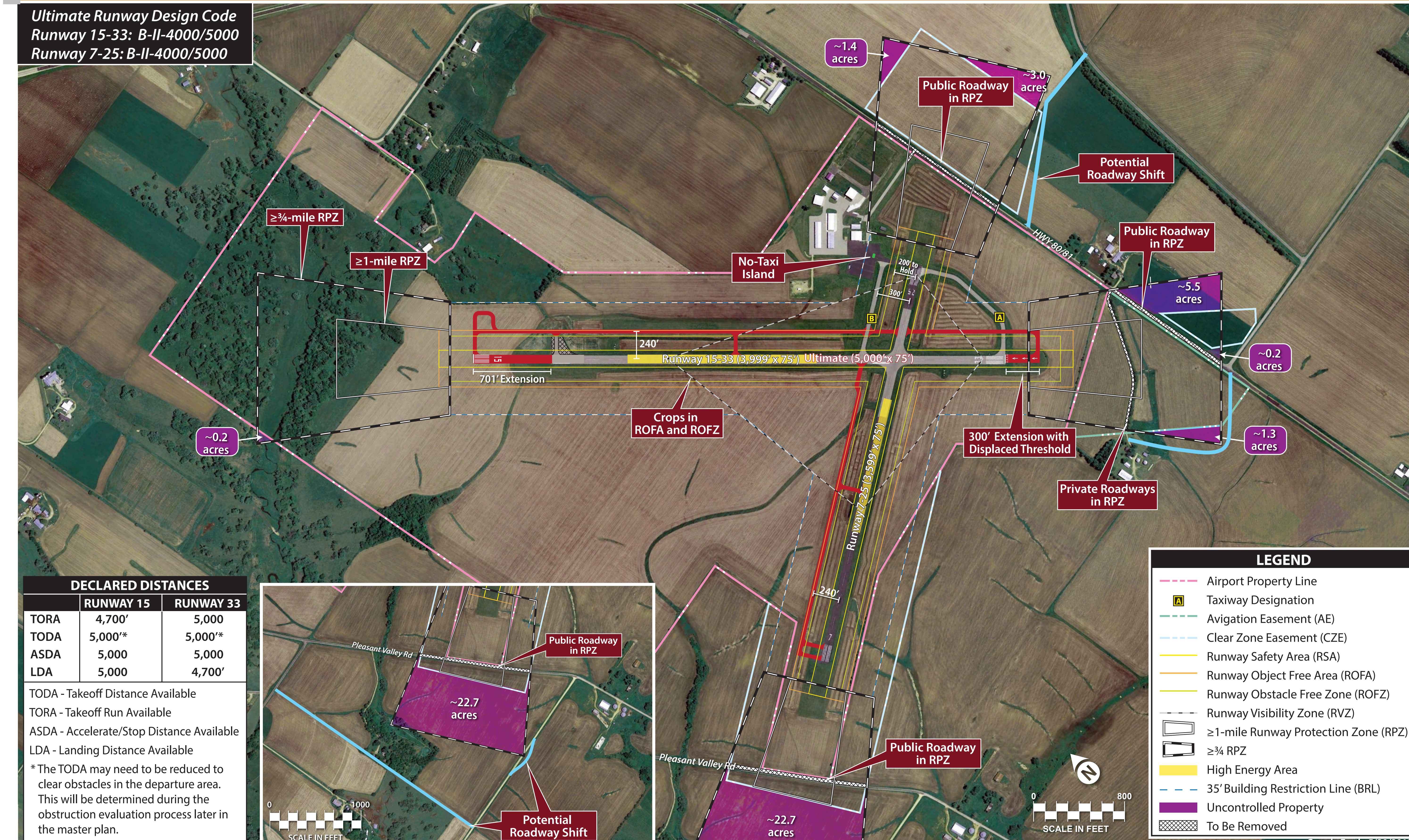
Outlined in the previous chapter, the connecting taxiway extending from the apron area serving the threshold of Runway 25 is a direct access linkage, which can lead to runway incursions. Alternative considerations to correct the direct access issue identified are also presented on **Exhibits 4A, 4B, 4C, and 4D**. Given the nature of a taxiway system, each taxiway interrelates with and affects the development potential of other taxiways and the airfield environment. Ultimately, the selected alternative (or combination thereof) will be coordinated to ensure the functionality of the ultimate taxiway system depicted on the recommended development concept to be presented later.

AIRFIELD ALTERNATIVE 1

Alternative 1, presented on **Exhibit 4A**, considers extending Runway 15-33 by 1,001 feet to the northwest for an ultimate runway length of 5,000 feet. As depicted, the physical pavement of Runway 15 would remain within the existing property boundary, as well as the RSA, ROFA, and ROFZ, serving the extended runway. Under RDC B-II-5000 conditions (instrument approach minimums not lower than one


Ultimate Runway Design Code
Runway 15-33: B-II-4000/5000
Runway 7-25: B-II-4000/5000
~1.4 acres
~3.0 acres
Public Roadway in RPZ
Potential Roadway Shift
≥¾-mile RPZ
≥1-mile RPZ
No-Taxi Island
200' to Hold
300'
HWY 80/81
~5.5 acres
~0.2 acres
~1.3 acres
Potential Roadway Shift
240'
Runway 15-33 (3,999' x 75') Ultimate (5,000' x 75')
1,001' Extension
Crops in ROFA and ROFZ
~1.6 acres
Runway 7-25 (3,599' x 75')
Pleasant Valley Rd
Public Roadway in RPZ
~22.7 acres
Potential Roadway Shift
SCALE IN FEET
0
1000
800
Public Roadway in RPZ
~22.7 acres
LEGEND
Airport Property Line
Taxiway Designation
Avigation Easement (AE)
Clear Zone Easement (CZE)
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
Runway Visibility Zone (RVZ)
≥1-mile Runway Protection Zone (RPZ)
≥¾ RPZ
High Energy Area
35' Building Restriction Line (BRL)
Uncontrolled Property
New Airfield Pavement
New Road
To Be Removed
Google Earth: 5/30/2015

Ultimate Runway Design Code
Runway 15-33: B-II-4000/5000
Runway 7-25: B-II-4000/5000



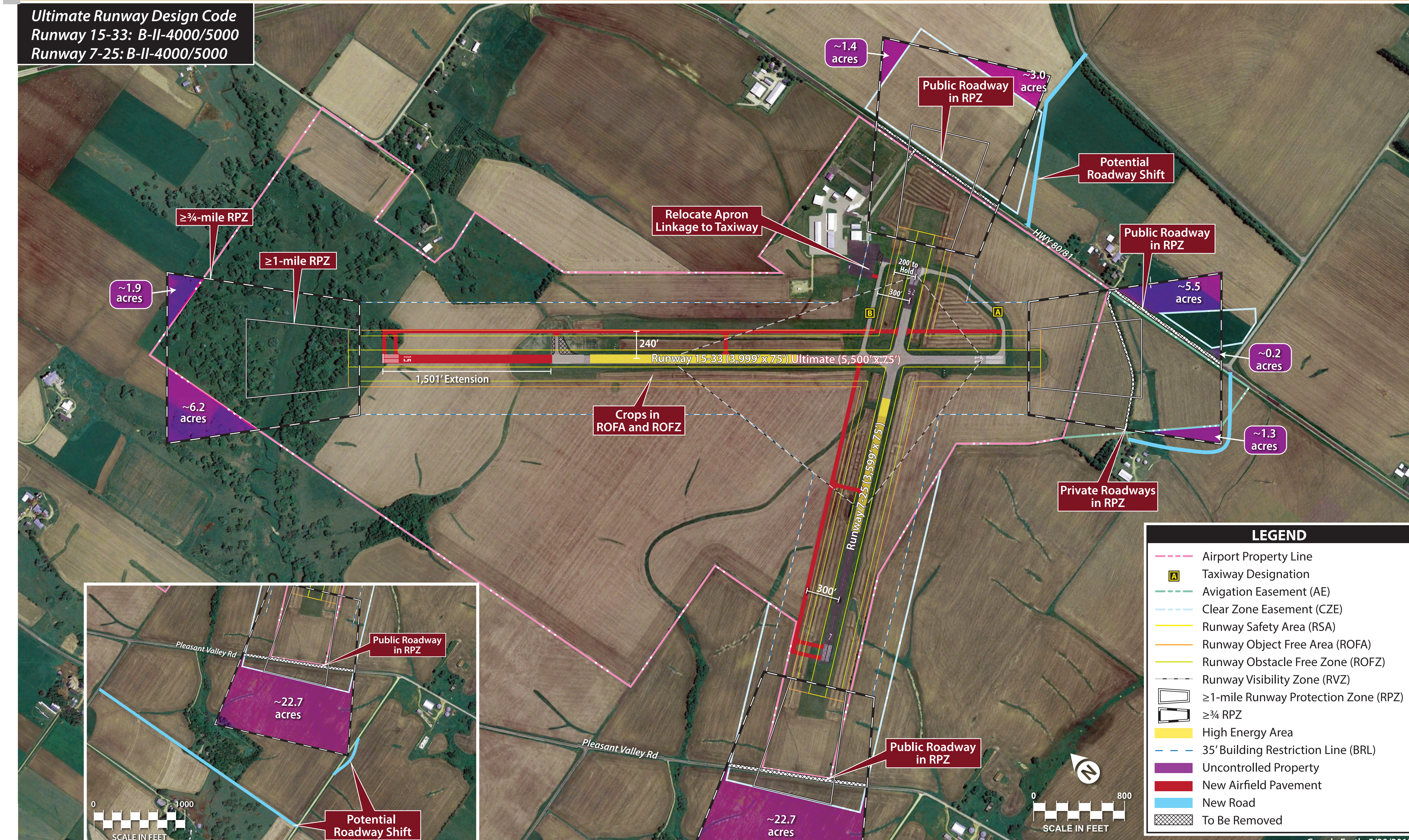
DECLARED DISTANCES

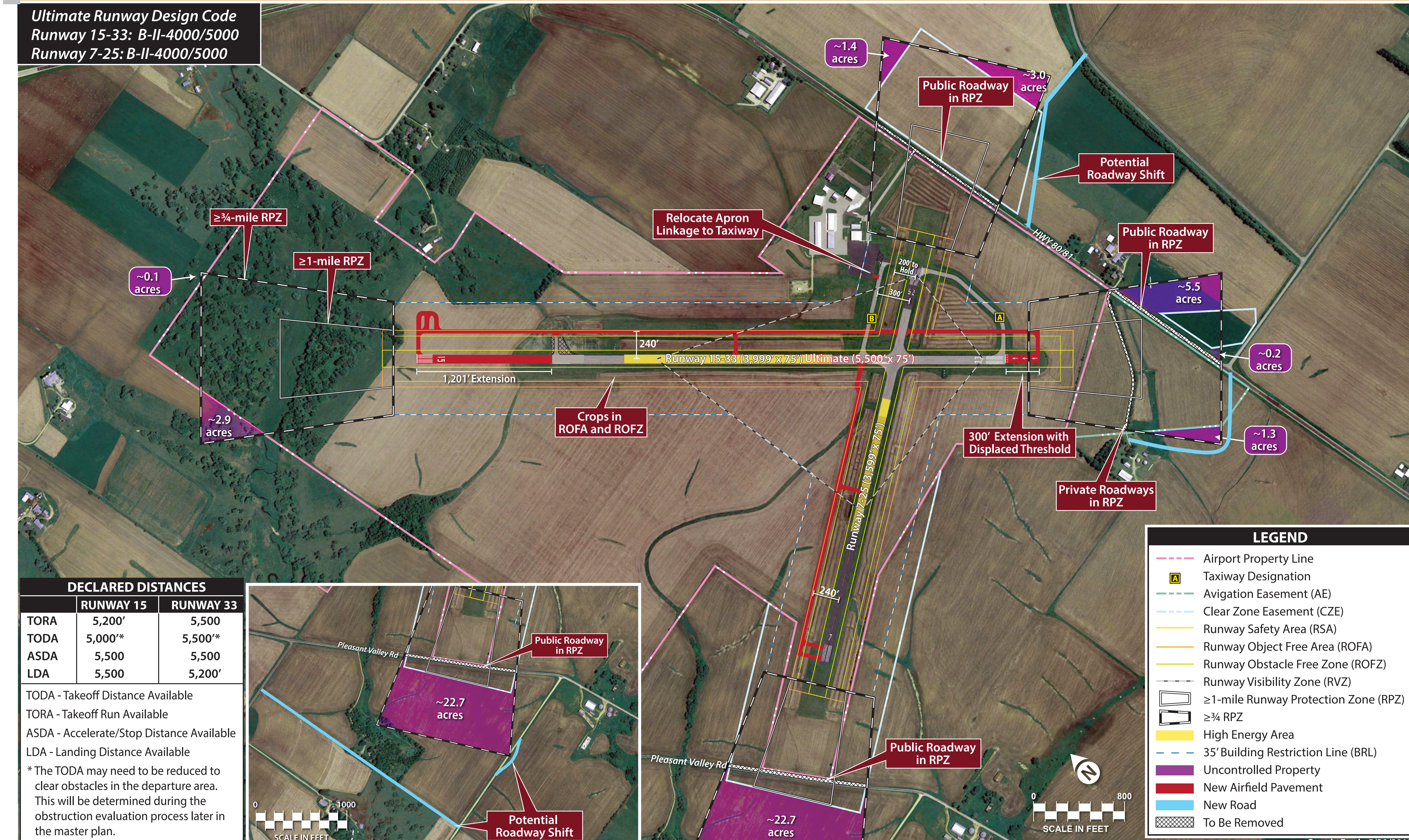
	RUNWAY 15	RUNWAY 33
TORA	4,700'	5,000
TODA	5,000'*	5,000'*
ASDA	5,000	5,000
LDA	5,000	4,700'

TODA - Takeoff Distance Available
TORA - Takeoff Run Available
ASDA - Accelerate/Stop Distance Available
LDA - Landing Distance Available
* The TODA may need to be reduced to clear obstacles in the departure area. This will be determined during the obstruction evaluation process later in the master plan.

LEGEND

- Airport Property Line
- Taxiway Designation
- Avigation Easement (AE)
- Clear Zone Easement (CZE)
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- Runway Visibility Zone (RVZ)
- ≥1-mile Runway Protection Zone (RPZ)
- ≥¾ RPZ
- High Energy Area
- 35' Building Restriction Line (BRL)
- Uncontrolled Property
- To Be Removed


Ultimate Runway Design Code
Runway 15-33: B-II-4000/5000
Runway 7-25: B-II-4000/5000
~1.4 acres
~3.0 acres
Public Roadway in RPZ
Potential Roadway Shift
Relocate Apron Linkage to Taxiway
HWY 80/81
Public Roadway in RPZ
≥¾-mile RPZ
≥1-mile RPZ
~1.9 acres
200' to Hold
300'
B
A
~5.5 acres
240'
Runway 15-33 (3,999' x 75') Ultimate (5,500' x 75')
~0.2 acres
1,501' Extension
~6.2 acres
Crops in ROFA and ROFZ
~1.3 acres
Private Roadways in RPZ
Runway 7-25 (3,599' x 75')
300'
Pleasant Valley Rd
Public Roadway in RPZ
~22.7 acres
Potential Roadway Shift
0
1000
SCALE IN FEET
Pleasant Valley Rd
Public Roadway in RPZ
~22.7 acres
N
0
800
SCALE IN FEET
LEGEND
Airport Property Line
Taxiway Designation
Avigation Easement (AE)
Clear Zone Easement (CZE)
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
Runway Visibility Zone (RVZ)
≥1-mile Runway Protection Zone (RPZ)
≥¾ RPZ
High Energy Area
35' Building Restriction Line (BRL)
Uncontrolled Property
New Airfield Pavement
New Road
To Be Removed
Google Earth: 5/30/2015



DECLARED DISTANCES

	RUNWAY 15	RUNWAY 33
TORA	5,200'	5,500
TODA	5,000'*	5,500'*
ASDA	5,500	5,500
LDA	5,500	5,200'

TODA - Takeoff Distance Available
TORA - Takeoff Run Available
ASDA - Accelerate/Stop Distance Available
LDA - Landing Distance Available
* The TODA may need to be reduced to clear obstacles in the departure area. This will be determined during the obstruction evaluation process later in the master plan.

mile), the Runway 15 RPZ would also remain on airport property. For purposes of this analysis, each runway end has also been examined for the possibility of instrument approach minimums of not lower than ¾-mile, which would significantly increase the size of each RPZ. Under RDC B-II-4000 conditions (instrument approach minimums of not lower than ¾-mile), the RPZ serving the extended Runway 15 would extend beyond airport property and encompass approximately 1.6 acres of uncontrolled property.

Under existing conditions, the RPZ serving Runway 33 extends beyond the airport property boundary to the southeast and the remainder of the RPZ is owned in easement. However, the RPZ is traversed by an existing private driveway. Should the airport pursue instrument approach minimums of not lower than ¾-mile for Runway 15-33, the RPZ serving Runway 33 would expand beyond the airport property boundary and easement to include a combined total of approximately seven acres of uncontrolled property. The ultimate RPZ would also be traversed by a private driveway, as well as a portion of Highway 80/81, which would have to be relocated outside the ultimate RPZ.

As previously discussed in Chapter 3, the existing RPZs serving Runway 7-25 extend beyond airport property to the northeast and southwest. While the portion of each existing RPZ serving Runway 7-25 that extends beyond airport property is owned in easement, the RPZs are traversed by Pleasant Valley Road and Highway 80/81, respectively. It should be noted that a portion of the airport entrance road is also included in the Runway 25 RPZ. If the runway environment remains unchanged, the existing roadways traversing the Runway 7-25 RPZs could be allowed to remain as a grandfathered condition. However, if the airport pursues instrument approach minimums of not lower than ¾-mile, the size of each respective RPZ would increase. This would require the removal and relocation of Pleasant Valley Road and Highway 80/81, similar to what is shown on **Exhibit 4A**. In addition, each RPZ would extend beyond the airport-owned easement, encompassing approximately 22.7 acres of uncontrolled property in the Runway 7 RPZ and a combined total of 4.4 acres in the Runway 25 RPZ. Prior to reducing the instrument approach minimums, the airport would be required to relocate all roads out of the ultimate RPZs and acquire all uncontrolled property.

Taxiway considerations on this alternative examine the potential for a full-length parallel taxiway serving Runway 15-33 with 240-foot runway-to-taxiway centerline separation. In doing so, the taxiway turn-around pavement serving the existing Runway 15 threshold could be extended (with excess pavement removed on either side) and utilized as a connecting taxiway. A midfield connecting taxiway is also proposed. In addition, a bypass taxiway is proposed at the Runway 15 threshold and a taxiway turn-around is proposed at the Runway 7 threshold to alleviate points of potential congestion. To eliminate the direct access provided from the apron area to Runway 25, a no-taxi island is proposed preceding Taxiway A, which would require pilots to make a turn prior to entering the runway environment.

Actions associated with this alternative include:

- Extend Runway 15-33 1,001 feet northwest to an ultimate length and width of 5,000 x 75 feet.
- Conform to a minimum of RDC B-II-5000 standards and consider improved instrument approach minimums and RDC B-II-4000.
- Acquire a total of approximately 35.7 acres of uncontrolled property through fee-simple acquisition or avigation easements to comply with RDC B-II-4000 standards.

- Mitigate roadway, overgrown vegetation, and crop incompatibilities associated with the ultimate RSA, ROFA, ROFZ, and RPZs.
- Top, trim, or clear any trees located within ultimate approach surfaces as appropriate.
- Construct a full-length parallel taxiway, bypass taxiway, taxiway turn-around, and connecting taxiways as appropriate.
- Implement a no-taxi island on the apron area preceding Taxiway A.

AIRFIELD ALTERNATIVE 2

This alternative, presented on **Exhibit 4B**, examines the potential for a runway extension on Runway 15-33 to an ultimate length of 5,000 feet. Unlike Alternative 1, however, this option considers extensions to both ends of the runway and the displacement of the Runway 33 threshold. Due to a multitude of constraining factors to the southeast, including Highway 80/81 and residential property, a maximum runway extension of 300 feet is being considered in this direction and is coupled with a 300-foot threshold displacement. A northwestern runway extension of 701 feet is also being evaluated to achieve a combined extension of 1,001 feet.

The Runway 33 extension in this alternative would still allow for 300 feet of RSA/ROFA beyond the runway end; however, due to RPZ incompatible developments to the southeast (Highway 80/81 and residential property), the new runway pavement is displaced. Displaced runway pavement can be used for takeoff but not for landing, so the real benefit of these extensions is for takeoff operations and for landing rollout. By applying declared distances, the approach and departure RPZs at the Runway 33 end would remain in its existing location.

Declared distances are used to define the effective runway length for landing and takeoff when a standard RSA cannot be achieved or an RPZ needs to be relocated. The four declared distances include:

- Takeoff Run Available (TORA) – the runway length declared available and suitable for the ground run of an aircraft taking off (factors in the positioning of the departure RPZ).
- Takeoff Distance Available (TODA) – the TORA plus the length of any remaining runway or clearway beyond the far end of the TORA; the full length of the TODA may need to be reduced because of obstacles in the departure area.
- Accelerate-Stop Distance Available (ASDA) – the runway plus stopway length declared available and suitable for the acceleration and deceleration of an aircraft aborting a takeoff (factors in the length of RSA/ROFA beyond the runway end).
- Landing Distance Available (LDA) – the runway length declared available and suitable for landing an aircraft (factors in the length of RSA/ROFA beyond the runway end and the positioning of the approach RPZ).

The declared distance pertaining to RPZs is the takeoff run available (TORA) and the landing distance available (LDA). To keep the RPZ in its existing location, the TORA and LDA are reduced based on the runway's displaced threshold (300 feet for Runway 33). The resulting declared distances for this alternative are presented in **Table 4B**.

TABLE 4B | Airside Alternative 2 – Runway 15-33 Declared Distances

	Existing		Airside Alternative 2	
	15	33	15	33
Takeoff Run Available (TORA)	3,999'	3,999'	4,700'	5,000
Takeoff Distance Available (TODA)	3,999'	3,999'	5,000'*	5,000'*
Accelerated Stop Distance Available (ASDA)	3,999'	3,999'	5,000'	5,000'
Landing Distance Available (LDA)	3,999'	3,999'	5,000'	4,700'

* The TODA may need to be reduced to clear obstacles in the departure area. This will be determined during the obstruction evaluation process later in the master plan.

Source: Coffman Associates analysis

Under RDC B-II-5000 conditions, the RSA, ROFA, ROFZ, and RPZ serving the extended Runway 15 would remain on airport property. Similarly, all safety areas serving the extended Runway 15 end would remain on airport property under B-II-4000 conditions, except for approximately 0.2 acres of uncontrolled property encompassed within the RPZ. The RSA, ROFA, and ROFZ serving the extended Runway 33 will remain on airport property, and the displaced threshold will allow the RPZ serving Runway 33 to remain in its existing location. In the RDC B-II-5000 condition, this could allow the Runway 33 RPZ to remain unchanged and the existing private driveway traversing the RPZ could possibly remain as a grandfathered condition. However, under RDC B-II-4000 conditions, the RPZ would contain a combined total of approximately 7.0 acres of uncontrolled property and Highway 80/81 and the private driveway would have to be removed and relocated out of the RPZ.

Similar to Alternative 1, the existing RPZs serving Runway 7-25 extend beyond airport property to the northeast and southwest. While the portion of each existing RPZ serving Runway 7-25 that extends beyond airport property is owned in easement, the RPZs are traversed by Pleasant Valley Road and Highway 80/81, respectively. Should the airport pursue instrument approach minimums of not lower than ¾-mile serving Runway 7-25, the removal and relocation of Pleasant Valley Road and Highway 80/81 would be required. In addition, each RPZ would extend beyond the airport-owned easement, encompassing approximately 22.7 acres of uncontrolled property in the Runway 7 RPZ, and a combined total of 4.4 acres in the Runway 25 RPZ. Prior to reducing the instrument approach minimums, the airport would be required to relocate all roads out of the ultimate RPZs and acquire all uncontrolled property.

Under this alternative, taxiway improvements consider a full-length parallel taxiway at 240 feet runway-to-taxiway centerline separation serving the extended Runway 15-33. The full-length parallel taxiway serving Runway 15-33 includes connecting taxiways, as well as a holding bay serving the Runway 15 threshold to prevent points of congestion. Where practical, the existing taxiway turn-around pavement will be utilized to extend proposed connectors and any excess taxiway turn-around pavement is to be removed. This alternative option also considers the extension of Taxiway B to serve as a full-length parallel taxiway serving Runway 7-25. The existing portion of the partial parallel Taxiway B is maintained at 300 feet runway-to-taxiway centerline and is reduced to a separation of 240 feet beyond the intersection of Taxiway B and Runway 15-33, which meets RDC B-II standards. A bypass taxiway is also considered at the Runway 7 end to mitigate potential congestion. The implementation of a no-taxi island is also considered, which would mitigate the current direct access incompatibility preceding Taxiway A. Although this option will eliminate direct access, it will also reduce the existing usable apron area.

Actions associated with this alternative include:

- Extend Runway 15-33 701 feet northwest and 300 feet to the southeast to an ultimate length and width of 5,000 x 75 feet.
- Implement a 300-foot threshold displacement on Runway 33.
- Conform to a minimum of RDC B-II-5000 standards and consider improved instrument approach minimums and RDC B-II-4000.
- Acquire a total of approximately 34.3 acres of uncontrolled property through fee-simple acquisition or avigation easements to comply with RDC B-II-4000 standards.
- Mitigate roadway, overgrown vegetation, and crop incompatibilities associated with the ultimate RSA, ROFA, ROFZ, and RPZs.
- Top, trim, or clear any trees located within ultimate approach surfaces as appropriate.
- Construct full-length parallel taxiways serving Runways 15-33 and 7-25, holding bay, bypass taxiway, and connecting taxiways as appropriate.
- Implement a no-taxi island on the apron area preceding Taxiway A.

AIRFIELD ALTERNATIVE 3

Alternative 3, presented on **Exhibit 4C**, examines the extension of Runway 15-33 by 1,501 feet to the northwest for an ultimate runway length of 5,500 feet. Under RDC B-II-5000 conditions, the physical pavement of Runway 15 would remain within the existing property boundary, as well as the RSA, ROFA, ROFZ, and RPZ serving the extended runway. Under RDC B-II-4000 conditions, the RPZ serving extended Runway 15 would extend beyond airport property and encompass a combined total of approximately 8.1 acres of uncontrolled property. If the airport decides to pursue instrument approach minimums of not lower than ¾-mile on Runway 33, the airport would be required to acquire the 7.0 acres of uncontrolled property within the Runway 33 RPZ and relocate all roadways out of the ultimate RPZ prior to reducing the minimums. Similarly, the airport would be required to purchase a total of approximately 27.1 acres and relocate all roadways out of the RPZs serving Runway 7-25 if the instrument approach minimums serving Runway 7-25 are reduced below one mile.

Taxiway considerations examine the potential for full-length parallel taxiways serving Runway 15-33 as well as Runway 7-25. The full-length parallel taxiway serving Runway 15-33 maintains a 240-foot runway-to-taxiway centerline separation, which conforms to ultimate B-II standards. The proposed full-length parallel taxiway serving Runway 7-25 could be extended from the existing partial parallel Taxiway B, maintaining the existing 300-foot runway to taxiway centerline separation down to the end of Runway 7, conforming to ultimate B-II design standards. Under this alternative, connecting taxiways serving the extended Runway 15-33 and Runway 7-25 are proposed as appropriate and bypass taxiways are proposed serving the thresholds of Runways 7 and 15 to prevent points of congestion. To eliminate the existing direct access linkage between the apron area and the threshold of Runway 25, this alternative proposes the removal of apron pavement preceding Taxiway A and relocating the connection to the southwest.

Actions associated with this alternative include:

- Extend Runway 15-33 1,501 feet northwest to an ultimate length of 5,500 feet.
- Conform to a minimum of RDC B-II-5000 standards and consider improved instrument approach minimums and RDC B-II-4000.
- Acquire a total of approximately 42.2 acres of uncontrolled property through fee-simple acquisition or avigation easements to comply with RDC B-II-4000 standards.
- Mitigate roadway, overgrown vegetation, and crop incompatibilities associated with the ultimate RSA, ROFA, ROFZ, and RPZs.
- Top, trim, or clear any trees located within ultimate approach surfaces as appropriate.
- Construct full-length parallel taxiways serving Runways 15-33 and 7-25, bypass taxiways, and connecting taxiways as appropriate.
- Remove apron area connection preceding Taxiway A and relocate linkage to the southwest to eliminate direct access.

AIRFIELD ALTERNATIVE 4

Alternative 4, presented on **Exhibit 4D**, examines extending Runway 15-33 to an ultimate length of 5,500 feet. Similar to Alternative 2, this option considers the runway extension to both the northwest and southeast. A runway extension and threshold displacement of 300 feet is being considered to the southeast due to constraining factors, including Highway 80/81 and residential property. By applying declared distances, the approach and departure RPZs at the Runway 33 end would remain in its existing location. The resulting declared distances for this alternative are presented in **Table 4C**.

TABLE 4C | Airside Alternative 4 – Runway 15-33 Declared Distances

	Existing		Airside Alternative 4	
	15	33	15	33
Takeoff Run Available (TORA)	3,999’	3,999’	5,200’	5,500
Takeoff Distance Available (TODA)	3,999’	3,999’	5,000’*	5,500’*
Accelerated Stop Distance Available (ASDA)	3,999’	3,999’	5,500’	5,500’
Landing Distance Available (LDA)	3,999’	3,999’	5,500’	5,200’

*The TODA may need to be reduced to clear obstacles in the departure area. This will be determined during the obstruction evaluation process later in the master plan.

Source: Coffman Associates analysis

To achieve an ultimate runway length of 5,500 feet, a runway extension to the northwest of 1,201 feet is also being considered. The physical pavement of Runway 15 would remain within the existing property boundary, as well as the RSA, ROFA, ROFZ, and RPZ, serving the extended runway under RDC B-II-5000 conditions. Under RDC B-II-4000 conditions, the RPZ serving extended Runway 15 would extend beyond airport property and encompass a combined total of approximately 3.0 acres of uncontrolled property. The airport would also be required to acquire approximately 7.0 acres of uncontrolled property and relocate all roadways within the ultimate Runway 33 RPZ prior to reducing the instrument approach minimums below one mile, if desired. Similarly, the airport would be required to purchase a total of approximately 27.1 acres and relocate all roadways out of the RPZs serving Runway 7-25 if the instrument approach minimums serving Runway 7-25 are reduced below one mile.

Like Alternatives 2 and 3, taxiway considerations in Alternative 4 examine the potential for full-length parallel taxiways serving Runway 15-33 as well as Runway 7-25. The full-length parallel taxiway serving Runway 15-33 maintains a 240-foot runway-to-taxiway centerline separation, which conforms to ultimate B-II standards. The proposed full-length parallel taxiway serving Runway 7-25 could be extended from the existing partial parallel Taxiway B, maintaining the existing 300-foot runway-to-taxiway centerline separation, which would then reduce to a 240-foot separation beyond the intersection of Taxiway B and Runway 15-33 to conform with ultimate B-II design standards. Under this alternative, connecting taxiways serving the extended Runway 15-33 and Runway 7-25 are proposed as appropriate, and a holding bay and bypass taxiway are proposed serving the thresholds of Runways 15 and 7, respectively. Ultimately, this will help prevent points of congestion. To eliminate the existing direct access linkage between the apron area and the threshold of Runway 25, this alternative proposes the removal of apron pavement preceding Taxiway A and relocating the connection to the southwest.

Actions associated with this alternative include:

- Extend Runway 15-33 1,201 feet northwest and 300 feet to the southeast to an ultimate length of 5,500 feet.
- Implement a 300-foot threshold displacement on Runway 33.
- Conform to a minimum of RDC B-II-5000 standards and consider improved instrument approach minimums and RDC B-II-4000.
- Acquire a total of approximately 37.1 acres of uncontrolled property through fee-simple acquisition or avigation easements to comply with RDC B-II-4000 standards.
- Mitigate roadway, overgrown vegetation, and crop incompatibilities associated with the ultimate RSA, ROFA, ROFZ, and RPZs.
- Top, trim, or clear any trees located within ultimate approach surfaces as appropriate.
- Construct full-length parallel taxiways serving Runways 15-33 and 7-25, bypass taxiways, and connecting taxiways as appropriate.
- Remove apron area connection preceding Taxiway A and relocate linkage to the southwest to eliminate direct access.

AIRFIELD ALTERNATIVE 5

Alternative 5, presented on **Exhibit 4E**, examines the extension of Runway 7-25 by 1,401 feet to the southwest for an ultimate runway length of 5,500 feet. The airport would be required to purchase approximately 61.4 acres and relocate all roadways from the southwest in order to facilitate the new pavement and safety areas. This would include an RPZ to Runway 7 that can accommodate instrument approach minimums down to ¾-mile. The airport would also need to purchase approximately 4.4 acres and relocate roadways out of the Runway 25 RPZ if the instrument approach minimum is reduced to below one mile.

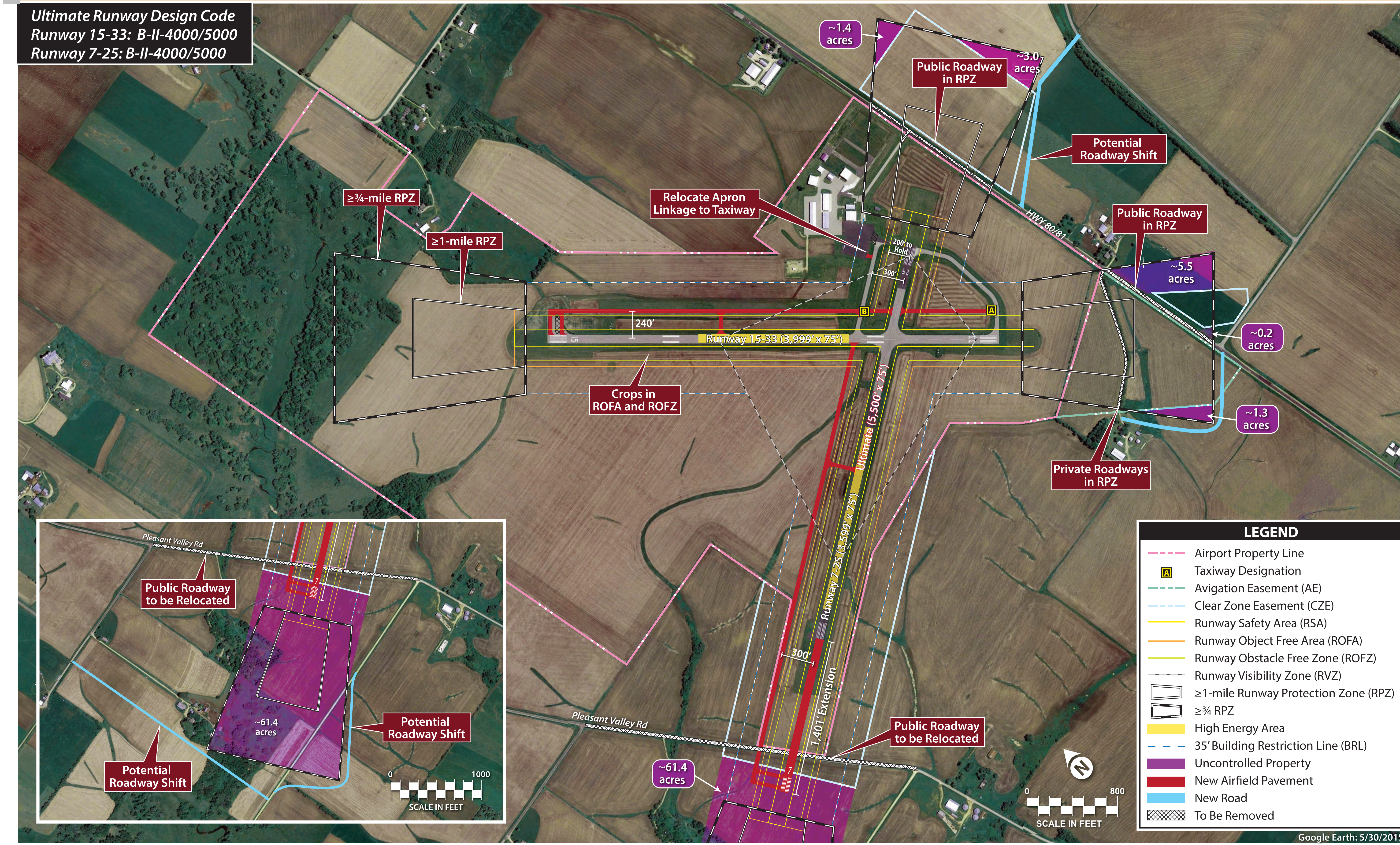


Exhibit 4E
AIRFIELD ALTERNATIVE 5

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Under RDC B-II-5000 conditions, the physical pavement of Runway 15-33 would remain within the existing property boundary, as well as the RSA, ROFA, ROFZ, and RPZ, serving Runway 15. Under RDC B-II-4000 conditions, the RPZ serving Runway 15 would also remain within airport property. To reduce the Runway 33 instrument approach minimums to not lower than ¾-mile, the airport would be required to acquire the 7.0 acres of uncontrolled property within the Runway 33 RPZ and relocate all roadways out of the ultimate RPZ prior to reducing the minimums.

Taxiway considerations examine the potential for full-length parallel taxiways serving Runway 15-33 as well as Runway 7-25. The full-length parallel taxiway serving Runway 15-33 maintains a 240-foot runway-to-taxiway centerline separation, which conforms to ultimate B-II standards. The proposed full-length parallel taxiway serving Runway 7-25 could be extended from the existing partial parallel Taxiway B, maintaining the existing 300-foot runway-to-taxiway centerline separation down to the end of Runway 7, conforming to ultimate B-II design standards. Under this alternative, connecting taxiways serving the extended Runway 15-33 and Runway 7-25 are proposed as appropriate and bypass taxiways are proposed serving the thresholds of Runways 7 and 15 to prevent points of congestion. To eliminate the existing direct access linkage between the apron area and the threshold of Runway 25, this alternative proposes the removal of apron pavement preceding Taxiway A and relocating the connection to the southwest.

Actions associated with this alternative include:

- Extend Runway 7-25 1,401 feet southwest to an ultimate length of 5,500 feet.
- Conform to a minimum of RDC B-II-5000 standards and consider improved instrument approach minimums and RDC B-II-4000.
- Acquire a total of approximately 72.8 acres of uncontrolled property through fee-simple acquisition or avigation easements to comply with RDC B-II-4000 standards.
- Mitigate roadway, overgrown vegetation, and crop incompatibilities associated with the ultimate RSA, ROFA, ROFZ, and RPZs.
- Top, trim, or clear any trees located within ultimate approach surfaces as appropriate.
- Construct full-length parallel taxiways serving Runways 15-33 and 7-25, bypass taxiways, and connecting taxiways as appropriate.
- Remove apron area connection preceding Taxiway A and relocate linkage to the southwest to eliminate direct access.

AIRSIDE SUMMARY

The airside development considerations have focused on several elements that include mitigating safety area deficiencies, examining runway extension options, improving existing and future taxiway development on the airfield, and enhancing instrument approach capabilities to the runway system. These alternatives will be considered by the City of Platteville, airport management, and WisDOT. Following discussion and review with these entities, a preferred recommended airside development concept will be drafted and presented later within this study.

LANDSIDE DEVELOPMENT CONSIDERATIONS

Generally, landside issues are related to those facilities necessary or desired for the safe and efficient parking and storage of aircraft, movement of pilots and passengers to and from aircraft, airport support facilities, and overall revenue support functions. Landside planning considerations will focus on strategies following a philosophy of separating activity levels. To maximize airport efficiency, it is important to locate facilities together that are intended to serve similar functions. The best approach to landside facility planning is to consider the development to be like that of a community where land use planning is the guide. For airports, the land use guide in the terminal area should generally be dictated by aviation activity levels.

The orderly development of the airport terminal area and flight line (areas located with immediate access to the airfield) can be the most critical, and probably the most difficult, development to control on the airport. A development approach of "taking the path of least resistance" can have a significant effect on the long-term viability of an airport. Allowing development without regard to a functional plan can result in a haphazard array of buildings and small ramp areas, which will eventually preclude the most efficient use of valuable space.

In addition to the functional compatibility of the landside areas, the proposed development concept should provide a first-class appearance for PVB. Consideration to aesthetics should be given high priority in all public areas, as many times an airport can serve as the first impression a visitor may have of the community. Each of the landside alternatives will plan for adequate facilities to meet the forecast needs as defined in the Chapter 2.

LANDSIDE ALTERNATIVES

Analysis in the Facility Requirements section indicated that the airport should plan for the construction of additional aircraft hangars and facilities over the next 20 years. Hangar and facility development take on a variety of sizes corresponding with several different intended uses. Commercial general aviation activities are essential to providing the necessary services on an airport. This includes privately owned businesses involved with, but not limited to, aircraft rental and flight training, aircraft charters, aircraft maintenance, line service, and aircraft fueling. In addition, forecasted needs for airport parking, terminal facilities, and support facilities were also discussed. Given the need for additional facilities over the planning horizon, three landside alternatives, presented on **Exhibit 4F**, were developed to best determine the ideal direction for long-term development.

Landside Alternative 1

As a result of somewhat limited area prime for landside development, each alternative seeks to maximize the development potential adjacent to the existing landside development. As such, this scenario proposes the construction of four 10-unit T-hangars, one located adjacent to the existing T-hangars on the northwest side of the terminal building, and the other three located on the northeast

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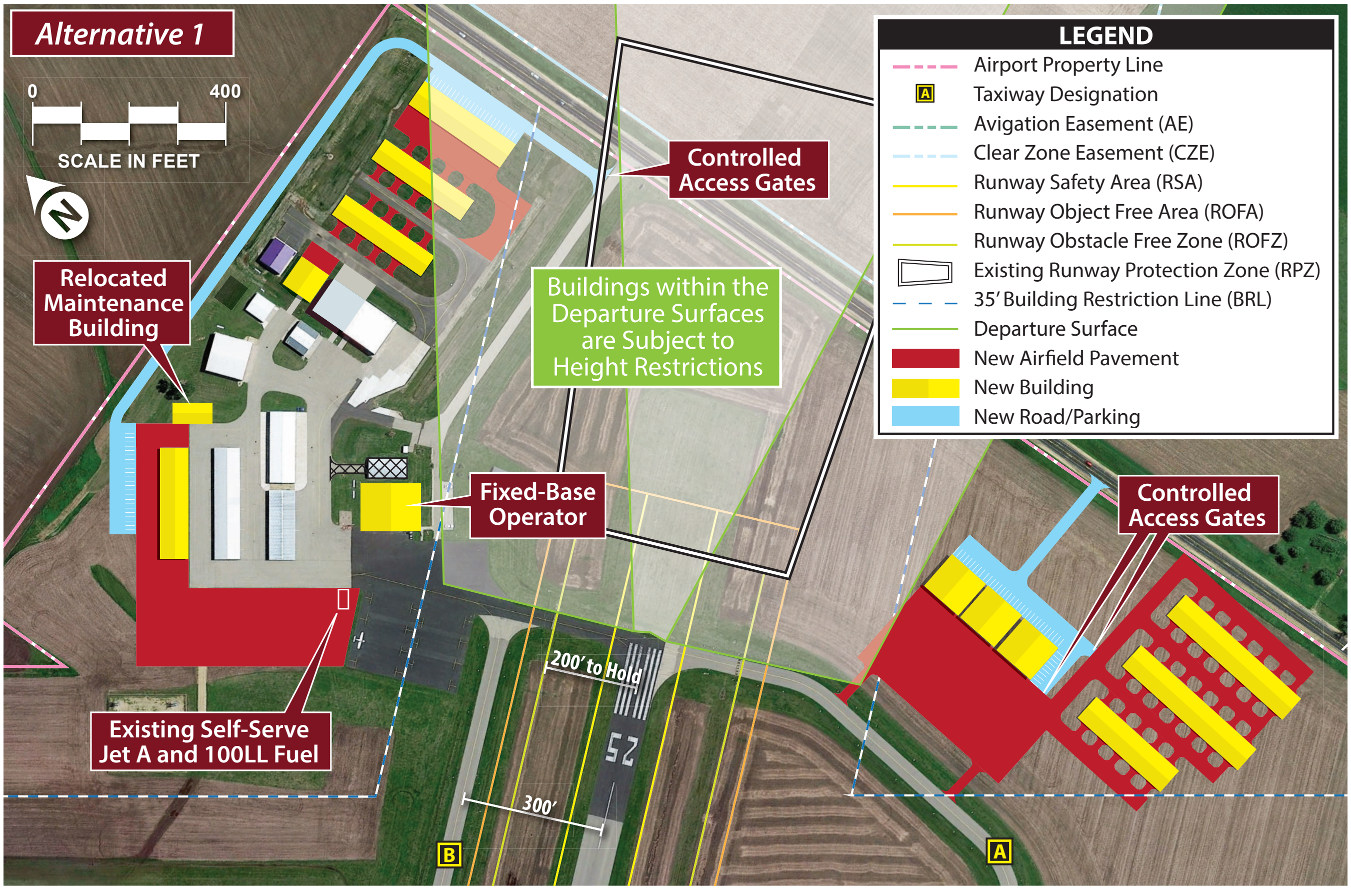

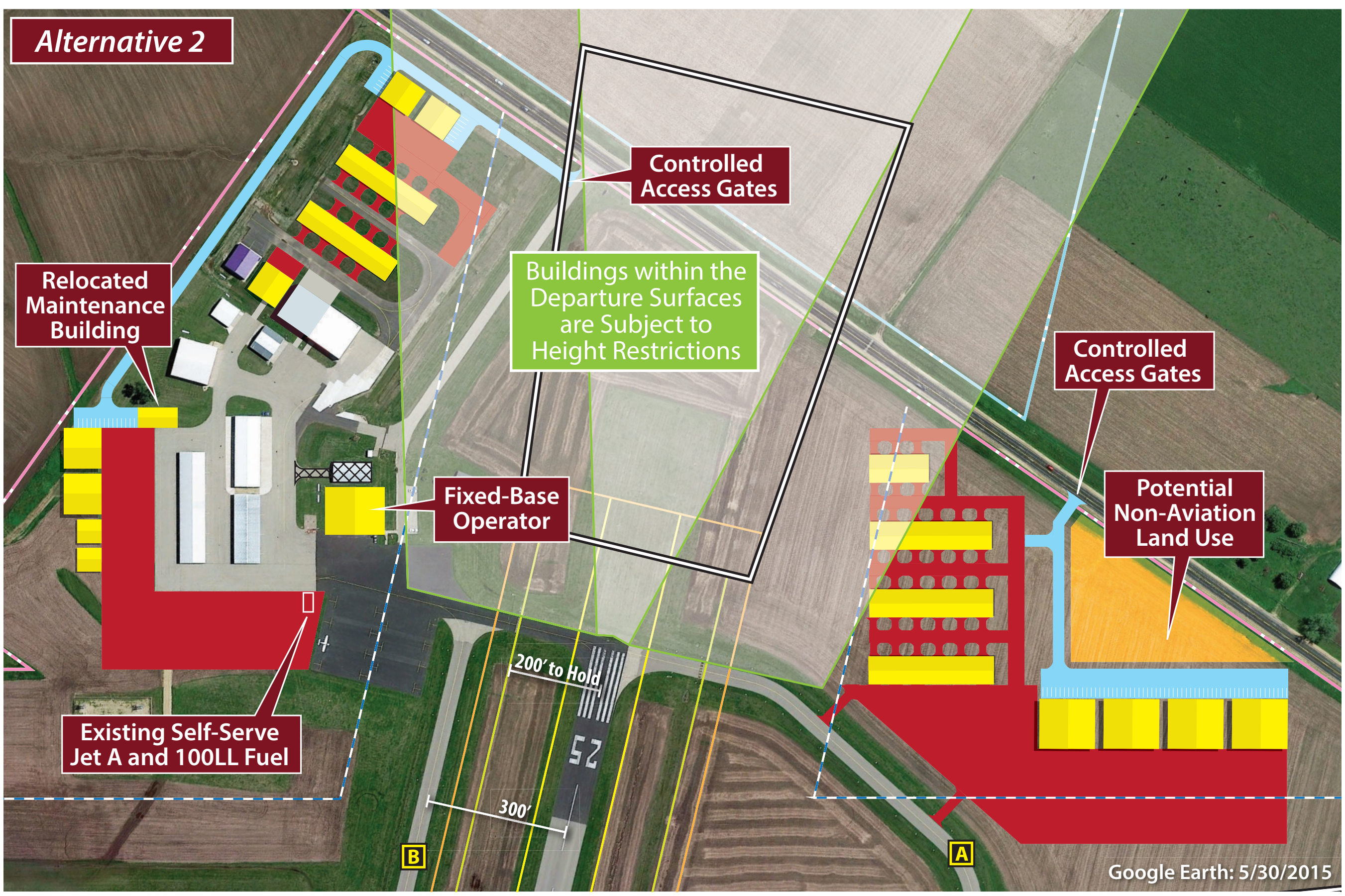

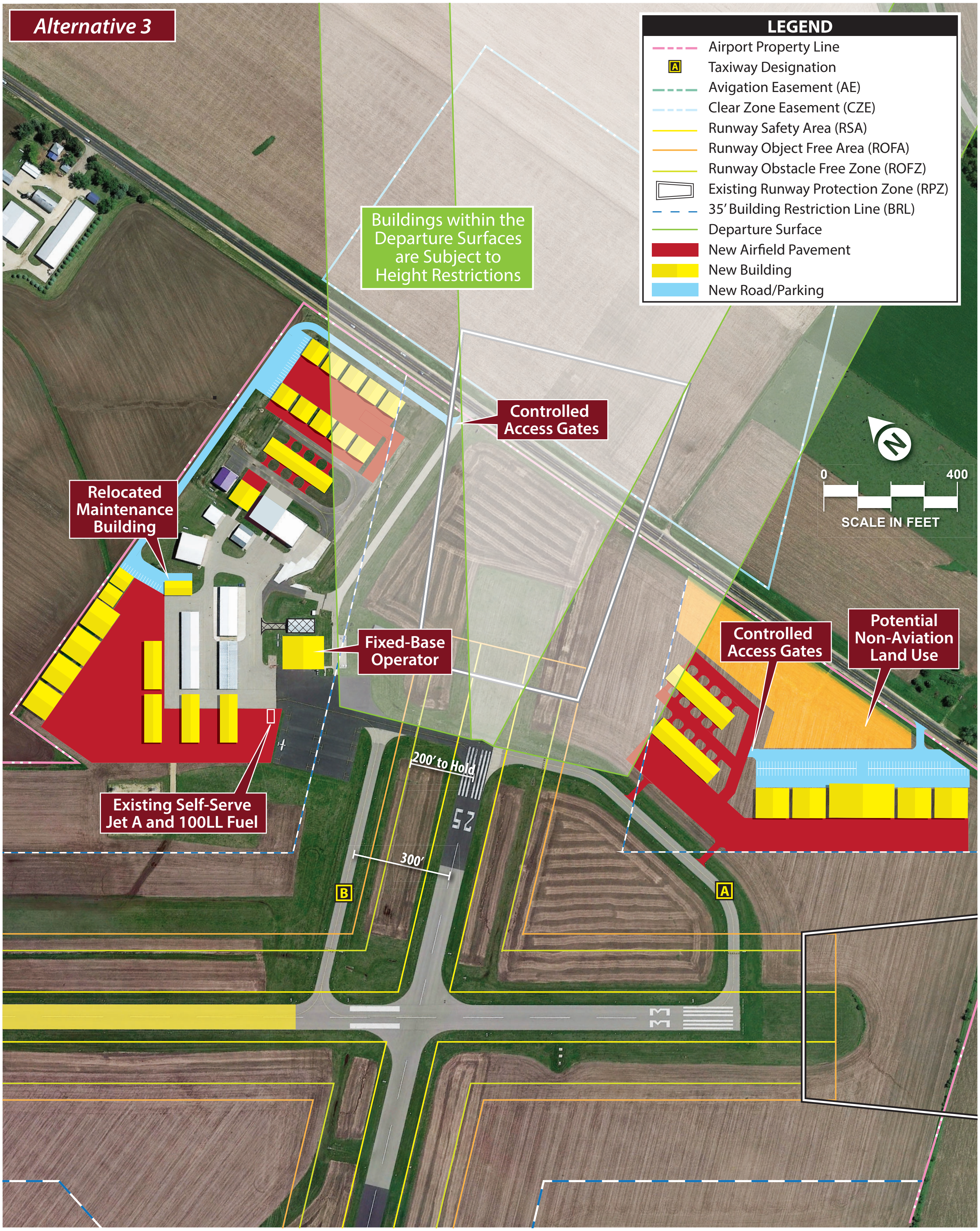
Alternative 3
LEGEND
Airport Property Line
Taxiway Designation
Avigation Easement (AE)
Clear Zone Easement (CZE)
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
Existing Runway Protection Zone (RPZ)
35' Building Restriction Line (BRL)
Departure Surface
New Airfield Pavement
New Building
New Road/Parking
Buildings within the Departure Surfaces are Subject to Height Restrictions
Controlled Access Gates
Relocated Maintenance Building
Fixed-Base Operator
Existing Self-Serve Jet A and 100LL Fuel
Controlled Access Gates
Potential Non-Aviation Land Use
0
400
SCALE IN FEET
200' to Hold
300'
25
B
A

side of the existing landside development area. An additional executive/box hangar is also proposed between the existing three executive/box hangars located on the northeast side of the terminal building. The proposed hangar is 70- by 70-feet, offering an additional 4,900 sf of executive/box hangar space. Approximately 7,700 (sy) of additional apron area is also proposed adjacent to the northwest side of the existing apron area and self-serve fueling island. A new airport access road could be provided, extending from the existing airport drive, with access controlled by gates. Automobile parking areas of 6,900 sf could be provided at a T-hangar assembly at the northwest and the northeast ramp area, respectively.

Should demand dictate, this alternative also examines the possibility of a new development area located on the southeast side of the Runway 25 threshold. This development area could be accessed via existing Taxiway A from the airside and from Highway 80/81 from the landside via a new airport access road. This is recommended to prevent automobile traffic traversing the airfield to access the proposed development. The southeast development area could be served by three large 90- by 95-foot executive or conventional-style hangars offering a total of 25,650 sf of clear-span hangar storage space, as well as two 14-unit T-hangars and one 10-unit T-hangar. In addition, the development area could be served by approximately 8,800 sy of apron area and approximately 22,800 sf of automobile parking area. Controlled access gates could be placed preceding the proposed apron area and T-hangars to prevent unauthorized or inadvertent airfield access.

Landside Alternative 2

Alternative 2 considers a variety of hangar styles and sizes. Located immediately northwest of the existing landside development area, four executive/box hangars are proposed, totaling approximately 18,600 sf of hangar storage space. Located northeast of the terminal building, two 8-unit T-hangars and three more executive/box hangars are proposed and would provide an additional 12,975 sf of hangar storage capacity. The proposed executive/box hangars adjacent to Highway 80/81 are served by an additional access road and controlled access gate, as well as approximately 2,400 sf of automobile parking area. The access road would also run along the north side of the landside development area and provide an automobile parking area of approximately 39,000 sf to the four new executive/box hangars at the northwest. Approximately 12,500 sy of additional apron area is also proposed adjacent to the northwest side of the existing apron area and self-serve fueling island.

Given limited landside development potential immediately adjacent to the existing development area, it is proposed that the airport develop the property immediately southeast of the existing Runway 25 threshold. This scenario examines the possibility of four 11,500 sf conventional hangars, three 12-unit T-hangars, and one 6-unit T-hangar, which would be served by an additional 19,300 sy of apron area. Landside access to the proposed development area could be provided via an additional airport access road extending from Highway 80/81. The proposed conventional hangars could be served by approximately 31,200 sf of automobile parking area and vehicle access could be provided to the proposed T-hangars via a controlled access gate. Airside access to the proposed development area could be provided by existing Taxiway A. In an effort to maximize the use of airport property, approximately 1.8 acres of property located in the terminal area are designated for non-aeronautical land use.

Landside Alternative 3

The final alternative scenario proposes the construction of four 7,650 sf executive/box hangars, two 3,000 sf executive/box hangars, and approximately 20,000 sy of additional apron area located immediately northwest of the existing landside development area. Four additional 6-unit T-hangars are proposed adjacent to the existing T-hangars and would occupy some of the new ramp space. An access road extending from the existing airport drive would provide vehicular access to the executive/box hangars, as well as approximately 4,500 sf of automobile parking.

Ten 3,600-sf executive/box hangars are also proposed northeast of the terminal building and adjacent to Highway 80/81. The two rows of five hangars would be separated and served by approximately 3,800 sy of apron area and a 6,600-sf automobile parking area. Vehicle access could be provided through a controlled access gate and the road mentioned previously. Additional hangar development in this area could include an additional executive/box hangar, approximately 4,900 sf, between the existing three executive/box hangars, as well as one 8-unit T-hangar.

Should the airport experience continued demand for landside development, additional landside facilities are proposed on the southeast side of the Runway 25 threshold. These facilities could be accessed via Taxiway A from the airside and Highway 80/81 from the landside, via an additional airport access road. This alternative considers the development of five large clear-span conventional style hangars. Of these hangars, there are four 10,000 sf conventional hangars and one 20,000 sf conventional hangar proposed. These hangars could be served by approximately 12,700 sy of apron area, as well as 72,200 sf of automobile parking. If demand dictates, two additional 10-unit T-hangars could be constructed in this development area as well. Vehicle access to the proposed T-hangars could be provided through a controlled access gate. Under this scenario, approximately 3.3 acres of airport property could be used for non-aeronautical land use.

LANDSIDE ALTERNATIVES SUMMARY

The intent of this analysis is to present alternatives that provide straightforward development concepts aimed at meeting the needs of several service levels. Additionally, the alternatives offer separation of activity levels. In some cases, a portion of one alternative could be intermixed with another, or some development concepts could be replaced with others. The final recommended plan only serves as a guide for the airport. Many times, airport operators change their plan to meet the needs of specific users. The goal in analyzing these landside alternatives is to focus on future development so that airport property can be maximized.

SUMMARY

The process utilized in assessing airside, terminal, and general aviation development alternatives involves a detailed analysis of facility requirements, as well as future growth potential. Current airport design standards were considered at each stage of development.

It is important to note that analysis presented in this section has been conducted from a standpoint that assumes the airport's commitment to funding future infrastructure development, and airside and landside alternatives assume the realization of forecast demand previously presented. Considering forecast future potential demand and assumed commitment to funding infrastructure development, alternatives presented in this section consider options to develop individualized areas on the airport.

On the airside, the major considerations involve extending Runway 15-33 or Runway 7-25 to better meet the needs of larger turbine aircraft that currently utilize the runway and are forecast to utilize the runway more frequently over the 20-year planning period. The alternatives analysis also considers the potential for improved instrument approach minimums and visual approach aids.

On the landside, alternatives were presented to consider hangar development layouts and additional apron area. All options for future hangar and apron development meet or exceed the forecast 20-year need. After review by the City of Platteville, airport management, and WisDOT, a recommended concept will be presented. In addition, a financial plan and environmental overview of the proposed plan will be developed.

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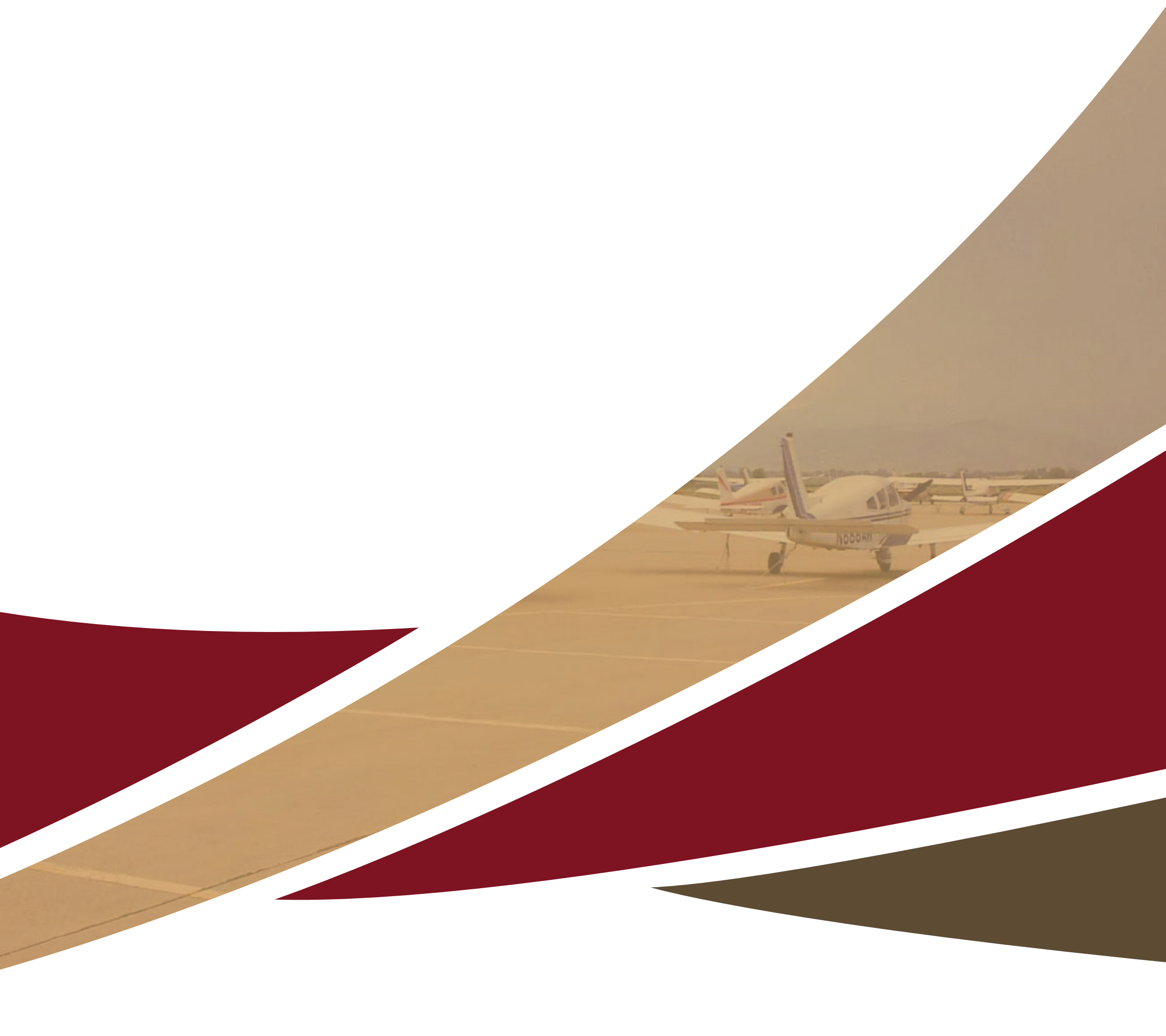
CITY OF PLATTEVILLE

PLATTEVILLE MUNICIPAL AIRPORT

Chapter 5

RECCOMENDED CONCEPT



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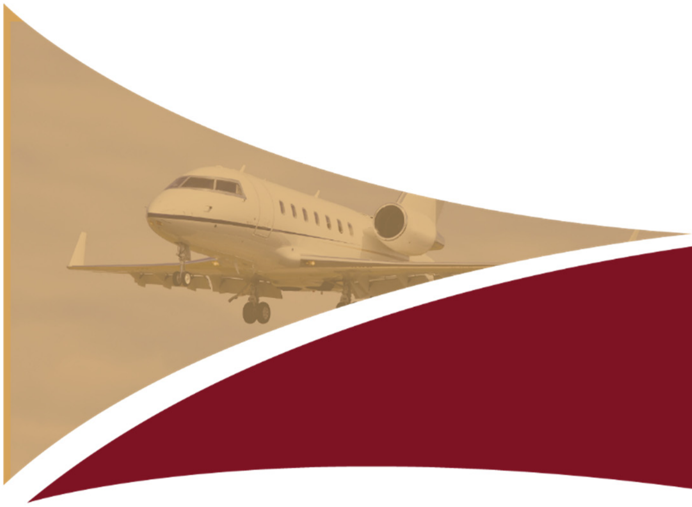

Chapter 5

RECOMMENDED CONCEPT

This chapter outlines a recommended long-term development concept and an environmental overview. Once approved locally, the critical outcome will be an updated ALP, to be approved by the BOA and the Federal Aviation Administration (FAA). The approved ALP will be useful in future development of PVB, as any potential grant funding requests must be represented on the ALP. Each step in the planning process has included the development of draft working papers, which were presented and discussed at Planning Advisory Committee (PAC) meetings and public information workshops and were also available on the project website.

FORECAST VALIDATION

The original forecasts developed in Chapter 2 are presented in **Table 5A**. These forecasts were submitted to FAA for approval, which was received.

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TABLE 5A | Forecast Comparison to the *Terminal Area Forecast*
Platteville Municipal Airport

	BASE YEAR 2018	FORECAST			CAGR 2018-2039
		2024	2029	2039	
Itinerant Operations					
Study Forecast	5,456	6,390	6,900	8,500	2.24%
2019 FAA TAF	10,550	10,550	10,550	10,550	0.00%
% Difference	47.47%	35.66%	29.98%	14.88%	
Local Operations					
Study Forecast	4,945	5,460	5,850	7,250	1.93%
2019 FAA TAF	10,000	10,000	10,000	10,000	0.00%
% Difference	50.83%	43.40%	38.25%	22.45%	
Total Operations					
Study Forecast	10,401	11,850	12,750	15,750	2.10%
2019 FAA TAF	20,550	20,550	20,550	20,550	0.00%
% Difference	49.09%	39.32%	33.88%	18.44%	
Based Aircraft					
Study Forecast	21	24	26	32	2.13%
2019 FAA TAF	28	28	28	28	0.00%
% Difference	20.00%	10.53%	5.00%	8.70%	

CAGR - Compound annual growth rate
Source: Coffman Associates analysis.

Based on existing conditions as reported by the airport and that were included in the current (2022) FAA *Terminal Area Forecast* (TAF), the forecasts generated in Chapter 2 are still applicable with few changes. For example, the FAA's based aircraft database (www.basedaircraft.com) indicates that the airport currently has 19 validated based aircraft, while the FAA TAF indicates 21. The last validation was completed in 2019, per the website. The 2022 TAF remains basically the same as it was in 2019, and no newer more comprehensive information is available to suggest a major difference. It is apparent that the forecasts remain valid and will continue to serve as general course guides needing to be re-evaluated every five years or so.

The analysis in Chapter 2 also established that the current critical aircraft, defined by the most demanding singular or grouping of aircraft with 500 or more annual operations, was represented by the Pilatus-12 (PC-12) which falls in aircraft approach category (AAC) A and airplane design group (ADG) – II, thereby having a critical aircraft designation of A-II. The analysis was completed in 2019 prior to the COVID-19 pandemic, and a revalidation of the airport's critical aircraft has been completed. **Table 5B** presents the annualized data obtained from FAA's Traffic Flow Management System Count (TFMSC) for the last ten years. The TFMSC includes all aircraft that filed an instrument flight plan, as well as those captured by radar data. The FAA allows this data to be used to determine critical aircraft for justification of grant funding purposes. While some traffic is not captured, it generally represents the majority of operations by turbine aircraft since these aircraft typically fly under instrument flight rules (IFR). Based on the updated TFMSC data, the critical aircraft for PVB remains the PC-12. It should be noted that the historic rise of jet activity between 2013 and 2017 has reversed, with annual totals falling below 200 since the pandemic began.

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TABLE 5B | FAA TFMSC Turbine Aircraft Activity Data for PVB

ARC	Aircraft Type	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
A-I	Eclipse 400/500	0	18	38	38	62	10	4	0	4	0
A-I	Lancair Evolution/Legacy	0	0	14	40	44	24	0	0	2	0
A-I	Piper Malibu/Meridian	2	10	0	0	4	0	0	2	2	2
A-I	Socata TBM 7/850/900	2	4	2	6	4	8	12	12	4	6
Subtotal		**4**	**32**	**54**	**84**	**114**	**42**	**16**	**14**	**12**	**8**
A-II	Pilatus PC-12	324	314	276	324	228	212	106	38	66	110
Subtotal		**324**	**314**	**276**	**324**	**228**	**212**	**106**	**38**	**66**	**110**
B-I	Cessna 425 Corsair	0	0	0	0	2	0	0	0	0	0
B-I	Citation CJ1	0	2	0	6	24	14	24	22	24	12
B-I	Citation I/SP	0	0	0	0	0	0	0	0	2	0
B-I	Citation M2	0	0	0	0	116	158	14	0	0	4
B-I	Citation Mustang	2	10	0	0	2	2	2	4	6	6
B-I	Honda Jet	0	0	0	0	0	0	0	0	6	0
B-I	King Air 90/100	12	8	4	0	2	6	8	0	2	4
B-I	Phenom 100	0	0	0	0	0	0	0	0	0	2
B-I	Piper Cheyenne	0	2	0	0	2	0	0	6	14	0
Subtotal		**14**	**22**	**4**	**6**	**148**	**180**	**48**	**32**	**54**	**28**
B-II	Cessna Conquest	0	2	2	0	4	2	2	0	0	0
B-II	Citation CJ2/CJ3/CJ4	0	0	12	34	0	2	0	0	4	0
B-II	Citation II/SP/Latitude	2	0	0	0	0	2	0	0	0	0
B-II	Citation V/Sovereign	0	0	2	0	0	0	0	0	8	2
B-II	Citation XLS	0	0	0	0	0	2	0	0	0	0
B-II	King Air 200/300/350	12	14	6	2	12	8	4	8	12	6
B-II	Phenom 300	0	0	0	0	0	22	38	38	34	34
B-II	Shorts 330/360	0	0	0	0	2	0	0	0	0	0
Subtotal		**14**	**16**	**22**	**36**	**18**	**38**	**44**	**46**	**58**	**42**
C-I	BAe Systems Hawk	0	0	0	0	0	0	0	0	2	0
Subtotal		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**
ARC Code Summary											
ARC Code		**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
A-I		4	32	54	84	114	42	16	14	12	8
A-II		324	314	276	324	228	212	106	38	66	110
B-I		14	22	4	6	148	180	48	32	54	28
B-II		14	16	22	36	18	38	44	46	58	42
C-I		0	0	0	0	0	0	0	0	2	0
Totals		**356**	**384**	**356**	**450**	**508**	**472**	**214**	**130**	**192**	**188**

RECOMMENDED CONCEPT

The development alternatives provided in the previous chapter were presented to the PAC and have been refined into a single recommended concept for the master plan. This chapter describes, in narrative and graphic form, the recommended direction for the future use and development of PVB.

The recommended concept provides the ability to meet the different needs of the various airport operators. The goal of this plan is to ensure that the airport can continue, and even improve, in its role of serving general aviation operators in and around the City of Platteville, as well as the southwestern region of Wisconsin. The plan has been specifically tailored to support existing and future growth in all forms of potential activity as the demand materializes.

The recommended airport development concept, as shown on **Exhibit 5A**, presents a long-term configuration for the airport, which preserves and enhances the role of the airport, while also meeting FAA design standards. The phased implementation of the recommended development concept will be presented in the next element of this report. The following sections describe the key details of the airside and landside elements of the recommended master plan concept.

AIRSIDE CONCEPT

The airside plan generally considers those improvements relating to the runway and taxiway system, as well as lighting and navigational aids.

DESIGN STANDARDS

The FAA has established design criteria to define the physical dimensions of runways and taxiways, as well as the imaginary surfaces surrounding them, to enhance the safe operations of aircraft at airports. These design standards also define the separation criteria for the placement of landside facilities.

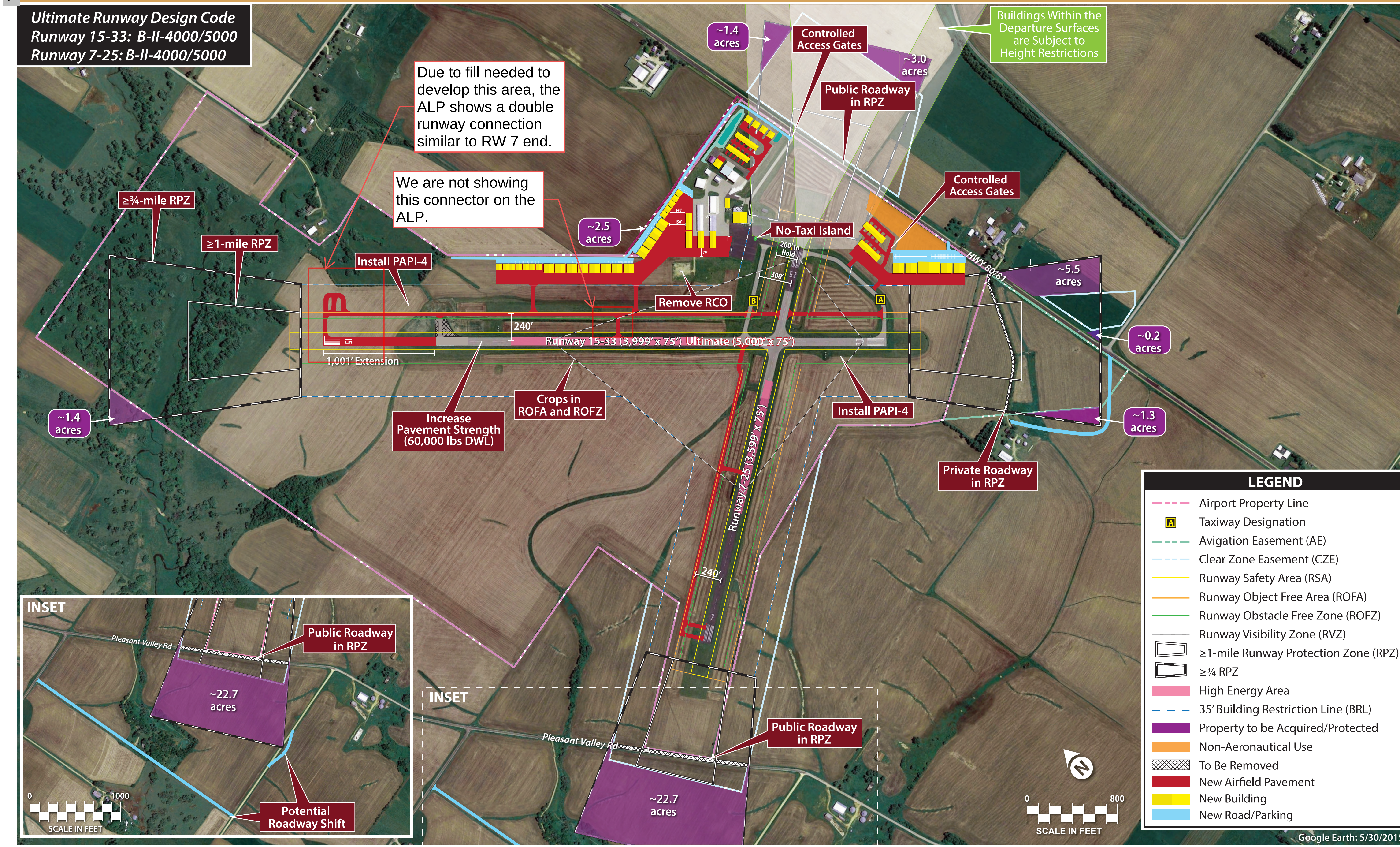
As discussed previously, the design criteria primarily center on the airport's established critical aircraft. The critical aircraft is the most demanding aircraft, or family of aircraft, which currently conducts, or is projected to conduct, 500 or more operations (takeoffs and landings) per year at the airport. Factors included in the airport design are an aircraft's wingspan, landing approach speed, tail height, and, in some cases, the instrument approach visibility minimums for each runway. The FAA has established the Runway Design Code (RDC) to relate these design aircraft factors to airfield design standards. The most restrictive RDC is also considered the overall Airport Reference Code (ARC).

While airfield elements, such as safety areas, must meet design standards associated with the applicable RDC, landside elements can be designed to accommodate specific categories of aircraft. For example, an airside taxiway must meet taxiway object free area (TOFA) standards for all aircraft types using the taxiway, while the taxilane to a T-hangar area only needs to meet width standards for smaller single and multi-engine piston aircraft that are expected to use the taxilane.

The applicable RDC and critical design aircraft for each runway at PVB in the ultimate conditions, as established previously, are summarized in **Table 5C**. While some alternatives did consider meeting ARC C-II standards, it was determined that meeting more demanding design constraints would be impractical as the larger safety areas would impact the immediate land uses surrounding the airport or require a reduction of on-airport operational spaces in a way that would not support the shift to C-II. Thus, the most practical approach is to continue to support and plan for the runway system to meet ARC B-II design standards.

TABLE 5C | Airport and Runway Classifications

	Runways 15-33 (Primary) and 7-25 (Existing/Ultimate)
Airport Reference Code (ARC)	A-II/B-II
Critical Aircraft Example	Beechcraft King Air 300 Cessna Citation S/II/Latitude Dassault Falcon 900 Phenom 300
Runway Design Code (RDC)	A-II-5000/B-II-4000
Taxiway Design Group (TDG)	2A


Ultimate Runway Design Code
Runway 15-33: B-II-4000/5000
Runway 7-25: B-II-4000/5000
Due to fill needed to develop this area, the ALP shows a double runway connection similar to RW 7 end.
We are not showing this connector on the ALP.
~1.4 acres
Controlled Access Gates
~3.0 acres
Buildings Within the Departure Surfaces are Subject to Height Restrictions
Public Roadway in RPZ
Controlled Access Gates
≥¾-mile RPZ
≥1-mile RPZ
~2.5 acres
No-Taxi Island
Install PAPI-4
Remove RCO
~5.5 acres
240'
Runway 15-33 (3,999' x 75') Ultimate (5,000' x 75')
1,001' Extension
~0.2 acres
~1.4 acres
Increase Pavement Strength (60,000 lbs DWL)
Crops in ROFA and ROFZ
Install PAPI-4
~1.3 acres
Private Roadway in RPZ
Runway 7-25 (3,599' x 75')
240'
INSET
Pleasant Valley Rd
Public Roadway in RPZ
~22.7 acres
Potential Roadway Shift
SCALE IN FEET
INSET
Pleasant Valley Rd
Public Roadway in RPZ
~22.7 acres
SCALE IN FEET
LEGEND
Airport Property Line
Taxiway Designation
Avigation Easement (AE)
Clear Zone Easement (CZE)
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
Runway Visibility Zone (RVZ)
≥1-mile Runway Protection Zone (RPZ)
≥¾ RPZ
High Energy Area
35' Building Restriction Line (BRL)
Property to be Acquired/Protected
Non-Aeronautical Use
To Be Removed
New Airfield Pavement
New Building
New Road/Parking
Google Earth: 5/30/2015

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PRIMARY RUNWAY 15-33

Runway Designation | A runway's designation is based on its magnetic headings, which are determined by the magnetic declination for the area. The magnetic declination in the area of PVB is 2° 1' west per year. The runway is oriented north/south with a true heading of 145°/325°, respectively. Based on the calculations for the next ten years, the existing 15-33 heading is the optimal orientation calibration, and no changes are needed.

Runway Dimensions | Runway 15-33 is currently 3,999 feet long and 75 feet wide. At these dimensions, the runway is capable of safely accommodating all small general aviation aircraft, as well as some medium- to large-sized business jets. Many medium to large sized business jets can operate on the runway under moderate loading conditions with shorter trip lengths and during cool to warm temperatures. Longer trips (requiring higher useful loads) and hot summer days will limit the capabilities of some larger business jets.

As a general aviation airport, PVB's role is to support the regional economy by connecting the community to the region, state, and national markets by providing services to general aviation traffic, including business jets. For these reasons, and based on the analysis presented previously, ***the long-term plan considers an extension to an ultimate runway length of 5,000 feet.*** As shown on **Exhibit 5A**, the plan includes a 1,001-foot extension to the northwest to meet long-term needs as presented and justified by actual need.

The runway width of 75 feet meets the RDC B-II-4000 design standard. The 4000 designation denotes the runway having an instrument approach with not lower than ¾-mile visibility minimums. No change in the runway width is planned.

Pavement Strength | The runway at PVB is currently strength-rated for up to 30,000 pounds for single-wheel loading aircraft (SWL) and 35,000 pounds for dual wheel gear loading (DWL). This rating is adequate for smaller single and multi-engine piston aircraft and many small to medium sized business jets, including the Cessna Citation jets, Embraer Phenom 300, and Beechjet. Larger business jets can have an maximum takeoff weight (MTOW) of up to 90,000 pounds (Gulfstream 550/650 and Global Express) and have dual wheel landing gear configurations. Most business jets, however, operate at much lower than MTOW, typically closer to 60 percent useful loading. These larger, heavier aircraft can safely operate at the airport on occasion, but increasing the surface strength will prevent premature wear to the runway and extend the usefulness of the surface. Therefore, consideration should be given to ***improving the runway surface strength rating to 60,000 pounds (DWL)*** through the planning period. The single-wheel strength rating is adequate for the airport through the 20-year horizon.

Instrument Approach Procedures | Both ends of Runway 15-33 have published instrument approach procedures. Both runways have a localizer performance with vertical guidance (LPV) GPS approach with visibility minimums of 1-mile. The recommended concept includes the possibility of lowering ***the instrument procedures to a not lower than 3/4-mile visibility (corresponding to the 4000 designation in the RDC)***. This process would require application to and approval by FAA.

Runway Object Free Area (ROFA) | The ROFA for Runway 15-33 is 500 feet wide and centered on the runway centerline. There are crops/vegetation along the western edge of the ROFA that may cause a non-standard condition. The FAA mandates that the area within a ROFA be cleared of any above-ground objects that are non-essential to airport operations, such as runway lighting or visual approach aids. The airport should clear and maintain a level and obstacle-free ROFA through the planning period.

Runway Protection Zones (RPZs) | An RPZ is a trapezoidal area centered on the extended runway centerline beginning 200 feet from the end of the runway. This safety area has been established to protect the end of the runway from airspace penetrations and incompatible land uses. The RPZ dimensions are based upon the established RDC and the approach visibility minimums serving the runway. While the RPZ is intended to be clear of incompatible objects or land uses, some uses are permitted with conditions and other land uses are prohibited. According to AC 150/5300-13B, the following land uses are permissible within the RPZ:

- Farming that meets the minimum buffer requirements.
- Irrigation channels, as long as they do not attract birds.
- Airport service roads, as long as they are not public roads and are directly controlled by the airport operator.
- Underground facilities, as long as they meet other design criteria, such as RSA requirements, as applicable.
- Unstaffed navigational aids (NAVAIDs) and facilities, such as required for airport facilities that are fixed-by-function in regard to the RPZ.
- Above-ground fuel tanks associated with back-up generators for unstaffed NAVAIDS.

In September 2022, the FAA published AC 150/5190-4B, *Airport Land Use Compatibility Planning*, which states that airport owner control over RPZs is preferred. Airport owner control over RPZs may be achieved through:

- Ownership of the RPZ property in fee simple;
- Possessing sufficient interest in the RPZ property through easements, deed restrictions, etc.;
- Possessing sufficient land use control authority to regulate land use in the jurisdiction containing the RPZ;
- Possessing and exercising the power of eminent domain over the property; or
- Possessing and exercising permitting authority over proponents of development within the RPZ (e.g., where the sponsor is a state).

AC 150/5190-4B further states that “control is preferably exercised through acquisition of sufficient property interest and includes clearing RPZ areas (and keeping them clear) of objects and activities that would impact the safety of people and property on the ground.” The FAA does recognize that land ownership, environmental, geographical, and other considerations can complicate land use compatibility within RPZs. Regardless, airport sponsors are to comply with FAA Grant Assurances, including but not limited to Grant Assurance 21, Compatible Land Use. Sponsors are expected to take appropriate measures to “protect against, remove, or mitigate land uses that introduce incompatible development within RPZs.” For proposed projects that would shift an RPZ into an area with existing incompatible land uses, such as a runway extension or construction of a new runway, the sponsor is expected to have or secure sufficient control of the RPZ, ideally through fee simple ownership. Where existing incompatible land uses are present, the FAA expects sponsors to "seek all possible opportunities to eliminate, reduce, or mitigate existing incompatible land uses" through acquisition, land exchanges, right-of-first-refusal to purchase, agreement with property owners on land uses, easements, or other such measures. These efforts should be revisited during master plan or ALP updates, and periodically thereafter, and documented to demonstrate compliance with FAA Grant Assurances. If new or proposed incompatible land uses impact an RPZ, the FAA expects the airport to take the above actions to control the property within the RPZ, along with adopting a strong public stance opposing the incompatible land uses.

For new incompatible land uses that result from a sponsor-proposed action (i.e., an airfield project such as a runway extension, a change in the critical aircraft that increases the RPZ dimension, or lower minimums that increase the RPZ dimension), the airport sponsor is expected to conduct an Alternatives Evaluation. The intent of the Alternatives Evaluation is to "proactively identify a full range of alternatives and prepare a sufficient evaluation to be able to draw a conclusion about what is 'appropriate and reasonable.'" For incompatible development off-airport, the sponsor should coordinate with the Airports District Office (ADO) as soon as they are aware of the development, with the Alternatives Evaluation conducted within 30 days of becoming aware of the development within the RPZ. The following items are typically necessary in an Alternatives Evaluation:

- Sponsor's statement of the purpose and need of the proposed action (airport project, land use change or development)
- Identification of any other interested parties and proponents
- Identification of any federal, state, and local transportation agencies involved
- Analysis of sponsor control of the land within the RPZ
- Summary of all alternatives considered including:
    - Alternatives that preclude introducing the incompatible land use within the RPZ (e.g., zoning action, purchase, and design alternatives such as implementation of declared distances, displaced thresholds, runway shift or shortening, raising minimums)
    - Alternatives that minimize the impact of the land use in the RPZ (e.g., rerouting a new roadway through less of the RPZ, etc.)
    - Alternatives that mitigate risk to people and property on the ground (e.g., tunnelling, depressing and/or protecting a roadway through the RPZ, implementing operational measures to mitigate any risks, etc.)
- Narrative discussion and exhibits or figures depicting the alternative
- Rough order of magnitude cost estimates associated with each alternative, regardless of potential funding sources
- A practicability assessment based on the feasibility of the alternative in terms of cost, constructability, operational impacts, and other factors.

Once the Alternatives Evaluation has been submitted to the ADO, the FAA will determine whether or not the sponsor has made an adequate effort to pursue and give full consideration to appropriate and reasonable alternatives. **The FAA will not approve or disapprove the airport sponsor's preferred**

alternative; rather, the FAA will only evaluate whether an acceptable level of alternatives analysis has been completed before the sponsor makes the decision to allow or not allow the proposed land use within the RPZ.

In summary, the RPZ guidance published in September 2022 shifts the responsibility of protecting the RPZ to the airport sponsor. The airport sponsor is expected to take action to control the RPZ or to demonstrate that appropriate actions have been taken. It is ultimately up to the airport sponsor on whether or not to permit existing or new incompatible land uses within an RPZ, with the understanding that they still have grant assurance obligations, and the FAA retains the authority to review and approve or disapprove portions of the ALP that would adversely impact the safety of people and property within the RPZ.

The existing 1-mile RPZs for Runway 15-33 extend outside airport property beyond the south end but remain fully on airport property to the north. To the south, the Runway 33 RPZ is partially controlled through an avigation easement, but extends over a private roadway extending from Highway 80/81 to a private property to the southwest. Typically, as long as the airport does not make any changes to the runway environment, the FAA has allowed non-standard conditions such as these roads to continue; however, lowering the approach minimums can require modifying these uses if warranted. The lower than 1-mile RPZ shown on **Exhibit 5A** increases in size, extending even farther south beyond Highway 80/81. Based on cost factors alone, with added challenges of environmental and gradient issues, the alternative of re-routing State Road 80/81 out of the future RPZ has been dismissed. If the FAA objects to its location inside the RPZ, the better alternative would be to remain at 1-mile visibility minimums on Runway 33 in the future. This decision should be made only after discussions with the FAA. It should be noted that the land to the south which extends beyond the existing easement is proposed to be acquired via easement to ensure that it is protected from any flight hazards to Runway 33. Approximately 5.5 acres to the east of Highway 80/81 and 1.3 acres to the west are proposed to be acquired, as shown on **Exhibit 5A**.

The 1-mile RPZ for Runway 15 remains on existing airport property. In fact, the future not lower than ¾-mile visibility minimum RPZ with the proposed 1,000-foot northwesterly extension remains mostly on existing property. The plan includes acquiring less than 1.5 acres of land in the northwestern corner of the future RPZ, as shown on **Exhibit 5A**. Trees north of the extended runway may need to be lowered if there is need to clear all approach surfaces to Runway 15.

Visual Approach Aids | Runway 15-33 is equipped with a 2-box Precision Approach Path Indicator (PAPI-2) to provide descent guidance to the runway during visual approaches. The plan includes ***installing a PAPI-4 to both ends of Runway 15-33*** to improve vertical guidance for the proposed not lower than 3/4-mile approach minimums and in support of larger aircraft usage.

CROSSWIND RUNWAY 7-25

Runway Designation | Based on the calculations for the next ten years utilizing the magnetic declination and current runway orientation, the existing 7-25 heading is the optimal orientation calibration, and no changes are needed.

Runway Dimensions | Runway 7-25 is currently 3,599 feet long and 75 feet wide. The runway is planned to remain at this length to support small to medium general aviation aircraft through the planning period.

The runway width of 75 feet meets the RDC B-II-4000 design standard. No change in the runway width is planned.

Pavement Strength | Runway 7-25 is currently strength-rated for up to 30,000 pounds SWL and 35,000 pounds DWL. These strength ratings are adequate for the airport through the 20-year planning horizon.

Instrument Approach Procedures | Both ends of Runway 7-25 have published instrument approach procedures. Runway 7 has an LPV (GPS) approach with a visibility minimum of 1-mile, while Runway 25 offers an LNAV/GPS approach, with a minimum of 1-mile. Both GPS approaches have a localizer performance, vertically guided/non-precision approach with a 1-mile visibility minimums for Category A and B aircraft and 1 ¼-mile visibility minimums for Category C aircraft. The approach is not available for Category D aircraft. The recommended concept includes the possibility of lowering ***the instrument procedures to a not lower than 3/4-mile visibility (corresponding to the 4000 designation in the RDC)***. This process would require the application and approval by FAA.

Runway Protection Zones (RPZs) | The current and future RPZs for both ends of the runway extend beyond current airport property bounds. The plan includes the acquisition of approximately five acres of the Runway 25 RPZ and 23 acres of the Runway 7 RPZ over the planning period to support the potential to improve the approach minimums to lower than 1-mile. The property acquisition would only proceed as needed and/or directed by the FAA to protect the RPZ from incompatibilities. The plan considers the relocation of the private road west of Runway 7 (see lower left inset on **Exhibit 5A**) if required by the FAA in the future.

TAXIWAY IMPROVEMENTS

Taxiway Design | The proposed taxiway system serving Runway 15-33 is planned to meet Taxiway Design Group (TDG) 2A standards, which establishes a design standard width of 35 feet. With the Runway 15-33 extension and the inclusion of improved instrument approaches, a parallel taxiway is planned. The taxiway is proposed to be located 240 feet east of the runway centerline, extending the full length of the runway.

Partial parallel Taxiway B currently extends from the existing parking apron to intersect with Runway 15-33. It serves as a partial parallel taxiway to the eastern end of Runway 7-25 and is located 300 feet north of the runway (centerline to centerline). The plan includes the long-term extension of Taxiway B to function as a full-length taxiway for Runway 7-25 and include one additional entrance/exit taxiway.

Taxiway Geometry Improvements | Taxiway geometry is an important consideration when planning the airfield for the highest levels of operational safety. The only geometry improvement planned at PVB is a no-taxi island at the eastern edge of the ramp. The island is used to promote turns from the ramp area onto Taxiway B prior to entering Runway 25. Forcing pilots to turn prior to entering the runway environment improves situational awareness in the cockpit to avoid unintended runway incursion events.

LANDSIDE CONCEPT

The primary goal of landside facility planning is to provide adequate space to meet reasonably anticipated general aviation needs, while also optimizing operational efficiency and land use. Achieving these goals yields a development scheme that segregates functional uses while maximizing the airport's revenue potential. The PVB landside concept reflects generalized land use areas, as well as proposing specific facility/hangar layouts, which are likely to change depending on the needs of the developer and its target customers.

The key issues to be addressed in the landside areas at PVB are similar to most general aviation airports and include increasing hangar capacities and terminal size, adding amenities to accommodate existing users and attract new users, as well as reserving space for the eventual implementation of and use by advanced air mobility (AAM) operators.

As a reminder, all general aviation related development, such as new hangar construction, should only occur as dictated by demand. The recommended concept is intended to be used strictly as a guide for PVB staff when considering new developments.

Sections below describe reserving portions of airport property for non-aviation uses along Highway 80/81. Generally, airport property is subject to Airport Improvement Program (AIP) grant assurances; therefore, PVB will need to request a release of these properties of federal obligation by the FAA. Once a release of federal obligation is issued by the FAA, PVB would be able to lease or sell these certain properties to support revenue diversification and generation. The FAA Reauthorization Act of 2018, Section 163 changed how the FAA's Office of Airport's staff reviews and considers the release of airport property for non-aviation uses. The section focuses FAA's review and approval of Airport Layout Plans (ALPs) to those portions of the ALP that materially impact the safe and efficient operation of airports; the safety of people and property on the ground adjacent to the airport; and the value of prior federal investments to a significant extent. In effect, this new guidance is intended to ease the process of gaining FAA approval of land releases.

The recommended landside concept is depicted on **Exhibit 5B** with features of the plan described below.

Hangar Development | The primary focus of the landside development concept is on increasing the number of both executive and conventional hangar facilities. Conventional hangars are large, open-space facilities with no supporting interior structure that typically provide bulk aircraft storage and may be used by airport businesses, such as an aircraft maintenance company or fixed base operator (FBO). Executive hangars are conventional-style hangars that provide storage capacity larger than a typical T-hangar, but smaller than a conventional hangar, and can accommodate a single large or multiple small aircraft. Executive hangars range in size from 1,500 square feet (sf) to 2,500 sf, with some approaching the conventional hangar size of 10,000 sf.

The plan includes a variety of new hangars, many not required by the demand of this plan but outlined to ensure that long-term viability remains throughout the planning period. The current terminal area can support two additional T-hangars and four executive hangars near Highway 80/81 as shown. Then the area to the north and northwest of the existing terminal can support a large number of additional

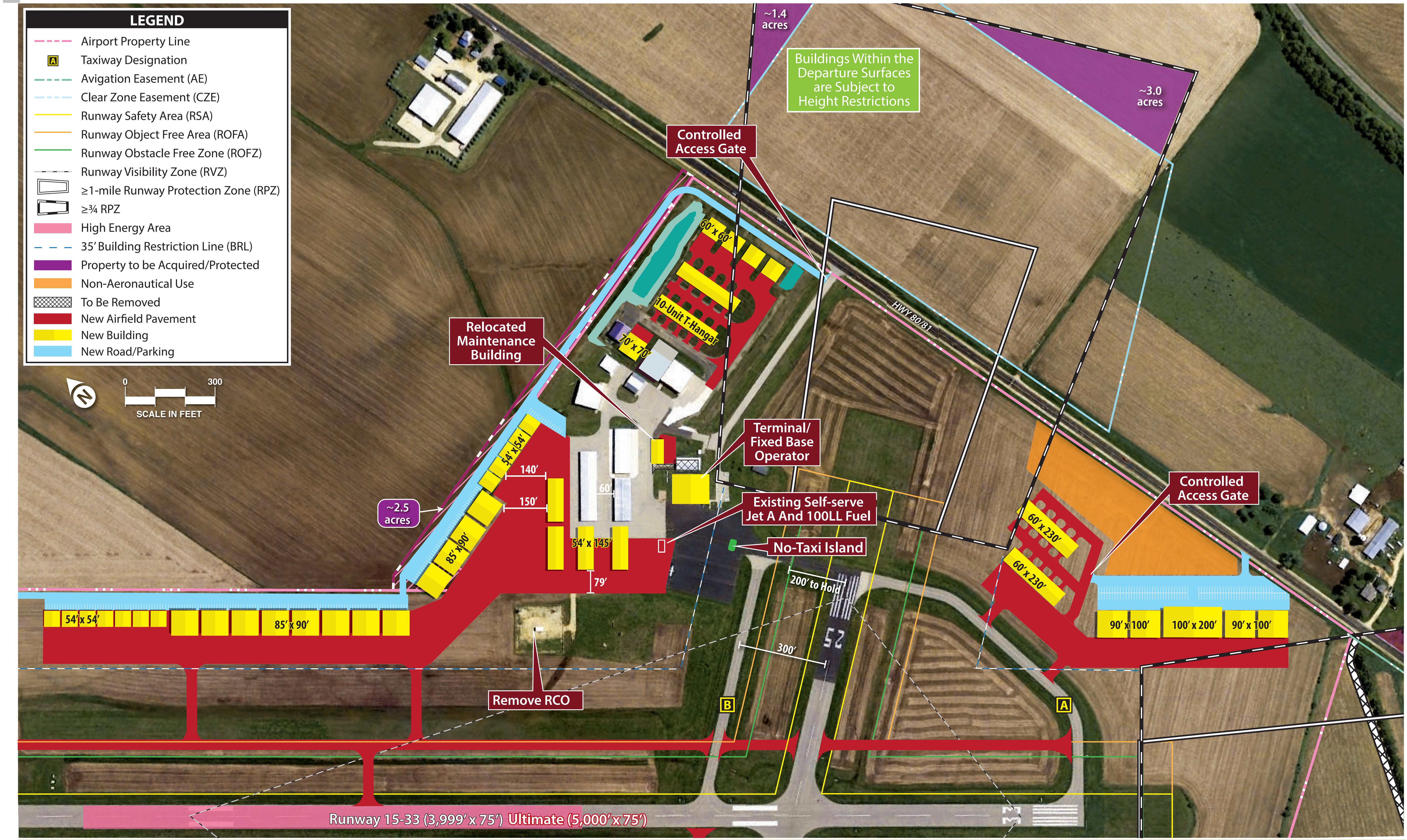

Exhibit 5B
RECOMMENDED LANDSIDE CONCEPT

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hangars. As shown, the plan would include up to 12 54-foot by 54-foot executive hangars, 12 85-foot by 90-foot conventional hangars, and four additional T-hangars. It would also support an additional parking apron. Much of the development can only be built if the existing remote communications outlet (RCO) antenna facility is removed/relocated as planned. To the southeast, the seven additional hangar buildings represent a possible continuation of hangar development beyond the 20-year planning horizon but would require extension of utilities.

Vehicle access roads will be expanded upon with additional parking areas installed; however, some of these areas are located on property not currently owned by the airport. The plan considers the acquisition of 2.5 acres to allow for the public road and parking to support the new north side hangar area, as shown on **Exhibit 5B**.

Terminal Building and Parking Expansions | Throughout the master plan process, airport management expressed a need for expanding on the existing terminal building to include a hangar attachment. Several alternatives were discussed, with the recommended plan depicted on **Exhibit 5B**. The expanded terminal building with attached hangar will support the full breadth of FBO operations and the transfer of aircraft operators/passengers between air and ground. The facility is supported by the existing parking lot.

Non-Aeronautical Land Use Reserve | The plan includes the allowance for non-aviation development along Highway 80/81 as depicted in the orange-shaded area. The area could support light commercial uses, such as a gas station, to help generate additional airport revenue resources.

ENVIRONMENTAL INVENTORY

The purpose of the following environmental inventory is to identify potential environmental sensitivities that should be considered when planning future improvements at the airport. Research was performed for each of the 14 environmental impact categories described within the Federal Aviation Administration's (FAA) Order 1050.1F *Environmental Impacts: Policies and Procedures*.

- Air Quality
- Biological Resources (including fish, wildlife, and plants)
- Climate
- Coastal Resources
- *Department of Transportation Act*, Section 4(f)
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Compatible Land Use
- Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks
- Visual Effects (including light emissions)
- Water Resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

AIR QUALITY

The concentration of various pollutants in the atmosphere describes the local air quality. The significance of a pollutant's concentration is determined by comparing it to the state and federal air quality standards. In 1971, the United States (U.S.) Environmental Protection Agency (EPA) established standards that specify the maximum permissible short- and long-term concentrations of various air contaminants. The National Ambient Air Quality Standards (NAAQS) consist of primary and secondary standards for criteria pollutants: ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead (Pb).

Based on federal air quality standards, a specific geographic area can be classified as either an "attainment," "maintenance," or "nonattainment" area for each pollutant. The threshold for nonattainment designation varies by pollutant.

The airport is in Grant County, Wisconsin. Grant County is in attainment for all criteria pollutants.[1]

BIOLOGICAL RESOURCES

Biotic resources include the various types of plants and animals that are present in an area. The term also applies to rivers, lakes, wetlands, forests, and other habitat types that support plants and animals.

The U.S. Fish and Wildlife Service (USFWS) is charged with overseeing the requirements contained within Section 7 of the *Endangered Species Act* (ESA). The ESA provides a framework to conserve and protect animal or plant species whose populations are threatened by human activities. The FAA and USFWS review projects to determine if a significant impact to protected species will result in the implementation of a proposed project. Significant impacts occur when a proposed action could jeopardize the continued existence of a protected species or would result in the destruction or adverse modification of federally designated critical habitat in the area. The USFWS's Information for Planning and Consultation (IPaC) resource list describes species and habitat protected under ESA within the vicinity of the airport (**Table 5D**). There is no federally designated critical habitat at the airport.

The potential for the airport to support birds protected under the federal *Migratory Bird Treaty Act* (MBTA) has also been evaluated. There are eight potential avian concerns for areas near the airport: black-billed cuckoo (*Coccyzus rythropthalmus*), bobolink (*Dolichonyx oryzivorus*), Canada warbler (*Cardellina canadensis*), cerulean warbler (*Dendroica cerulea*), golden-winged warbler (*Vermivora chrysoptera*), red-headed woodpecker (*Melanerpes erythrocephalis*), rusty blackbird (*Euphagus carolinus*), and wood thrush (*Hylocichla mustelina*).

The Ipswich Prairie State Reserve is located 0.6 miles east of the airport (**Exhibit 5C**). The reserve protects the largest remnant of deep-soil mesic prairie that once occurred in southwestern Wisconsin. The prairie is maintained by regularly prescribed burning and brushing, and the site contains a moderately rich prairie flora with over 125 species.[2]

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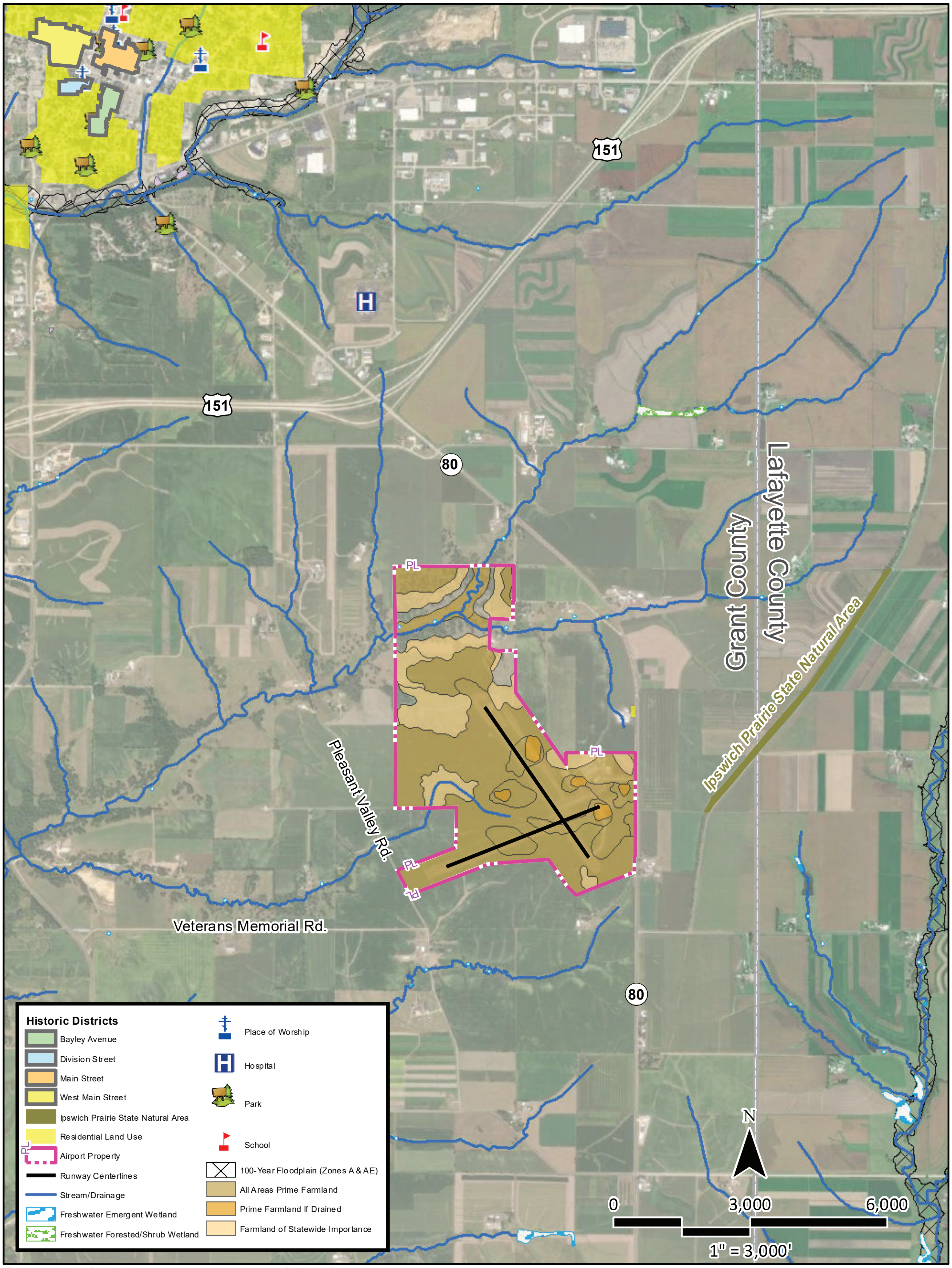
[1] U.S. EPA | Green Book | Wisconsin Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants: https://www3.epa.gov/airquality/greenbook/anayo_wi.html

[2] Wisconsin State Natural Areas Program | Ipswich Prairie (No. 195): https://dnr.wi.gov/topic/lands/naturalareas/index.asp?SNA=195

RETURN TO AGENDA



Source: ESRI Basemap Imagery (2013), FEMA, FWS, USDA.

Exhibit 5C - ENVIRONMENTAL SENSITIVITIES WITHIN THREE MILES OF THE AIRPORT

Table 5D | Species Protected Under ESA Section 7 with Potential to Occur Near the Airport

Common Name (*Scientific Name*)	Federal Status	Habitat and Range	Potential for Occurrence at Airport
Northern long-eared bat (*Myotis septentrionalis*)	Threatened	Day roosts in buildings, under tree bark or shutters, or caves during the night. Foraging habitat includes forested hillsides and ridges, and small ponds or streams.	Potential. Additional habitat surveys may be necessary to determine the presence of this species.
Whooping crane (*Grus americana*)	EXPN[1]	The whooping cranes nest in potholes dominated by bulrushes and containing other aquatic plants such as cattails, sedge, and muskgrass. Whooping cranes spend their time on estuarine marshes, shallow bays, and tidal flats, sometimes venturing to nearby farmland.	Unlikely. The airport does not contain refuge sites for this species nor are marshes or ponds of any kind located within the airport boundary.
Hine's emerald dragonfly (*Somatochlora hineana*)	Endangered	Wetland areas with clean water.	Potential. Additional habitat surveys may be necessary to determine the presence of this species. Riverine wetlands are adjacent to airport boundary.
Monarch butterfly *(Danaus plexippus)*	Candidate	Monarchs feed exclusively on the leaves of milkweed. During winter Monarchs cluster together in colonies and root in forests in elevations up to 3,600 meters.	Potential. Individuals may occur seasonally as a potential migratory stopover. Additional habitat surveys may be necessary to determine the presence of this species.
Mead's milkweed (*Asclepias meadii*)	Threatened	Unplowed prairie consisting of deep, silty loams.	Potential. Additional habitat surveys may be necessary to determine the presence of this species.
Northern wild monkshood (*Aconitum noveboracense*)	Threatened	Deep shade within mature deciduous or pine forests in a specific habitat type, known as algific or "cold soil" habitat.	Unlikely. There are no mature deciduous or pine forests located at the airport.
Prairie bush-clover (*Lespedeza leptostachya*)	Threatened	Found in dry, gravelly, or sandy hillside prairies.	Potential. Additional habitat surveys may be necessary to determine the presence of this species.

[1] EXPN = Experimental population, non-essential. A population that has been established within its historical rand under section 10(j) of the ESA to aid recovery of the species. USFWS has determined a non-essential population is not necessary for the continued existence of the species. https://ipac.ecosphere.fws.gov/status/list#:~:text=Experimental%20population%2C%20Non%2Dessential%20(,continued%20existence%20of%20the%20species

Source: USFWS Information for Planning and Consultation (https://ipac.ecosphere.fws.gov/)

CLIMATE

Increasing concentration of greenhouse gases (GHG) can affect global climate by trapping heat in Earth's atmosphere. Scientific measurements have shown that Earth's climate is warming with concurrent impacts, including warmer air temperatures, rising sea levels, increased storm activity, and greater intensity in precipitation events. Climate change is a global phenomenon that can also have local impacts. GHGs, such as water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and O_3, are both naturally occurring and anthropogenic (man-made). The research has established a direct correlation between fuel combustion and GHG emissions. GHGs from anthropogenic sources include CO_2, CH_4, N_2O, hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF6). CO_2 is the most important anthropogenic GHG because it is a long-lived gas that remains in the atmosphere for up to 100 years.[3]

The U.S. EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2017* found that the transportation sector, which includes aviation, accounted for approximately 29 percent of U.S. GHG emissions in 2019. Of this, the aviation sector contributed approximately 175.0 million metric tons (MMT) of carbon dioxide equivalent (CO_2e), or nearly 9.4 percent of all transportation emissions. Transportation emission sources include cars, trucks, ships, trains, and aircraft. Most GHG emissions from transportation systems are CO emissions resulting from the combustion of petroleum-based products in internal combustion engines. Relatively insignificant amounts of CH_4, HFC, and N_2O are emitted during fuel combustion. From 1990 to 2017, total transportation emissions increased. The upward trend is largely due to increased demand for travel; however, much of this travel was done in passenger cars and light-duty trucks.

In addition to transportation-related emissions, **Figure 1** shows GHG emissions sources in the U.S. in 2019. Several other factors influence the quantities of greenhouse gas emissions released into the atmosphere, including agriculture, commercial and residential, industry, and electricity.

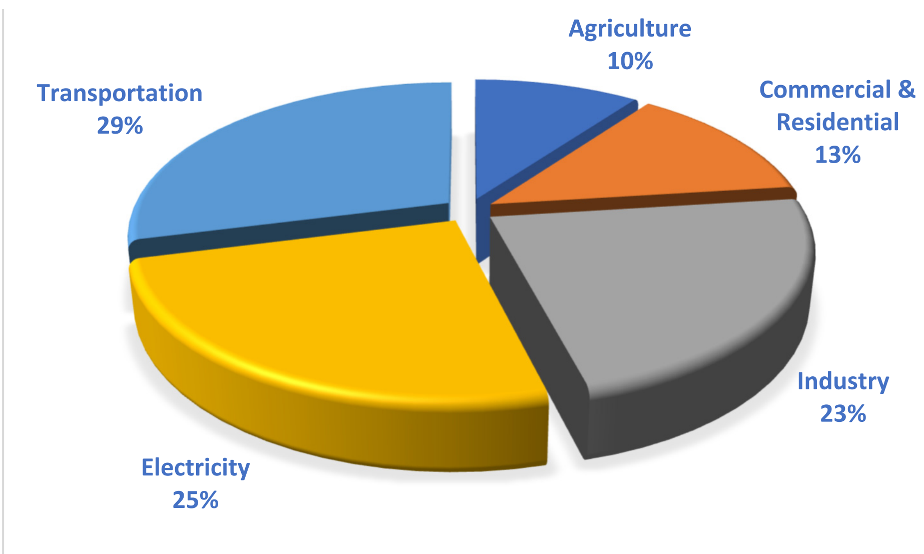


Figure 1: 2019 Sources of Greenhouse Gas Emissions in the U.S.
Source: U.S. EPA | Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2019 (2021)

The U.S. EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2020* shows total transportation emissions, including aviation, decreased largely due to coronavirus (COVID-19) and the combined impacts of long-term trends in population, economic growth, energy markets, technological changes, and changes in energy efficiency. The inventory included aviation as a part of the 13.3 percent decrease in transportation sector GHG emissions leading up to 2020.[4]

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[3] Intergovernmental Panel on Climate Change | AR5 Synthesis Report: Climate Change 2014: http://www.ipcc.ch/

[4] U.S. EPA | Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020: https://www.epa.gov/system/files/documents/2022-04/us-ghg-inventory-2022-main-text.pdf

Information regarding the climate for the airport and surrounding environments, including wind, temperature, and precipitation, are found earlier in this master plan.

Department of Health Services (DHS) has created the Wisconsin Climate and Health Adaptation Plan 2016, which outlines strategies for adapting to the potential climate-related impacts. The plan outlines policy pathways for Wisconsin agencies to collaborate and make decisions about emissions reduction.[5] The State of Wisconsin published the Governor's Task Force on Climate Change Report in 2020.

COASTAL RESOURCES

Federal activities involving or affecting coastal resources are governed by the *Coastal Barriers Resource Act*, the *Coastal Zone Management Act*, and Executive Order (E.O.) 13089, *Coral Reef Protection*.

The airport is not located within a coastal zone. The closest National Marine Sanctuary is the Thunder Bay National Marine Sanctuary, located 366 miles away, in Lake Huron.[6]

DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F)

Section 4(f) of the *Department of Transportation Act,* which was recodified and renumbered as Section 303(c) of 49 United States Code, provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly or privately owned historic sites, public parks, recreation areas, or waterfowl and wildlife refuges of national, state, regional, or local importance unless there is no feasible and prudent alternative to the use of such land, and the project includes all possible planning to minimize harm resulting from the use.[7]

Table 5E lists potential Section 4(f) resources within three miles of the airport. School playgrounds or athletic fields may be considered a Section 4(f) resource if the recreational facilities at the school are readily available to the public. Significant historic resources are also protected under Section 4(f). There are several historic places or districts listed on the National Register of Historic Places (NRHP) that are within three miles from the airport (**Exhibit 5C**).

As discussed under Biological Resources, the Ipswich Prairie State Reserve is located 0.3 mile east of the airport. The reserve protects the largest remnant of deep-soil mesic prairie that once occurred in southwestern Wisconsin.

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[5] State of Wisconsin | Governor's Task Forces on Climate Change Report (2020): https://climatechange.wi.gov/Documents/Final%20Report/GovernorsTaskForceonClimateChangeReport-LowRes.pdf
[6] Google Earth Aerial Imagery (March 2022)
[7] 49 U.S. Code § 303 - Policy on lands, wildlife and waterfowl refuges, and historic sites

Nearest wilderness and national recreation areas are listed below:

- Nearest Wilderness Area: Nordhouse Dunes Wilderness (222 miles from the airport)
- Nearest National Recreation Area: Mississippi National River and Recreation Area (177 miles from airport)
- Nearest Wildlife Refuge: Upper Mississippi River National Wildlife and Fish Refuge (12 miles from airport)

Table 5E | U.S. Dept. of Transportation Section 4(f) Resources Within Three Miles of the Airport

Place	Distance from Airport (miles)	Direction from Airport
Parks/Nature Preserves		
Ipswich Prairie Reserve	0.3	East
Knollwood Park (accessed primarily via trails)	1.7	Northwest
Swiss Valley Dog Park	2.0	North
Harrison Park	2.1	Northwest
Sherman Park	2.3	Northwest
Valley View Park	2.3	Northwest
City Hall Park	2.5	Northwest
Jenor Tower Park	2.5	Northwest
Highland Park	2.5	Northwest
Mound View Park and Campground	2.5	North
Indian Park	2.7	Northwest
Schools		
Platteville High School athletic fields	2.7	Northwest
Platteville Middle School athletic fields	2.8	Northwest
Significant Historic Resources		
Bayley Historic District	2.9	Northwest
Main Street Commercial Historic District	2.9	Northwest
West Main Street Historic District	3.0	Northwest
Division Street Historic District	2.9	Northwest
J.H. Roundtree Mansion	2.9	Northwest

Source: Google Earth Aerial Imagery (December 2021); Coffman Associates analysis

FARMLANDS

Under the *Farmland Protection Policy Act* (FPPA), federal agencies are directed to identify and consider the adverse effects of federal programs on the preservation of farmland, to consider appropriate alternative actions which could lessen adverse effects, and to assure that such federal programs are, to the extent practicable, compatible with state or local government programs and policies to protect farmland. The FPPA guidelines, developed by the U.S. Department of Agriculture (USDA), apply to farmland classified as prime, unique, or of state or local importance as determined by the appropriate government agency, with concurrence by the Secretary of Agriculture.

The City of Platteville Development Concept Plan identifies farming on the airport. The airport sits on approximately 532 acres. The USDA's Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey farmland classification shows the following types of soils at the airport (**Table 5F** and **Exhibit 5C**): All areas are prime farmland, prime farmland if drained, farmland of statewide importance, and not prime farmland if irrigated.

Table 5F | Farmland Classification of Soils Present at the Airport

Web Soil Survey Map Unit Symbol	Soil Type	Farmland Classification
175C2	**Palsgrove silt loam, 6 to 12 percent slopes, moderately eroded**	**Farmland of statewide importance**
194D2	Newglarus silt loam, moderately deep, 12 to 20 percent slopes, moderately eroded	Not prime farmland
194E2	Newglarus silt loam, moderately deep, 20 to 30 percent slopes, moderately eroded	Not prime farmland
Ar	**Arenzville silt loam, 0 to 3 percent slopes, occasionally flooded**	**All areas are prime farmland**
AtA	**Atterberry silt loam, 0 to 2 percent slopes**	**Prime farmland if drained**
AtB	**Atterberry silt loam, 2 to 6 percent slopes**	**Prime farmland if drained**
DbD2	Dodgeville silt loam, 10 to 15 percent slopes, moderately eroded	Not prime farmland
DoB2	**Dodgeville silt loam, deep, 6 to 10 percent slopes, moderately eroded**	**All areas are prime farmland**
FaB2	**Downs silt loam, 2 to 6 percent slopes, moderately eroded**	**All areas are prime farmland**
FaC2	**Fayette silt loam, 2 to 6 percent slopes, moderately eroded**	**Farmland of statewide importance**
JuA	**Fayette silt loam, 6 to 12 percent slopes, moderately eroded**	**All areas are prime farmland**
JuB	**Judson silt loam, 0 to 3 percent slopes**	**Farmland of statewide importance**
MuA	**Muscatine silt loam, 0 to 2 percent slopes**	**All areas are prime farmland**
MuB	**Muscatine silt loam, 2 to 6 percent slopes**	**All areas are prime farmland**
MuB2	**Muscatine silt loam, 2 to 6 percent slopes, moderately eroded**	**All areas are prime farmland**
SyB2	**Stronghurst silt loam, 2 to 6 percent slopes, moderately eroded**	**Prime farmland if drained**
TaA	**Tama silt loam, driftless, 0 to 2 percent slopes**	**All areas are prime farmland**
TaB2	**Tama silt loam, driftless, 2 to 6 percent slopes, moderately eroded**	**All areas are prime farmland**
TaC2	**Tama silt loam, driftless, 6 to 12 percent slopes, moderately eroded**	**Farmland of statewide importance**

Bolded type indicates soils classified as potential farmlands.

Source: USDA-NRCS Web Soil Survey (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx)

HAZARDOUS MATERIALS, SOLID WASTE AND POLLUTION PREVENTION

Federal, state, and local laws regulate hazardous materials use, storage, transport, and disposal. These laws may extend to past and future landowners of properties containing these materials. In addition, disrupting sites containing hazardous materials or contaminants may cause significant impacts to soil, surface water, groundwater, air quality, and the organisms using these resources. According to the U.S. EPA's *EJSCREEN* online screening tool, there are no Superfund or brownfields sites within three miles of the airport.

National Pollutant Discharge Elimination System (NPDES) permits outline the regulatory requirements of municipal storm water management programs and establish requirements to help protect the beneficial uses of the receiving waters. They require permittees to develop and implement best management practices (BMP) to control/reduce the discharge of pollutants to waters of the United States to the maximum extent practicable (MEP).

The Wisconsin Department of Natural Resources (DNR) NPDES regulates the discharge of pollutants to waters of the state through the Wisconsin Pollutant Discharge Elimination System (WPDES). The DNR developed a state storm water permits program to meet the requirements of Section 402 of the federal *Clean Water Act*.[8]

[8] Wisconsin DNR: https://dnr.wisconsin.gov/topic/Wastewater/Permits.html

Wisconsin DNR also regulates constructed landfills. All landfills must collect and treat liquids and gases they generate before releasing them to the environment. Facilities are monitored to detect contamination and report monitoring data to the DNR.[9] Solid waste collection and recycling for the City of Platteville is provided by Faherty, Incorporated through its transfer station in Platteville.[10]

HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Determination of a project's environmental impact to historic and cultural resources is made under guidance in the *National Historic Preservation Act* (NHPA) *of 1966*, as amended, the *Archaeological and Historic Preservation Act* (AHPA) *of 1974*, the *Archaeological Resources Protection Act* (ARPA), and the *Native American Graves Protection and Repatriation Act* (NAGPRA) *of 1990*. In addition, the *Antiquities Act of 1906*, the *Historic Sites Act of 1935*, and the *American Indian Religious Freedom Act of 1978* also protect historical, architectural, archaeological, and cultural resources. Impacts may occur when a proposed project causes an adverse effect on a resource which has been identified (or is unearthed during construction) as having historical, architectural, archaeological, or cultural significance.

The City of Platteville Public GIS Viewer shows four historic districts roughly three miles northwest of the airport property.[11] Any airport structures 50 years or older should be evaluated for historic significance prior to alteration or demolition.

LAND USE

Land use regulations near airports are achieved through local government codes, city policies, and plans that include airport districts and planning areas. Regulations are used to avoid land use compatibility conflict around airports.

The airport is surrounded by open space, farmland, and scattered rural residences. Although the airport is within the city limits, the other developed areas within the City of Platteville begin northwest of the airport. The airport is separated from the rest of the city by open farmland with the jurisdiction of the county.[12]

The *Platteville Municipal Airport Overlay Zoning and Height Limitations Ordinance* regulates and restricts the height of structures and objects of natural growth in the vicinity of the airport. [13] General provisions in the ordinance include use restrictions related to glare, lighting, electrical interference, visibility, operation of vehicles, and pedestrian traffic on the airport.

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[9] Wisconsin DNR | Landfills: https://dnr.wisconsin.gov/topic/Landfills
[10] Faherty, Incorporated: https://www.faherty-inc.com/
[11] City of Platteville Public GIS Viewer: https://platteville.maps.arcgis.com/apps/MapSeries/index.html?appid=8a64b665a33d4f8d886d4f4459e2eb65
[12] Ibid.
[13] Chapter 4: Overlay Zoning and Height Limitations Ordinance: https://www.platteville.org/sites/default/files/fileattachments/municipalcode/10561/chapter_42_-_municipal_airport_4-20-161.pdf

The associated map outlines the areas within overlay zoning districts (**Exhibit 5D**):[14]

- **Zone 1 – Airport District** is defined as all lands owned by the airport and intended to be used for airport purposes.

- **Zone 2 – High Impact Runway Approach and Departure District** establishes land use requirements in areas that are typically over flown by aircraft during initial takeoff and final landing maneuvers, and hence could be subjected to excessive noise and greater risk of aircraft crashes.

- **Zone 3 – Moderate Impact Runway Approach and Departure District** establishes land use requirements in areas that may be over flown by aircraft entering, operating within, and departing from a typical airport flight pattern, and hence could be subject to occasional excessive noise and risk of aircraft crashes.

- **Zone 4 – Noise Control/Overflight District** establishes land use requirements in areas that are typically within the flight pattern of aircraft approaching and departing the airport's runways, and hence could be subject to occasional excessive noise and risk of aircraft crashes. This zone includes property approximately one mile of the ultimate runway (per the approved airport layout plan), not already within Zones 1, 2, or 3.

- **Zone 5 – Height Limitation District** protects the approaches to the airport from the construction or erection of structures that would constitute a hazard to air navigation and from incompatible land uses. The boundaries of Zone 5 include all parcels falling within three statute miles.

NATURAL RESOURCES AND ENERGY SUPPLY

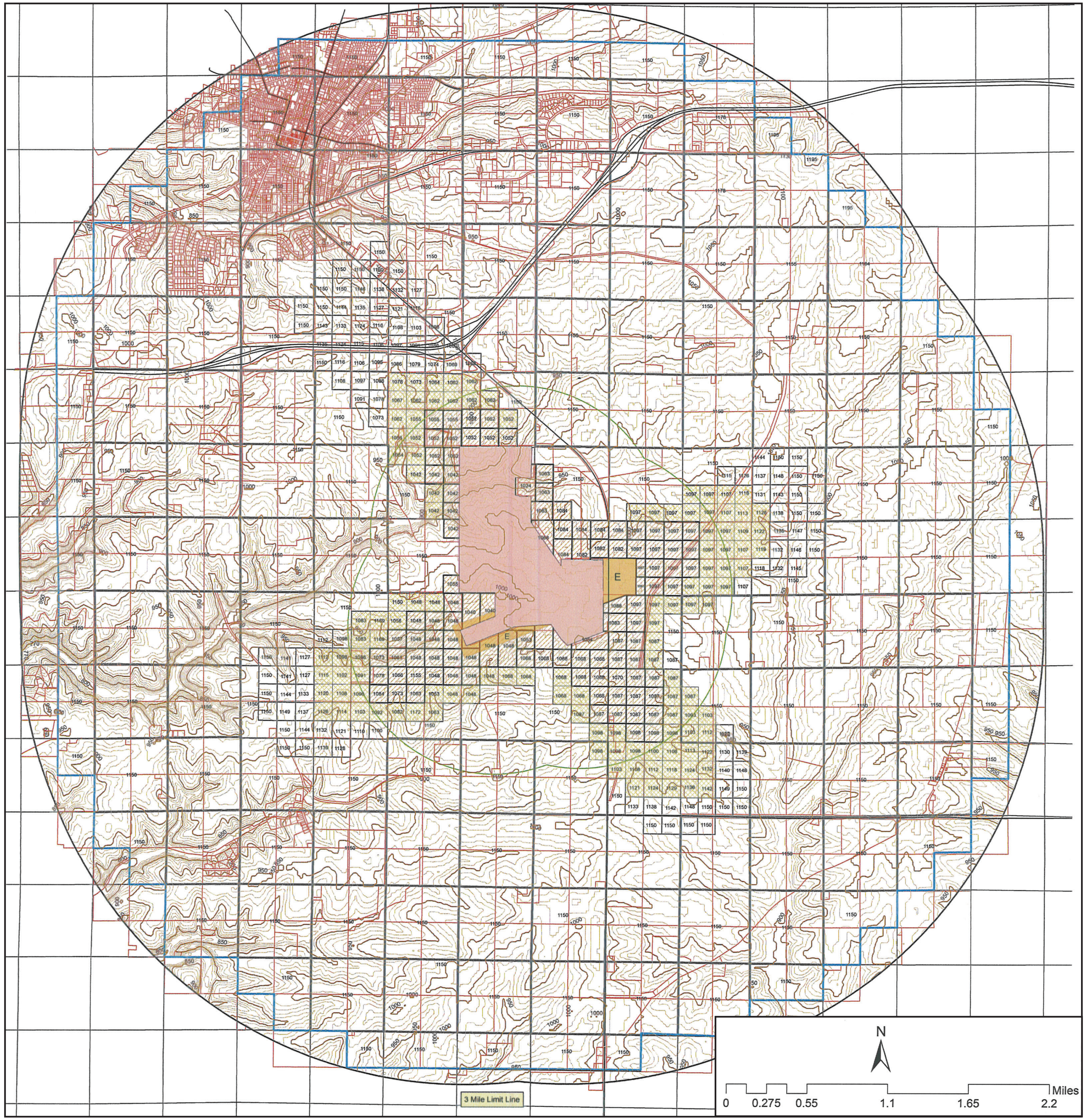
Natural resources and energy supply provide an evaluation of a project's consumption of natural resources. It is the policy of FAA Order 1053.1C, *Energy and Water Management Program for FAA Buildings and Facilities*, to encourage the development of facilities that exemplify the highest standards of design, including principles of sustainability.

NOISE AND NOISE COMPATIBLE LAND USE

Federal land use compatibility guidelines are established under 14 Code of Federal Regulations (CFR) Part 150, *Airport Noise Compatibility Planning*. According to 14 CFR Part 150, residential land and schools are noise-sensitive land uses that are not considered compatible with a 65 decibel (dB) Day-Night Average Sound Level (Ldn or DNL).[15] Other noise-sensitive land uses (such as religious facilities, hospitals, or nursing homes), if located within a 65 dB DNL contour, are generally compatible when an interior

[14] Southwestern Wisconsin Regional Planning Commission | Platteville Municipal Airport Overlay Zoning and Height Limitations Map https://www.platteville.org/sites/default/files/fileattachments/community_development/page/8601/airport_zoning_parcel_map.pdf

[15] The DNL accounts for the increased sensitivity to noise at night (10:00 PM to 7:00 AM) and is the metric preferred by FAA, the U.S. EPA, and the U.S. Department of Housing and Urban Development as an appropriate measure of cumulative noise exposure.



LEGEND

- Zone1: Airport District
- Zone 2: High Impact Approach & Departure District
- Zone 3: Moderate Impact Approach & Departure District
- Zone 4: Noise Control/Overflight District
- Zone 5: Height Limitation Overlay District
- Parcels
- E Easement Areas
- 0123 Zoned Elevations

-Notes-

1. Zone boundaries are section and subdivisional lines except those where street centerlines are used for boundaries.

2. Height limitations shown represent elevations permissable above mean sea level in feet.

3. Zoning map developed in accordance with Wisconsin State Statutes Chapter 114.136.

Date: 04/12/2016

Sources: SWWRPC, DNR, City of Platteville, Grant County Real Property, & Lafayette County Treasurer

This map is neither a legally recorded map nor a technical surveyand is not intended to be one. SWWRPC is not responsible for any inaccuracies herein contained.

SOUTHWESTERN WISCONSIN
REGIONAL PLANNING
COMMISSION

Exhibit 5D
AIRPORT OVERLAY ZONING AND HEIGHT LIMITATIONS MAP

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noise level reduction of 25 dB is incorporated into the design and construction of the structure. Special consideration should also be given to noise-sensitive areas within Section 4(f) properties where the land use compatibility guidelines in 14 CFR Part 150 do not account for the value, significance, and enjoyment of the area in question. [16]

Table 5G shows noise-sensitive land uses within three miles of the airport (**Exhibit 5C**). There are also scattered rural residents within three miles of the airport. The nearest residential neighborhoods are in the City of Platteville roughly two miles northwest of the airport. As discussed previously under Land Use, the city already restricts land uses that would be adversely affected by airport noise as part of the *Platteville Municipal Airport Overlay Zoning and Height Limitations Ordinance*, Zone 4.

Table 5G | Noise-Sensitive Land Uses within Three Miles of Airport

Facility	Distance from Airport (Miles)	Direction from Airport
Schools		
Neal Wilkins Early Learning Center (pre-K/K)	2.3	Northwest
Platteville High School	2.7	Northwest
Platteville Middle School	2.8	Northwest
Medical		
Southwest Health	1.1	North
Places of Worship		
Community Church	2.1	Northwest
St. Paul Lutheran Church	2.3	Northwest

SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Socioeconomics

Socioeconomics is an umbrella term used to describe aspects of a project that are either social or economic in nature. A socioeconomic analysis evaluates how elements of the human environment such as population, employment, housing, and public services might be affected by the proposed action and alternative(s).

FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* specifically requires that a federal action causing disproportionate impacts to an environmental justice population (i.e., a low-income or minority population), be considered, as well as an evaluation of environmental health and safety risks to children. The FAA has identified factors to consider when evaluating the context and intensity of potential environmental impacts.

Would the proposed action:

- Induce substantial economic growth in an area, either directly or indirectly;
- Disrupt or divide the physical arrangement of an established community;

[16] 49 U.S. Code § 47141 – Compatible land use planning and projects by state and local governments

- Cause extensive relocation when sufficient replacement housing is unavailable;
- Cause extensive relocation of community business what would cause severe economic hardship for affected communities;
- Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities; or
- Produce a substantial change in the community tax base?

Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies.

Meaningful involvement ensures that:

- People have an opportunity to participate in decisions about activities that may affect their environment and/or health;
- The public's contribution can influence the regulatory agency's decision;
- Their concerns will be considered in the decision-making process; and
- The decision-makers seek out and facilitate the involvement of those potentially affected.[17]

The closest residential areas are roughly two miles northwest of the airport. According to 5-Year 2020 American Community Survey (ACS) estimates, the population within one mile of the airport is 140 persons, of which seven percent are people of color and 24 percent of the population is considered low-income. Individuals are scattered within rural residences along the airport boundaries. Indicated in **Table 5H,** three percent of the population has identified as Hispanic, which can be of any race but are included as people of color.

Table 5H | Population Characteristics Within One Mile of the Airport

Characteristic	
Total Population	140
Population by Race	
White	96%
Black	0%
American Indian	0%
Asian	0%
Pacific Islander	0%
Some Other Race	0%
Population Reporting Two or More Races	4%
Total Hispanic population (of any race)	3%

Source: U.S. EPA EJScreen | 5-Year 2020 ACS (https://ejscreen.epa.gov/mapper/)

[17] U.S. EPA | Environmental Justice: https://www.epa.gov/environmentaljustice

Children's Environmental Health and Safety Risks

Federal agencies are directed, per E.O. 13045, Protection of Children from Environmental Health Risks and Safety Risks, to make it a high priority to identify and assess the environmental health and safety risks that may disproportionately impact children. Such risks include those that are attributable to products or substances that a child is likely to encounter or ingest (air, food, water – including drinking water) or to which they may be exposed.

According to the U.S. EPA EJScreen report, 22 percent of the population within one mile of the airport are 17 or younger. This is estimated to be 32 children in 2020.

VISUAL EFFECTS

Visual effects deal broadly with the extent to which a proposed action or alternative(s) would either (1) produce light emissions that create an annoyance or interfere with activities; or (2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment. Each jurisdiction will typically address outdoor lighting, scenic vistas, and scenic corridors in zoning ordinances and their general plan.

Light Emissions

Light emission impacts typically relate to the extent to which any light or glare results from a source that could create an annoyance for people or would interfere with normal activities. Generally, local jurisdictions will include ordinances in the local code addressing outdoor illumination to reduce the impact of light on surrounding properties.

Visual Resources and Visual Character

Visual character refers to the overall visual makeup of the existing environment where a proposed action or its alternative(s) would be located. For example, areas near densely populated areas generally have a visual character that could be defined as urban, whereas less developed areas could have a visual character defined by the surrounding landscape features, such as open grass fields, forests, mountains, deserts, etc.

Visual resources include buildings, sites, traditional cultural properties, and other natural or manmade landscape features that are visually important or have unique characteristics. Visual resources may include structures or objects that obscure or block other landscape features. In addition, visual resources can include the cohesive collection of various individual visual resources that can be viewed at once or in concert from the area surrounding the site of the proposed action or alternative(s).

There are no state scenic byways or scenic highways near the airport.[18]

[18] State of Wisconsin Department of Transportation | Wisconsin Scenic Byways Program: https://wisconsindot.gov/Pages/travel/road/scenic-ways/default.aspx

WATER RESOURCES

Wetlands

The U.S. Army Corps of Engineers regulates the discharge of dredged and/or fill material into waters of the United States, including adjacent wetlands, under Section 404 of the *Clean Water Act* (CWA). Wetlands are defined in E.O. 11990, *Protection of Wetlands*, as "those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction." Wetlands can include swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, mudflats, natural ponds, estuarine areas, tidal overflows, and shallow lakes and ponds with emergent vegetation. Wetlands exhibit three characteristics: the soil is inundated or saturated to the surface at some time during the growing season (hydrology), has a population of plants able to tolerate various degrees of flooding or frequent saturation (hydrophytes), and soils that are saturated enough to develop anaerobic (absent of air or oxygen) conditions during the growing season (hydric).

USFWS manages the National Wetlands Inventory on behalf of all federal agencies. The National Wetlands Inventory identifies surface waters and wetlands in the nation. The inventory indicates riverine wetlands leaving the north and west boundaries of the airport. Blockhouse Creek is north and west of the airfield within the airport (**Exhibit 5C**).[19]

Floodplains

E.O. 11988, *Floodplain Management*, directs federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values served by the floodplains. A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel number 29105C0219C, effective September 2010 indicates that there are no Special Flood Hazard Areas such as a 100-year floodplain on the airport.[20]

The FEMA Flood Map Service Center indicates the airport property is not within a 100-year flood zone. The selected flood map boundaries: 55043C0680E (dated 9/2/2011), 55043C0685F (dated 2/3/2016), and55043C0700E (dated 9/2/2011) do not show special flood hazard areas.

Surface Waters

The *Clean Water Act* establishes water quality standards, controls discharges, develops waste treatment management plans and practices, prevents or minimizes the loss of wetlands, and regulates other issues concerning water quality. Water quality concerns related to airport development most often relate to the potential for surface runoff and soil erosion, as well as the storage and handling of fuel, petroleum products, solvents, etc. Additionally, Congress has mandated (under the CWA) the National Pollutant Discharge Elimination System (NPDES).

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[19] USFWS | National Wetlands Inventory Mapper: https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/
[20] Federal Emergency Management Agency | Flood Map Service Center: https://msc.fema.gov/portal/home

In Wisconsin, the DNR is required by section 303(e) of the *Clean Water Act* to develop a Continuing Planning Process (CPP) Plan. The CPP is an "umbrella" document that helps to coordinate all aspects of water pollution control to help ensure the states maintain progress toward protecting and preserving water quality.

Watershed planning in the state falls under the *Areawide Water Quality Management Plan* (AWQMP), a compilation of the guidance and programs that DNR uses to implement *Clean Water Act* requirements. The AWQMP Program provides a structure and foundation on which implementation activities are attached, including sewer service area plans, wastewater facility plans, permits for effluent limits, stormwater plans, and other projects funded through CWA monies, as well as watershed plans, which identify the condition of water and recommendations for management actions.[21]

The airport lies within the Blockhouse Creek watershed. The water quality in Blockhouse Creek is reported as "good" by the U.S. EPA. The closest impaired water bodies to the airport are in adjacent watersheds (i.e., Snowden Branch River and the Little Platte River).[22]

Groundwater

Groundwater is subsurface water that occupies the space between sand, clay, and rock formations. The term aquifer is used to describe the geologic layers that store or transmit groundwater, such as wells, springs, and other water sources. Examples of direct impacts to groundwater could include withdrawal of groundwater for operational purposes or reduction of infiltration or recharge area due to new impervious surfaces.[23]

U.S. EPA's Sole Source Aquifer (SSA) Program was established under section 1424(e) of the *Safe Drinking Water Act* (SDWA). Since 1977, it has been used by communities to help prevent contamination of groundwater from federally funded projects. It has increased public awareness of the vulnerability of groundwater resources. The SSA program is authorized by section 1424(e) of the SDWA (Public Law 93-523, 42 U.S.C. 300 et. seq), which states:

> "*If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register.*"[24]

There are no sole source aquifers located within airport boundaries. The nearest sole source aquifer is 278 miles from the airport, Mille Lacs Soul Source Aquifer. [25]

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[21] Wisconsin DNR| AWCMP Program: https://dnr.wisconsin.gov/topic/SurfaceWater/Planning.html
[22] U.S. EPA | How's My Waterway? https://mywaterway.epa.gov/community/070600030404/overview
[23] United States Geological Survey | What is Groundwater? https://www.usgs.gov/faqs/what-groundwater
[24] U.S. EPA | Overview of the Drinking Water Sole Source Aquifer Program: https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program#Authority
[25] U.S. EPA | Interactive Map for Sole Source Aquifers: https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b

Wild and Scenic Rivers

The *National Wild and Scenic Rivers Act* was established to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations.

The Nationwide River Inventory (NRI) is a list of over 3,400 rivers or river segments that appear to meet the minimum *Wild and Scenic Rivers Act* eligibility requirements based on their free-flowing status and resource values. The development of the NRI resulted from section 5(d)(1) in the *Wild and Scenic Rivers Act*, directing federal agencies to consider potential wild and scenic rivers in the comprehensive planning process.

The closest designated wild and scenic river identified is Wolf River located 175 miles east of the airport.[26] The nearest National River Inventory feature is Apple River, located 20 miles southwest.[27]

ENVIRONMENTAL OVERVIEW

Analysis of the potential environmental impacts of recommended airport development projects, as discussed in this chapter and depicted on **Exhibit 5A**, is a key component of the master plan process. The primary purpose of this environmental overview is to identify significance thresholds for the various resource categories contained in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1 and FAA Order 5050.4B, *National Environmental Policy Act* (NEPA) *Implementation Instructions for Airport Actions*, Table 7.1. The environmental overview then evaluates the development program to determine whether proposed actions could individually or collectively significantly affect the quality of the environment.

The construction of any improvements depicted on the recommended development concept plan would require compliance with NEPA to receive federal financial assistance or to obtain a federal approval (i.e., a federal action). For projects not "categorically excluded" under FAA Order 1050.1F, compliance with NEPA is generally satisfied through the preparation of an environmental assessment (EA). An EA is prepared when the initial review of the proposed action indicates that it is not categorically excluded, involves at least one extraordinary circumstance, or the action is not one known normally to require an environmental impact statement (EIS). If none of the potential impacts are likely to be significant, then the responsible FAA official prepares a Finding of No Significant Impact (FONSI), which briefly presents, in writing, the reasons why an action, not otherwise categorically excluded, would not have a significant impact on the human environment and the approving official may approve it. Issuance of a FONSI signifies that FAA would not prepare an EIS and has completed the NEPA process for the proposed action.

In instances where significant environmental impacts are expected, an EIS may be required. An EIS is a clear, concise, and appropriately detailed document that provides agency decision-makers and the public with a full and fair discussion of significant environmental impacts of the proposed action and reasonable alternatives and implements the requirement in NEPA §102(2)(C) for a detailed written statement.

[26] National Wild and Scenic Rivers System: https://www.rivers.gov/wisconsin.php

[27] U.S. Department of the Interior | National Park Service | Nationwide Rivers Inventory | Rivers: https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm

Table 5J summarizes potential environmental concerns associated with implementation of the recommended master plan development concept. Analysis under NEPA includes direct, indirect, and cumulative impacts. Direct impacts are those caused by the action and occur at the same time and place. Examples of direct impacts include:

- Construction of a facility or runway in a wetland which results in the loss of a portion of the wetland; or
- Noise generated by the proposed action or alternative(s) which adversely affects noise sensitive land uses.

Indirect impacts are those impacts caused by the action but are later in time or farther removed in distance but are still reasonably foreseeable. Indirect impacts may include growth inducing impacts and other effects related to induced changes in the pattern of land use, population density or growth rate, and related impacts on air and water and other natural systems, including ecosystems. Cumulative impacts are those that take into consideration the environmental impact of past, present, and future actions. Cumulative impacts would vary based on the project type, geographic location, potential to impact resources, and other factors, such as the current condition of potentially affected impact categories.

TABLE 5J | Summary of Potential Environmental Concerns

AIR QUALITY	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***The action would cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the United States (U.S.) Environmental Protection Agency (EPA) under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.***
Potential Environmental Concerns	The projected increase in operations over the 20-year planning horizon of the master plan, as well as construction of proposed projects, would result in additional emissions. The airport is in Grant County, Wisconsin. Grant County is in attainment for all criteria pollutants; therefore, a general conformity review per the *Clean Air Act* would not be required. According to the most recent FAA *Aviation Emissions and Air Quality Handbook* (2015), an emissions inventory under NEPA may still be necessary for any proposed action that would result in a reasonably foreseeable increase in emissions due to plan implementation. For construction emissions, a qualitative or quantitative emissions inventory under NEPA may be required, depending on the type of environmental review needed for development projects outlined in the master plan.
BIOLOGICAL RESOURCES (including fish, wildlife, and plants)	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***The U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS) determines that the action would be likely to jeopardize the continued existence of a federally listed threatened or endangered species or would result in the destruction or adverse modification of federally designated critical habitat.*** ***FAA has not established a significance threshold for non-listed species. However, factors to consider are if an action would have the potential for:*** - ***Long-term or permanent loss of unlisted plant or wildlife species;*** - ***Adverse impacts to special status species or their habitats;*** - ***Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations; or*** - ***Adverse impacts on a species' reproductive rates, non-natural mortality, or ability to sustain the minimum population levels required for population maintenance.***
Potential Environmental Concerns	No critical habitat is located on airport property or within the vicinity of the airport. There are five species federally listed as threatened or endangered (and one candidate species) which have the potential to occur in the vicinity (refer to **Table 5D**). Thus, specific development planned by the master plan will need to be more fully evaluated if occurring in vegetated areas. Migratory birds protected by the *Migratory Bird Treaty Act* could also be adversely affected if construction occurs during the nesting and breeding seasons for potentially occurring birds.

CLIMATE	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Climate.*** *Refer to FAA Order 1050.1F Desk Reference and/or the most recent FAA Aviation Emissions and Air Quality Handbook for the most up-to-date methodology for examining impacts associated with climate change.*
Potential Environmental Concerns	An increase in GHGs could occur over the future planning horizon of the master plan. Increased operations and facilities at the airport may result in added vehicular and aircraft GHGs.
COASTAL RESOURCES	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Coastal Resources. Factors to consider are if an action would have the potential to:*** • ***Be inconsistent with the relevant state coastal zone management plan(s);*** • ***Impact a coastal barrier resources system unit;*** • ***Pose an impact on coral reef ecosystems;*** • ***Cause an unacceptable risk to human safety or property; or*** • ***Cause adverse impacts on the coastal environment that cannot be satisfactorily mitigated.***
Potential Environmental Concerns	None. The airport is not located within a designated coastal zone.
***DEPARTMENT OF TRANSPORTATION ACT*, SECTION 4(f)** (NOW CODIFIED IN 49 U.S. CODE § 303)	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***The action involves more than a minimal physical use of a Section 4(f) resource or constitutes a "constructive use" based on an FAA determination that the aviation project would substantially impair the Section 4(f) resource. Resources that are protected by Section 4(f) are publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance; and publicly or privately owned land from an historic site of national, state, or local significance. Substantial impairment occurs when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished.***
Potential Environmental Concerns	There are no wilderness areas, public recreational facilities, or NHRP-listed resources that would be impacted by proposed development at the airport. The closest known potential Section 4(f) resource is the Ipswich Prairie State Natural Area located 0.3 miles east of the airport. However, any airport structures 50 years or older should be evaluated for historic significance prior to alteration or demolition. If determined to be a significant historic resource, they would likely qualify as a Section 4(f) resource as well.
FARMLANDS	

FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***The total combined score on Form AD-1006, Farmland Conversion Impact Rating, ranges between 200 and 260. (Form AD-1006 is used by the U.S. Department of Agriculture, Natural Resources Conservation Service [NRCS] to assess impacts under the Farmland Protection Policy Act [FPPA].)***
	FPPA applies when airport activities meet the following conditions:
	• *Federal funds are involved;*
	• *The action involves the potential for the irreversible conversion of important farmlands to non-agricultural uses. Important farmlands include pastureland, cropland, and forest considered to be prime, unique, or statewide or locally important land; or*
	• *None of the exemptions to FPPA apply. These exemptions include:*
	    o *When land is not considered "farmland" under FPPA, such as land already developed or already irreversibly converted. These instances include when land is designated as an urban area by the U.S. Census Bureau or the existing footprint includes rights-of-way.*
	    o *When land is already committed to urban development.*
	    o *When land is committed to water storage.*
	    o *The construction of non-farm structures necessary to support farming operations.*
	    o *The construction/land development for national defense purposes.*

Potential Environmental Concerns	The airport is in an area surrounded by farmland. In addition, the airport has allowed farming within some of its safety areas. Proposed changes to the airside and landside areas of the airport could convert farmlands protected by the FPPA. This should be confirmed on a project-by-project basis, and Form AD-1006 completed, when appropriate.

HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Hazardous Materials, Solid Waste, and Pollution Prevention. However, factors to consider are if an action would have the potential to:*** • ***Violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials and/or solid waste management;*** • ***Involve a contaminated site;*** • ***Produce an appreciably different quantity or type of hazardous waste;*** • ***Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity; or*** • ***Adversely affect human health and the environment.***
Potential Environmental Concerns	There are no Superfund sites, brownfields, or hazardous waste facilities on or near airport property. The recommended development concept does not include land uses that would produce an appreciably different quantity or type of hazardous waste. However, should this type of land use be proposed, further NEPA review and/or permitting would be required. Any construction and demolition waste, along with all other types of non-hazardous solid waste, would be hauled to the transfer facility in Platteville by the contractor. Minor amounts of solid waste from new tenant operations are also expected. Solid waste collection and recycling for the City of Platteville long-term is provided by Faherty, Incorporated. No impacts related to solid waste disposal are expected.
HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Historical, Architectural, Archaeological, and Cultural Resources. Factors to consider are if an action would result in a finding of "adverse effect" through the Section 106 process. However, an adverse effect finding does not automatically trigger the preparation of an EIS (i.e., a significant impact).***
Potential Environmental Concerns	Although much of the airport has been disturbed, intact archaeological or historic artifacts could be present. On-ground cultural resources surveys should be completed in any area where ground disturbance has not occurred but is proposed. In addition, any airport structures 50 years or older should be evaluated for historic significance prior to alteration or demolition. If previously undocumented buried cultural resources are identified during ground-disturbing activities for future airport development, all work must immediately cease within 100 feet until a qualified archaeologist has documented the discovery and evaluated its eligibility for the state or national historic registers, as appropriate. Work must not resume in the area without approval from FAA.
LAND USE	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Land Use. There are also no specific independent factors to consider. The determination that significant impacts exist is normally dependent on the significance of other impacts.***
Potential Environmental Concerns	There would be no impact on the existing land uses surrounding the airport due to proposed airport development, including a runway extension. The airport is surrounded by open space and farmland. The nearest residential and institutional areas are at least two miles away. The current boundaries of the Platteville Municipal Airport Overlay Zoning and Height Limitations Map referenced by the *Platteville Municipal Airport Overlay Zoning and Height Limitations Ordinance* appear to already accommodate the proposed runway extension.
NATURAL RESOURCES AND ENERGY SUPPLY	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Natural Resources and Energy Supply. However, factors to consider are if the action would have the potential to cause demand to exceed available or future supplies of these resources.***
Potential Environmental Concerns	Planned development projects at the airport would increase demands on energy utilities, water supplies and treatment, and other natural resources during construction; however, impacts are not anticipated to be significant. Should long-term impacts be a concern, coordination with service providers is recommended. During construction, demand for fossil fuels, building materials, and water for dust suppression would occur. No unusual demand is anticipated that would exceed available or future supplies.

NOISE AND NOISE-COMPATIBLE LAND USE	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***The action would increase noise by Day-Night Average Sound Level (DNL) 1.5 decibel (dB) or more for a noise-sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe.*** ***Another factor to consider is that special consideration should be given to the evaluation of the significance of noise impacts on noise-sensitive areas within Section 4(f) properties where the land use compatibility guidelines in Title 14 Code of Federal Regulations (CFR) Part 150 are not relevant to the value, significance, and enjoyment of the area in question.***
Potential Environmental Concerns	There are only a few scattered residents and the Ipswich Prairie Natural Area near the airport, and future development at the airport is not expected to change the overall noise environment more than 1.5 dB threshold. However, this should be confirmed prior to implementing a runway extension. The current boundaries of the Platteville Municipal Airport Overlay Zoning and Height Limitations Map referenced by the *Platteville Municipal Airport Overlay Zoning and Height Limitations Ordinance* appear to already accommodate the proposed runway extension.
SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS	
Socioeconomics	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Socioeconomics. However, factors to consider are if an action would have the potential to:*** • ***Induce substantial economic growth in an area, either directly or indirectly (e.g., through establishing projects in an undeveloped area);*** • ***Disrupt or divide the physical arrangement of an established community;*** • ***Cause extensive relocation when sufficient replacement housing is unavailable;*** • ***Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities;*** • ***Disrupt local traffic patterns and substantially reduce the levels of service of roads serving the airport and its surrounding communities; or*** • ***Produce a substantial change in the community tax base.***
Potential Environmental Concerns	Proposed development would not relocate or disrupt current businesses or residents. No division of existing neighborhoods or housing or businesses relocations would occur due to proposed development on the airport. The airport is bordered primarily by undeveloped vacant land. Future airport projects would result in temporary disruption of local traffic patterns during construction or once operational. The proposed development concept includes the realignment of one public and one private road to remove them from the Runway 7 approach and Runway 33 approach RPZs, respectively.
Environmental Justice	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Environmental Justice. However, factors to consider are if an action would have the potential to lead to a disproportionately high and adverse impact to an environmental justice population (i.e., a low-income or minority population), due to:*** • ***Significant impacts in other environmental impact categories; or*** • ***Impacts on the physical or natural environment that affect an environmental justice population in a way that FAA determines is unique to the environmental justice population and significant to that population.***
Potential Environmental Concerns	Very few low-income and minority populations have been identified within one mile of the airport (**Table 5H**). Based on the 5-Year 2020 ACS estimates, 34 people living within one mile of the airport are low income and 10 are people of color. It is unlikely that implementation of the proposed improvements outlined in the master plan would affect these populations in a disproportionate or adverse manner.
Children's Health and Safety Risks	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Children's Environmental Health and Safety Risks. However, factors to consider are if an action would have the potential to lead to a disproportionate health or safety risk to children.***
Potential Environmental Concerns	According to the 5-Year 2020 ACS estimates, there are only 32 children living within one mile of the airport. The closest school, park, or playground is located 1.7 miles northwest of the airport. It is unlikely that that implementation of the proposed improvements outlined in the master plan would affect children's safety. In addition, best management practices should be implemented to decrease environmental health risks to children. For example, during construction of the projects outlined in the master plan, appropriate measures should be taken to prevent access by unauthorized persons to construction project areas.

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VISUAL EFFECTS (INCLUDING LIGHT EMISSIONS AND VISUAL RESOURCES/VISUAL CHARACTER)	
Light Emissions	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Light Emissions. However, a factor to consider is the degree to which an action would have on the potential to:*** • ***Create annoyance or interfere with normal activities from light emissions;*** • ***Affect the nature of the visual character of the area due to light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources;***
Potential Environmental Concerns	None. The existing lighting at the airport includes runway lighting (medium intensity) and lighting used for navigation (such as a rotating beacon, a lighted wind indicator, and 2-box precision approach path indicators [PAPIs]). New edge lights for the proposed Runway 15-33 extension and the new parallel taxiway would also be installed. These lights would be part of the overall airport environment and are not expected to cause significant lighting issues to off-airport areas. During nighttime hours, the runway lights and visual approach aids are turned on when pilots approach the airport. They automatically turn back off when not being used. Night lighting during construction phases within the runway environment is typically directed down to the construction work area to avoid light from spilling outside the airport boundaries. Other future projects are likely to include additional lighting during operation of the airport's new structures and facilities but would not significantly change the amount of lighting seen from outside the airport.
Visual Resources/Visual Character	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Visual Resources/Visual Character. However, a factor to consider is the extent an action would have on the potential to:*** • ***Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources;*** • ***Contrast with the visual resources and/or visual character in the study area; and*** • ***Block or obstruct the views of the visual resources, including whether these resources would still be viewable from other locations.***
Potential Environmental Concerns	None. Future airport improvements are likely to be what currently exists on the airport and would not change the overall visual character of the airport. Proposed hangars and other structures will be located adjacent to existing airport development.
WATER RESOURCES (INCLUDING WETLANDS, FLOODPLAINS, SURFACE WATERS, GROUNDWATER, AND WILD AND SCENIC RIVERS)	
Wetlands	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***The action would:*** 1. ***Adversely affect a wetland's function to protect the quality or quantity of municipal water supplies, including surface waters and sole source and other aquifers;*** 2. ***Substantially alter the hydrology needed to sustain the affected wetland system's values and functions or those of a wetland to which it is connected;*** 3. ***Substantially reduce the affected wetland's ability to retain floodwaters or storm runoff, thereby threatening public health, safety or welfare (the term welfare includes cultural, recreational, and scientific resources or property important to the public);*** 4. ***Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands.*** 5. ***Promote the development of secondary activities or services that would cause the circumstances listed above to occur; or,*** 6. ***Be inconsistent with applicable state wetland strategies.***
Potential Environmental Concerns	Although there are potential wetlands within the airport boundary (**Exhibit 5C**), future development projects are not generally planned in these areas. If future development does encroach within wetlands or other waters of the U.S., an individual or nationwide Section 404 permit under the *Clean Water Act* would be required.
Floodplains	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***The action would cause notable adverse impacts on natural and beneficial floodplain values. Natural and beneficial floodplain values are defined in Paragraph 4.k of DOT Order 5650.2, Floodplain Management and Protection.***
Potential Environmental Concerns	None. The airport property is not within a 100-year floodplain.

Surface Waters	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***The action would:*** 1. ***Exceed water quality standards established by federal, state, local, and tribal regulatory agencies; or*** 2. ***Contaminate public drinking water supply such that public health may be adversely affected.***
Potential Environmental Concerns	None. Although there are drainages within the airport boundary (**Exhibit 5C**), future development projects are not generally planned in these areas. The airport should update its stormwater permitting and management plans to include all new development areas as they occur. Construction water quality management plans and other best management practices in keeping with FAA Advisory Circular 150/5370-10H, *Standards for Specifying Construction of Airports*, Item C-102, Temporary Air and Water Pollution, Soil Erosion and Siltation Control should also be followed. There are no impaired water bodies with the watershed containing the airport, i.e., the Blockhouse Creek watershed.
Groundwater	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***The action would:*** 1. ***Exceed groundwater quality standards established by federal, state, local, and tribal regulatory agencies: or*** 2. ***Contaminate an aquifer used for public water supply such that public health may be adversely affected.*** ***Factors to consider are when a project would have the potential to:*** • ***Adversely affect natural and beneficial groundwater values to a degree that substantially diminishes or destroys such values;*** • ***Adversely affect groundwater quantities such that the beneficial uses and values of such groundwater are appreciably diminished or can no longer be maintained and such impairment cannot be avoided or satisfactorily mitigated; or*** • ***Present difficulties based on water quality impacts when obtaining a permit or authorization.***
Potential Environmental Concerns	None. The airport property does not serve as a significant source of groundwater recharge and is not located near a sole source aquifer. Mille Lac Sole Source Aquifer, the nearest sole source aquifer, is 278 miles from the airport.
Wild and Scenic Rivers	
FAA Order 1050.1F, *Significance Threshold/Factors to Consider*	***FAA has not established a significance threshold for Wild and Scenic Rivers. Factors to consider are when an action would have an adverse impact on the values for which a river was designated (or considered for designation) through:*** • ***Destroying or altering a river's free-flowing nature;*** • ***A direct and adverse effect on the values for which a river was designated (or under study for designation);*** • ***Introducing a visual, audible, or another type of intrusion that is out of character with the river or would alter outstanding features of the river's setting;*** • ***Causing the river's water quality to deteriorate;*** • ***Allowing the transfer or sale of property interests without restrictions needed to protect the river or the river corridor; or*** • ***Any of the above impacts preventing a river on the Nationwide Rivers Inventory (NRI) or a Section 5(d) river that is not included in the NRI from being included in the Wild and Scenic River System or causing a downgrade in its classification (e.g., from wild to recreational).***
Potential Environmental Concerns	None. There are no protected rivers near the airport.

SUMMARY

This information and analyses have been prepared to help the City of Platteville make decisions on the future growth and development of PVB by describing narratively and graphically the recommended master plan concept. It details environmental and land use conditions that must be taken into consideration when implementing the development plan. The plan represents an airfield facility that fulfills aviation needs for the airport, while conforming to safety and design standards to the extent practicable. It also provides a landside development concept that can be developed as demand (and technology) dictates and is subject to further refinement pending comments from the PAC, City of Platteville, and the public.

Flexibility will be crucial to successful future development at the airport, as activity may not occur as predicted. The recommended master plan concept provides stakeholders with a general guide that, if followed, can maintain the airport's long-term viability, and allow it to continue to provide air transportation service to the area. The next chapter of this master plan will provide a reasonable schedule for undertaking the projects based on safety and demand over the course of the next 20 years.

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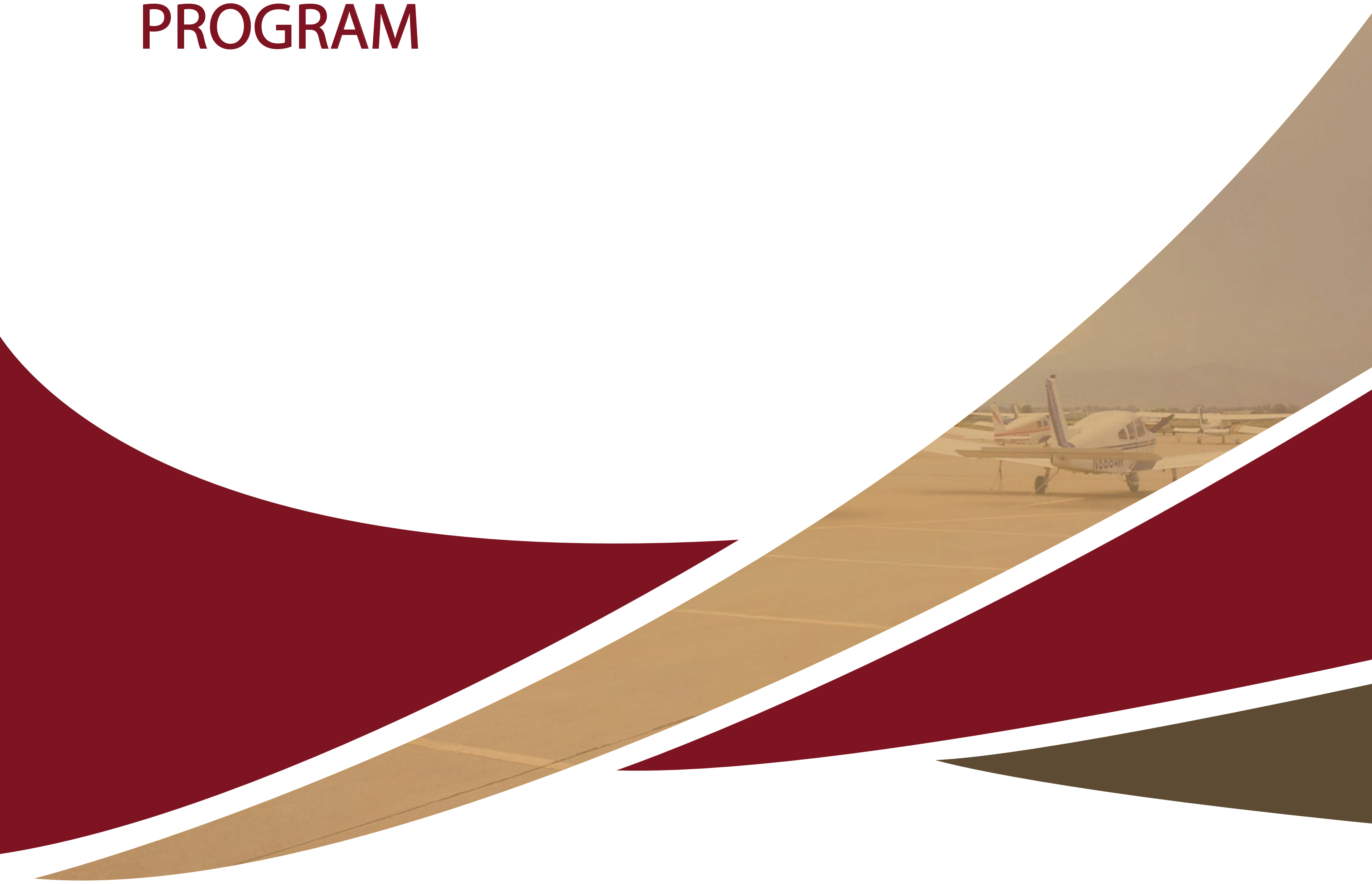
CITY OF PLATTEVILLE

PLATTEVILLE MUNICIPAL AIRPORT

Chapter 6

CAPITAL IMPROVEMENT PROGRAM



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CITY OF PLATTEVILLE

Chapter 6

CAPITAL IMPROVEMENT PROGRAM

The master plan concept presented in the previous chapter outlined airside and landside improvements for Platteville Municipal Airport (PVB) that provide the City of Platteville with a plan to preserve and develop the airport to meet future aviation demands. Using the recommended master plan concept as a guide, this chapter will provide a description and overall cost estimates for the projects identified in the capital improvement program (CIP) and development schedule. The program has been evaluated from a variety of perspectives and represents a comparative analysis of basic budget factors, demand, and priority assignments.

The presentation of the capital program is organized into two sections. First, the airport's CIP and associated cost estimates are presented in narrative and graphic form. The CIP has been developed following Federal Aviation Administration (FAA) guidelines for master plans and primarily identifies those projects that are likely eligible for FAA and Wisconsin Department of Transportation – Bureau of Aeronautics (BOA) grant funding. The second section identifies and discusses capital improvement funding sources at the federal, state, and local levels. As a block grant state, the BOA is responsible for distributing FAA state apportionment and discretionary grant funds to general aviation airports as well as their own state funding program. As such, the BOA serves as both the state and federal agency for grants at PVB.

With the recommended concept and specific needs and improvements for the airport having been established, the next step is to determine a realistic schedule for project implementation and the associated costs for the plan. The capital program considers the interrelationships among the projects in order to determine an appropriate sequence of development, while remaining within reasonable fiscal constraints.

The CIP, programmed by planning horizons, has been developed to cover the short- (1-5 years), intermediate- (6-10 years), and ultimate-term (11-20 years) planning horizons. By using planning horizons instead of specific years, the City of Platteville will have greater flexibility to adjust capital needs as demand dictates. **Table 5A** in the previous chapter summarizes the key aviation demand milestones projected at PVB for each of the three planning horizons.

A key aspect of this planning document is the use of demand-based planning milestones. The short-term planning horizon contains items of highest need and/or priority, some of which have been previously defined by airport management and existing CIP schedules. As short-term horizon activity levels are reached, it will then be time to plan for the intermediate term based on the next activity milestones. Likewise, when the intermediate milestones are reached, it will be time to plan for the ultimate-term activity milestones.

Many development items included in the recommended concept will need to follow these demand indicators. For example, the plan includes expanding utility infrastructure and site preparation for constructing new landside facilities to support aircraft activity. Demand for new based aircraft will be a primary indicator for these projects. If based aircraft growth occurs as projected, additional hangars should be constructed to meet the demand. If growth slows or does not occur as forecast, some projects may be delayed. As a result, capital expenditures are planned to be made on an as-needed basis, leading to more responsible use of capital assets. Some development items do not depend on demand, such as airfield improvements to meet FAA design standards. These projects need to be programmed in a timely manner, regardless of changes in demand indicators and should be monitored regularly by airport management.

At PVB, some hangars are owned and managed by the airport and leased to individual tenants, while others are privately owned and managed on land leased from the airport. Because of economic realities, many airports rely on private developers to construct new hangars. In some cases, private developers can keep construction costs lower which, in turn, lowers the monthly lease rates necessary to amortize a loan. **The CIP for PVB assumes that development for landside facilities will be constructed privately through ground lease agreements with the sponsor**. This assumption does not preclude the possibility of the airport constructing new hangars. Furthermore, the city may decide to provide the site preparation projects necessary to facilitate hangar construction, such as grading and utility installation. Ultimately, the City of Platteville will determine, based on demand and the specific needs of a potential developer, whether to self-fund landside facility development or to rely on private developers.

As a master plan is a conceptual document, implementation of the capital projects should only be undertaken after further refinement of their design and costs through architectural and/or engineering analysis. Moreover, some projects may require additional infrastructure improvements (e.g., drainage, extension of utilities, etc.) that may increase the estimated cost of the project or the timeline for completion.

Once a list of necessary projects was identified and refined, project-specific cost estimates were prepared. These estimates include design, construction, administration, and contingency costs that may arise on the project. **Capital costs presented here should be viewed only as "order-of-magnitude" estimates that are subject to further refinement during any engineering and/or architectural design**. Nevertheless, they are considered sufficient for planning purposes. Cost estimates for each of the development projects in the CIP are based on present-day construction, design, and administration costs. Adjustments will need to be applied over time to account for inflation and changes in construction and capital equipment costs. Cost estimates for all projects are in current (2022) dollars. It should also be noted that the CIP and costs were prepared by the airport's engineering firm with assistance and input from the airport board and City Commission prior to presentation within this report.

Exhibit 6A presents the proposed 20-year CIP for PVB with a beginning year of 2022. The start year is 2022 as projects from that year are not yet complete. All of the projects identified are eligible for federal and/or state grant funding but may not meet the eligibility funding threshold due to low priority rating. The point of the analysis is to identify possible funding opportunities to be decided on a project-by-project basis. **BOA-funded projects, utilizing FAA block grant funds, are eligible for up to 90 percent of the total project cost, with the local sponsor responsible for a 10 percent match**.

The BOA uses the FAA priority ranking system to help objectively evaluate potential airport projects. Projects are weighted toward safety, infrastructure preservation, standards, and capacity enhancement. The BOA will participate in the highest priority projects before considering lower priority projects, even if a lower priority project is considered a more urgent need by the local sponsor. Nonetheless, the project should remain a priority for the airport, and funding support should continue to be requested in subsequent years.

The most important feature of the CIP is that future projects for which the airport may request BOA funding are included on the list. On a biennial basis, the CIP is updated and reviewed with the BOA. Projects on the CIP will be moved up and down, depending on priority and funding availability. Periodically, new projects will arise that can be added to the CIP and presented to the BOA.

Some projects identified in the CIP will require environmental documentation. The level of required documentation for each project must be determined in consultation with FAA and BOA. There are three major levels of environmental review to be considered under the *National Environmental Policy Act* (NEPA): categorical exclusion (CatEx), Environmental Assessments (EA), and Environmental Impact Statements (EIS). Each level requires more time to complete and more detailed information. Guidance on what level of documentation is required for a specific project is outlined in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*. The Environmental Overview presented in Chapter Five addresses NEPA and provides an evaluation of various environmental categories for PVB.

The following sections will describe in greater detail the projects identified for the airport over the next 20 years. The projects are grouped based on a detailed evaluation of existing and projected demand, safety, rehabilitation needs, and local priority. While the CIP identifies the priority ranking of the projects, the list should be evaluated and revised on a regular basis. It is also important to note that certain projects, while listed separately for purposes of evaluation in this study, could be combined with other projects during time of construction/implementation.

#	Project Description	Cost Estimate	Federal/ BOA Share	Airport Sponsor/ Local Share
SHORT TERM PROGRAM (0-5 Years)				
2022				
1	SRE Blade	$30,000	$27,000	$3,000
2	Box Hangar	$1,100,000	$990,000	$110,000
2023				
3	Box Hangar Reimbursement	$309,000	$309,000	$0
4	Remove RCO	$50,000	$50,000	$0
2024				
5	Acquire Land for Northern Hangar Development Area Access Roadway	$50,000	$45,000	$5,000
6	Hangar Development Access Roadway and Stormwater Modifications Design	$45,000	$42,750	$2,250
7	Box Hangar Reimbursement	$309,000	$309,000	$0
8	Existing Hangar Evaluation and Maintenance and Repair Report	$15,000	$13,500	$1,500
2025				
9	Hangar Development Access Roadway Construction	$700,000	$665,000	$35,000
TOTAL SHORT TERM PROGRAM		**$2,558,000**	**$2,401,250**	**$156,750**
INTERMEDIATE TERM PROGRAM (6-10 Years)				
10	Rehabilitate T-Hangars Area Pavement	$200,000	$190,000	$10,000
11	Rehabilitate Existing T-Hangars	$400,000	$360,000	$40,000
12	Construct Taxilane in Existing Hangar Development Area East of Terminal	$300,000	$285,000	$15,000
13	New Terminal and FBO Building/Hangar	$4,000,000	$3,200,000	$800,000
14	Apron and Taxilane Expansion for New Hangars Along North Property Line, No Taxi Island, Add Tie-Downs	$700,000	$665,000	$35,000
15	Routine Pavement Maintenance	$400,000	$380,000	$20,000
TOTAL INTERMEDIATE TERM PROGRAM		**$6,000,000**	**$5,080,000**	**$920,000**
ULTIMATE TERM PROGRAM (11-20 Years)				
16	New Hangar in Existing Hangar Development Area	$1,300,000	$1,170,000	$130,000
17	Extend Runway 15-33 to 5000 feet including MIRLs, REILs, PAPI	$1,500,000	$1,425,000	$75,000
18	Parallel Taxiway to Runway 15-33 including MITLs	$3,500,000	$3,325,000	$175,000
19	Obtain Avigation Easement for Areas within Ultimate RPZs	$150,000	$142,500	$7,500
20	Routine Pavement Maintenance	$400,000	$380,000	$20,000
21	Expand Apron and Taxilanes for T-Hangars Northwest of Terminal	$800,000	$760,000	$40,000
TOTAL ULTIMATE TERM PROGRAM		**$7,650,000**	**$6,442,500**	**$407,500**
CAPITAL IMPROVEMENT PROGRAM TOTAL		**$16,208,000**	**$13,923,750**	**$1,484,250**

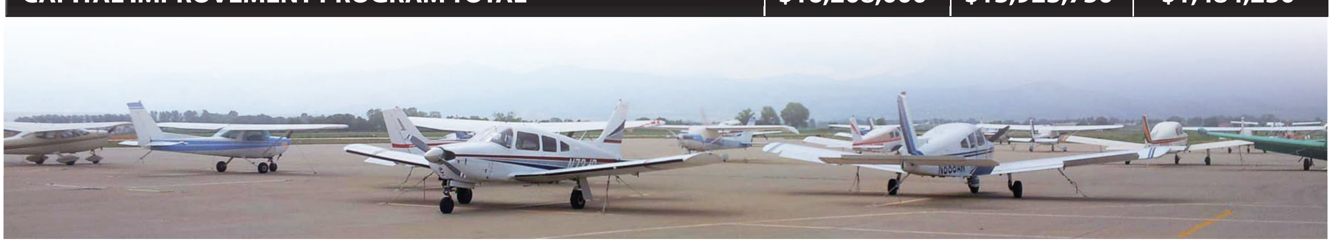

Exhibit 6A
CAPITAL IMPROVEMENT PROGRAM

SHORT-TERM PROGRAM

The short-term projects are those anticipated to be needed during the first five years of the 20-year CIP. The projects listed are subject to change based on federal and state funding priorities. Projects relating to safety and maintenance generally have the highest priority. The short-term program presents nine projects for the planning period between 2022 and 2025 as presented on **Exhibit 6A**.

The primary projects include the construction on a hangar and land acquisition for a roadway to serve additional hangars. Two projects listed are reimbursements for City-funded hangars under new federal funding legislation (to be discussed later). The short-term plan also includes the proposed removal/relocation of the remote communications outlet (RCO) which will need FAA approval and removal as it is their equipment.

The short-term CIP includes projects that enhance the landside development options. The total investment necessary for the short-term CIP is approximately $2.6 million, as detailed on **Exhibit 6A**. Of the overall short-term CIP total, approximately $2.4 million could be eligible for federal funding assistance. The remaining amount would need to be provided through airport sponsored funding outlets.

INTERMEDIATE-TERM PROGRAM

The intermediate-term projects are those that are anticipated to be necessary generally between 2026 and 2030. These projects are not tied to specific years of implementation; instead, they have been prioritized so that airport management has the flexibility to determine when they need to be pursued based on current conditions. It is not unusual for certain projects to be delayed or advanced based on changing conditions, such as funding availability or changes in the aviation industry. This planning horizon includes six projects as listed on **Exhibit 6A**. The intermediate term includes additional hangar improvements as well as replacement of the terminal building with a new facility that has an attached hangar. There is a line item which anticipates pavement maintenance to be completed in the intermediate term. The total costs associated with the intermediate-term program are estimated at $6.0 million, with approximately $5.1 million that could be eligible for federal/state funding. The local share is estimated at $920,000.

ULTIMATE-TERM PROGRAM

The ultimate-term planning horizon considers six projects for the final 10-year period that are mainly demand-driven. The projects and their associated costs are listed on **Exhibit 6A**. The most notable of projects in the ultimate term are the proposed Runway 15-33 extension and the construction of a full-length parallel taxiway to the runway.

The total investment necessary for the ultimate-term CIP detailed on **Exhibit 6A** is approximately $7.7 million. Roughly $6.4 million is eligible for federal assistance, with the airport's share of the long-term projects estimated at $407,500. As noted previously, eligibility and actual funding of individual projects will be made year-to-year and on a case-by-case basis.

CAPITAL IMPROVEMENT PROGRAM SUMMARY

The CIP is intended as a road map of improvements to help guide the City of Platteville and BOA. The plan as presented will help accommodate increased demand at PVB over the next 20 years and beyond. The sequence of projects may change due to availability of funds or changing priorities based on the annual review by airport management, the City, and BOA. Nonetheless, this is a comprehensive list of capital projects the airport should consider in the next 20 years.

The total CIP proposed is approximately $16.2 million in airport development needs. Of this total, approximately $13.92 million could be eligible for federal funding assistance. The local funding estimate for the proposed CIP is estimated to be a minimum of $1.5 million, which could increase if individual projects are not offered federal grants.

CAPITAL IMPROVEMENT FUNDING SOURCES

There are generally four different sources of funds used to finance airport development, which include:

- Airport cash flow
- Revenue and general obligation bonds
- Federal/state/local grants

Access to these sources of financing varies widely among airports, with some large airports maintaining substantial cash reserves, while the smaller commercial service and general aviation airports often require subsidies from local governments to fund operating expenses and finance modest improvements.

Financing capital improvements at PVB will not rely solely on the financial resources of the City of Platteville. Capital improvement funding is available through various grant-in-aid programs on both the federal and state levels. Historically, the airport has received both federal and state grants. While more funds could be available in some years, the CIP was developed with project phasing to remain realistic and within the range of anticipated grant assistance. The following discussion outlines key sources of funding potentially available for capital improvements at the airport.

FEDERAL GRANTS

Through federal legislation over the years, various grant-in-aid programs have been established to develop and maintain the system of public-use airports across the United States. The purpose of this system and its federally based funding is to maintain national defense and to promote interstate commerce. The *FAA Modernization and Reform Act of 2012*, enacted on February 17, 2012, authorized the FAA's Airport Improvement Program (AIP) at $3.35 billion for fiscal years 2012 through 2015. The law was then extended through a series of continuing resolutions. In 2016, Congress passed legislation (H.R. 636, *FAA Extension, Safety, and Security Act of 2016*) amending the law to expire on September 30, 2017. Subsequently, Congress passed a bill (H.R. 3823, *Disaster Tax Relief and Airport and Airway Extension Act of 2017*) authorizing appropriations to the FAA through March 31, 2018, and the

Consolidated Appropriations Act, 2018 extended the FAA's funding and authority through September 30, 2018. In October 2018, Congress passed legislation entitled ***FAA Reauthorization Act of 2018*, which will fund the FAA's AIP at $3.35 billion annually until 2023**. This bill reauthorized the FAA for five years, at a cost of $97 billion, and represents the longest funding authorization period for the FAA since 1982.

The source for AIP funds is the Aviation Trust Fund. Established in 1970, the Aviation Trust Fund provides funding for aviation capital investment programs (aviation development, facilities and equipment, and research and development). The Aviation Trust Fund also finances the operation of the FAA. It is funded by user fees, including taxes on airline tickets, aviation fuel, and various aircraft parts.

Several projects identified in the CIP are eligible for FAA funding through the AIP, which provides entitlement funds to airports based, in part, on their annual enplaned passengers and pounds of landed cargo weight. Additional AIP funds, designated as discretionary, may also be used for eligible projects based on the FAA's national priority system. Although the AIP has been reauthorized several times and the funding formulas have been periodically revised to reflect changing national priorities, the program has remained essentially the same. Public-use airports that serve civil aviation – like PVB – may receive AIP funding for eligible projects, as described in FAA's Airport Improvement Program Handbook. The airport must fund the remaining projects' costs using a combination of other funding sources, which are discussed in the following sections.

Table 6A presents the approximate distribution of the AIP funds as described in FAA Order 5100.38D, Change 1, *Airport Improvement Program Handbook*, issued February 26, 2019. PVB is eligible to apply for grants which may be funded through state apportionments, the small airport fund, discretionary funds, and/or set-aside categories.

TABLE 6A | Federal AIP Funding Distribution

Funding Category	Percent of Total	Amount[1]
Apportionment/Entitlement		
Passenger Entitlements	27.01%	$904,840,000
Cargo Entitlements	3.50%	$117,250,000
Alaska Supplemental	0.67%	$22,450,000
Nonprimary Entitlements	12.01%	$402,340,000
State Apportionment	7.99%	$267,670,000
Carryover	22.85%	$765,480,000
Small Airport Fund		
Small Hubs	2.33%	$78,060,000
Nonhubs	4.67%	$156,450,000
Nonprimary (GA and Reliever)	9.33%	$312,560,000
Discretionary		
Capacity/Safety/Security/Noise	4.36%	$146,060,000
Pure Discretionary	1.45%	$48,580,000
Set Asides		
Noise and Environmental	3.37%	$112,900,000
Military Airports Program	0.39%	$13,070,000
Reliever	0.06%	$2,010,000
Total	**100.00%**	**$3,350,000,000**

[1]FAA *Modernization and Reform Act of 2018*

Source: FAA Order 5100.38D, Change 1, Airport Improvement Program Handbook

Funding for AIP-eligible projects is undertaken through a cost-sharing arrangement in which FAA/BOA provides up to 90 percent of the cost and the airport sponsor invests the remaining 10 percent. In exchange for this level of funding, the airport sponsor is required to meet various Grand Assurances, including maintaining the improvement for its useful life, usually 20 years.

Another source of federal grants is the **Bipartisan Infrastructure Law (BIL), which was signed into law in 2022 and plans for $25 billion to be invested into airports in the United States over the next five years**. BIL funds are sourced from the U.S. Treasury General Fund and are split into two funding buckets: $20 billion for Airport Infrastructure Grants (AIG) and $4.85 billion for Airport Terminal Program (ATP). **Under BIL, PVB can receive $145,000[1] in allocated AIG funding each year for the next three years**. Beginning in FY2022, BIL became available to be used for repair and maintenance of existing infrastructure or construction of new facilities (e.g., airfield pavement, navaids, lighting, terminal buildings, etc.). ATP grants can be used for multi-modal terminal development and relocating, reconstructing, repairing, or improving an airport traffic control tower. The federal share for AIG is the same as an AIP grant – 90 percent with a 10 percent local match – while the federal share for ATP grants is 95 percent for non-primary airports. The same grant assurances that apply to AIP grants will also apply to BIL grants. BIL and AIP grants cannot be combined into a single grant.

Apportionment (Entitlement) Funds

AIP provides funding for eligible projects at airports through an apportionment (entitlement) program. Non-primary airports that are included in the *National Plan of Integrated Airport Systems* (NPIAS), such as PVB, receive a guaranteed minimum level of up to $150,000 each year in non-primary entitlement (NPE) funds. These funds can be carried over and combined for up to four years, thereby allowing for the completion of a more expensive project.

The FAA also provides a state apportionment based on a federal formula that considers land area and population. For the State of Wisconsin, BOA distributes these funds or projects at various airports throughout the state.

Small Airport Fund

If a large- or medium-hub commercial service airport chooses to institute a PFC, which is a fee of up to $4.50 per airline ticket for funding of capital improvement projects, then their apportionment is reduced. A portion of the reduced apportionment goes to the small airport fund. The small airport fund is reserved for small-hub primary commercial service airports, non-hub commercial service airports, reliever, and general aviation airports. As a general aviation airport, PVB is eligible for funds from this source.

[1] https://www.faa.gov/bil/airport-infrastructure

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Discretionary Funds

In several cases, airports face major projects that will require funds more than the airport's annual entitlements. Thus, additional funds from discretionary apportionments under AIP become desirable. The primary element of discretionary funds is that they are distributed on a priority basis. The priorities are established by a code system at FAA. Under this system, projects are ranked by their purpose. Projects ensuring airport safety and security are ranked as the most important priorities, followed by maintaining current infrastructure development, mitigating noise and other environmental impacts, meeting design standards, and increasing system capacity.

It is important to note that competition for discretionary funding is not limited to airports within the State of Wisconsin, or those within the FAA Great Lakes Region. The funds are distributed to all airports in the country and, as such, are more difficult to obtain. High priority projects will often fare favorably, while lower priority projects may not receive discretionary grants.

FAA Facilities and Equipment (F&E) Program

The Airway Facilities Division of the FAA administers the Facilities and Equipment (F&E) Program. This program provides funding for the installation and maintenance of various navigational aids and equipment of the National Airspace System. Under the F&E program, funding is provided for FAA air traffic control towers, enroute navigational aids, on-airport navigational aids, and approach lighting systems.

While F&E still installs and maintains some navigational aids, on-airport facilities at general aviation airports have not been a priority. Therefore, airports often request funding assistance for navigational aids through AIP and then maintain the equipment on their own. [2] F&E would likely be the source of funding to remove the RCO as proposed in the short term.

STATE FUNDING PROGRAMS

The State of Wisconsin participates in the federal State Block Grant Program. Under this program, the FAA annually distributes general aviation state apportionment and discretionary funds to BOA which, in turn, distributes grants to airports within the state. In compliance with BOA's legislative mandate that it "apply for, receive, and disburse" federal funds for general aviation airports, BOA acts as the agent of the local airport sponsor. Although these grants are distributed by BOA, they contain all federal obligations.

All publicly owned airports and federally designated privately-owned reliever airports are eligible for state financial aid. However, the state's designation of airport classification in the state aviation system plan (SASP) determines the extent to which an airport can be developed with these funds. Development beyond these guidelines may not be eligible for funding depending upon the justification of need for the specific development. This determination is made on a case-by-case basis. State financial aid is available

[2] Guidance on the eligibility of a project for federal AIP grant funding can be found in FAA Order 5100.38D, *Airport Improvement Program Handbook, Change 1*, effective February 26, 2019.

through the Bureau and is provided by the issuance of a finding approved by the Governor. Appropriation of funds depends on individual airport needs and Bureau priorities. For projects receiving federal financial aid, the airport owner and Bureau share equally the non- federal costs.

For projects not involving federal financial aid, the state normally pays:

- 80 percent of the cost of eligible airside and landside development, and;
- 50 percent of some planning projects.
- The state's contribution toward the cost of eligible buildings is limited to $1.25 million. The state cannot participate in the cost of hangars.

Advance Land Acquisition Loan Program

The Advance Land Acquisition Loan Program was created to lend state funds to the owners of public-use airports included in the SASP. These funds are used for purchasing land essential for airport development and approach protection. It is Bureau policy that all land needed for airport development projects seeking state or federal aid be purchased prior to funding approval. The program is available to airport owners to assist them in meeting this requirement. It also assists airport owners to purchase properties when they come up for sale and the airport owner has not budgeted for the purchase. The program operates as a revolving fund, where loan repayments are made available for future loans. Acquisition of land before receipt of federal financial aid allows construction to begin at the earliest possible date and minimizes the need for funding amendments caused by land cost overruns. In addition to property acquisition costs, other costs associated with the project are eligible for loans through this program.

These costs include:

- feasibility studies;
- land surveys;
- airport layout plan updates;
- environmental studies (including agricultural impact statements);
- project plans and specifications;
- other incidental expenses of acquisition such as appraisals, relocation plans, and hazardous materials surveys, and closing costs;
- legal services associated with land acquisition.

Loans are available for up to 80 percent of eligible costs, for a maximum term of five years, with simple interest payable annually at the rate of four percent on the unpaid balance. The airport owner must provide 20 percent of the estimated eligible project costs up front.

Funding flow

For land-loan projects, the airport owner's share of the project is used to begin the preliminary work. The funds for the preliminary work are then applied to the airport owner's share of the land-loan and ultimately the state or federal aid project. This procedure allows work to begin on a project before state or federal airport development funds are available. As previously stated, funds for preliminary work are also applied to the airport owner's share. In some cases, a third party (i.e., private corporations, individual) may donate funds toward the airport owner's share. The airport owner must commit their share of the project funds before state and federal funds can be secured. An airport owner may include one or several listed items in a request for financial aid. Funding consideration is given for each work item listed. Priority is given to work that will enhance safety or keep the airport operational.

Five-Year Airport Improvement Program

Even though a work item may be eligible for funding, it does not guarantee funding, or funding on the airport's stated schedule. The Bureau always has more funding requests than it can cover. The state and federal priority systems help the Bureau make decisions about what work to include in the Five-Year Airport Improvement Program, as well as the schedule of work included. The Five-Year Airport Improvement Program is the Bureau's tool for scheduling individual airport projects that are eligible for federal and state assistance. Projects with the highest priority will be included in the program for early consideration. The first two years of the program's five-year schedule primarily includes projects that have been formally petitioned by the airport owner. Many of the projects in the last three years of the program are tentative. The program is dynamic in that it changes due to fluctuating funding levels at federal, state, and local levels of government.

LOCAL FUNDING

The balance of project costs, after consideration has been given to grants, must be funded through local resources. A goal for any airport is to generate enough revenue to cover all operating and capital expenditures, if possible. There are several local financing options to consider when funding future development at airports, including airport revenues, issuance of a variety of bond types, leasehold financing, implementing a customer facility charge (CFC), pursuing non-aviation development potential, and collecting money from special events. These strategies could be used to fund the local matching share or complete a project if grant funding cannot be arranged. Below is a brief description of the most common local funding options.

Airport Revenues

An airport's daily operations are conducted through the collection of various rates and charges. These airport revenues are generated specifically by airport operations. There are restrictions on the use of revenues collected by the airport. All receipts, excluding bond proceeds or related grants and interest, are irrevocably pledged to the punctual payment of operating and maintenance expenses, payment of debt service for as long as bonds remain outstanding, or for additions or improvements to airport facilities.

All airports should establish standard base rates for various leases. All lease rates should be set to adjust to a standard index, such as the consumer price index (CPI), to ensure that fair and equitable rates continue to be charged in the future. Many factors will impact what the standard lease rate should be for a particular facility or ground parcel. For example, ground leases for aviation-related facilities should have a different lease rate than for non-aviation leases. When airports own hangars, a separate facility lease rate should be charged. The lease rate for any individual parcel or hangar may vary due to availability of utilities, condition, location, and other factors. Nonetheless, standard lease rates should fall within an acceptable range.

Bonding

Bonding is a common method to finance large capital projects at airports. A bond is an instrument of indebtedness of the bond issuer to the bond holders; a bond is a form of loan or "IOU." While bond terms are negotiable, typically the bond issuer is obligated to pay the bond holder interest at regular intervals and/or repay the principal at a later date.

Leasehold/Third-Party Financing

Leasehold or third-party financing refers to a developer or tenant financing improvements under a long-term ground lease. The advantage of this arrangement is that it relieves the airport of the responsibility of having to raise capital funds for the improvement. As an example, a hangar developer might consider constructing hangars and charging fair market lease rates, while paying the airport for a ground lease. A fuel farm can be undertaken in the same manner, with the developer of the facility paying the airport a fuel flowage fee.

Many airports use third-party funding when the planned improvements will primarily be used by a private business or other organization. Such projects are not ordinarily eligible for federal funding. Projects of this kind typically include hangars, fixed-base operator facilities, fuel storage, exclusive aircraft parking aprons, industrial aviation-use facilities, non-aviation office/commercial/industrial developments, and other similar projects. Private development proposals are considered on a case-by-case basis. Often, airport funds for infrastructure, preliminary site work, and site access are required to facilitate privately developed projects on airport property.

Customer Facility Charge (CFC)

A CFC is the imposition of an additional fee charged to customers for the use of certain facilities. The most common example is when an airport constructs a consolidated rental car facility and imposes a fee for each rental car contract. That fee is then used by the airport to pay down the debt incurred from building the facility. A landing fee is another example where operators of aircraft pay the airport a set amount for using the airfield. Often times, this can be waived with the purchase of aviation fuel, which in turn offers another revenue source for the airport.

Non-Aeronautical Development

In addition to generating revenue from traditional aviation sources, airports with excess land can permit compatible non-aeronautical development. Generally, an airport will extend a long-term lease for land not anticipated to be needed for aviation purposes in the future. The developer then pays the monthly lease rate, constructs, and uses the compatible facility. PVB has approximately 4.5 acres of property currently being used for non-aeronautical purposes consisting of two privately-owned gas wells. The recommended concept plans to maintain these existing well sites as they are separate enough from the airside facilities such that they do not pose a risk to airport operations. It should be noted that any future non-aviation development, such as the proposed area along State Road 80/81, must be reviewed and approved by both the FAA and BOA.

Special Events

Another common revenue-generating option is permitted use of airport property for temporary or single events. A pancake "fly-in" or an airshow are two popular examples of a special event. Airports can also permit portions of their facilities to be used for non-aviation special events, such as car shows or video production of commercials. This type of revenue generation must be approved by the FAA.

Airport Rates and Fees Information

Each year, the BOA completes a survey of public use airports in Wisconsin to gauge the rates, charges and related activities for state airports. Per Wisconsin Administrative Code Trans 55, airports are required to submit responses as a condition of receiving state funding. The survey offers a comparative tool to help airports gauge financial practices and needs. Of the 97 system plan airports, 93 provided a response to the survey. Complete rates and charges survey data can be found on the BOA's website at https://wisconsindot.gov/av-pubs. PVB qualifies as a medium general aviation airport with summary averages and/or details information for specific rates/fees included in **Table 6B.**

TABLE 6B | BOA Rates and Charges Survey Results (2021) – Medium GA Airports

100LL	
Available at 98% of Medium GA Airports	
100LL Price on 12/31/2021	$4.66
Gallons of 100LL Sold	20,000
Jet A	
Available at 70% of Responding Medium GA Airports	
Jet A Price on 12/31/2021	$4.16
Gallons of Jet A Sold	52,000
Landing Fees	
Charged at 11% of Responding Medium GA Airports	
Tie Down Fees	
Charged at 28% of Responding Medium GA Airports	
Daily Tie-Down Rate for a Cessna 172	$6
Monthly Tie-Down Rate for a Cessna 172	$33
Daily Tie-Down Rate for a Beechcraft King Air	$45
Daily Tie-Down Rate for a Hawker 800	$84

TABLE 6B | BOA Rates and Charges Survey Results (2021) – Medium GA Airports (continued)

Rented T-Hangars	
Available at 50% of Responding Medium GA Airports	
Non-Heated, T-Hangar Daily Rate for a Cessna 172	$21
Non-Heated, T-Hangar Monthly for a Cessna 172	$148
Heated, T-Hangar Monthly for a Cessna 172	$180
Community Hangars	
Available at 46% of Responding Medium GA Airports	
Non-Heated, Community Hangar Daily Rate for a Cessna 172	$45
Non-Heated, Community Hangar Monthly Rate for a Cessna 172	$202
Heated, Community Hangar Daily Rate for a Cessna 172	$59
Heated, Community Hangar Monthly Rate for a Cessna 172	$333
Ground Leases	
Available at 100% of Responding Medium GA Airports	
Private Hangar Rate	$0.08 per ft^2
Corporate Hangar Rate	$0.15 per ft^2
Commercial Hangar Rate	$0.20 per ft^2
Financial Self-Sustainability	
76% of Responding Medium GA Airports Required Local Subsidy	
Local Tax Levy Subsidy	$83,000

MASTER PLAN IMPLEMENTATION

To implement the master plan recommendations, it is key to recognize that planning is a continuous process and does not end with approval of this document. The airport should implement measures that allow it to track various demand indicators, such as based aircraft, hangar demand, and operations. The issues that this master plan is based on will remain valid for a number of years. The primary goal is for PVB to best serve the air transportation needs of the region, while achieving economic self-sufficiency. The CIP and phasing program presented will change over time. As effort has been made to identify and prioritize all major capital projects that would require federal or state grant funding. Nonetheless, the airport and BOA should review the five-year CIP on an annual basis.

The value of this study is keeping the issues and objectives at the forefront of the minds of decision-makers. In addition to adjustments in aviation demand, decisions on when to undertake any projects or improvements recommended in this master plan will impact how long this plan remains valid. The format of this plan reduces the need for formal and costly updates by simply adjusting the timing of project implementation. Updates can be done by airport management, thereby improving effectiveness of the master plan. Nonetheless, airports are typically encouraged to update their master plan every 7 to 10 years, or sooner if significant changes occur in the interim.

In summary, the planning process requires the City of Platteville to constantly monitor the progress of the airport. The information obtained from continually monitoring activity will provide the data necessary to determine if the development schedule should be accelerated or decelerated.

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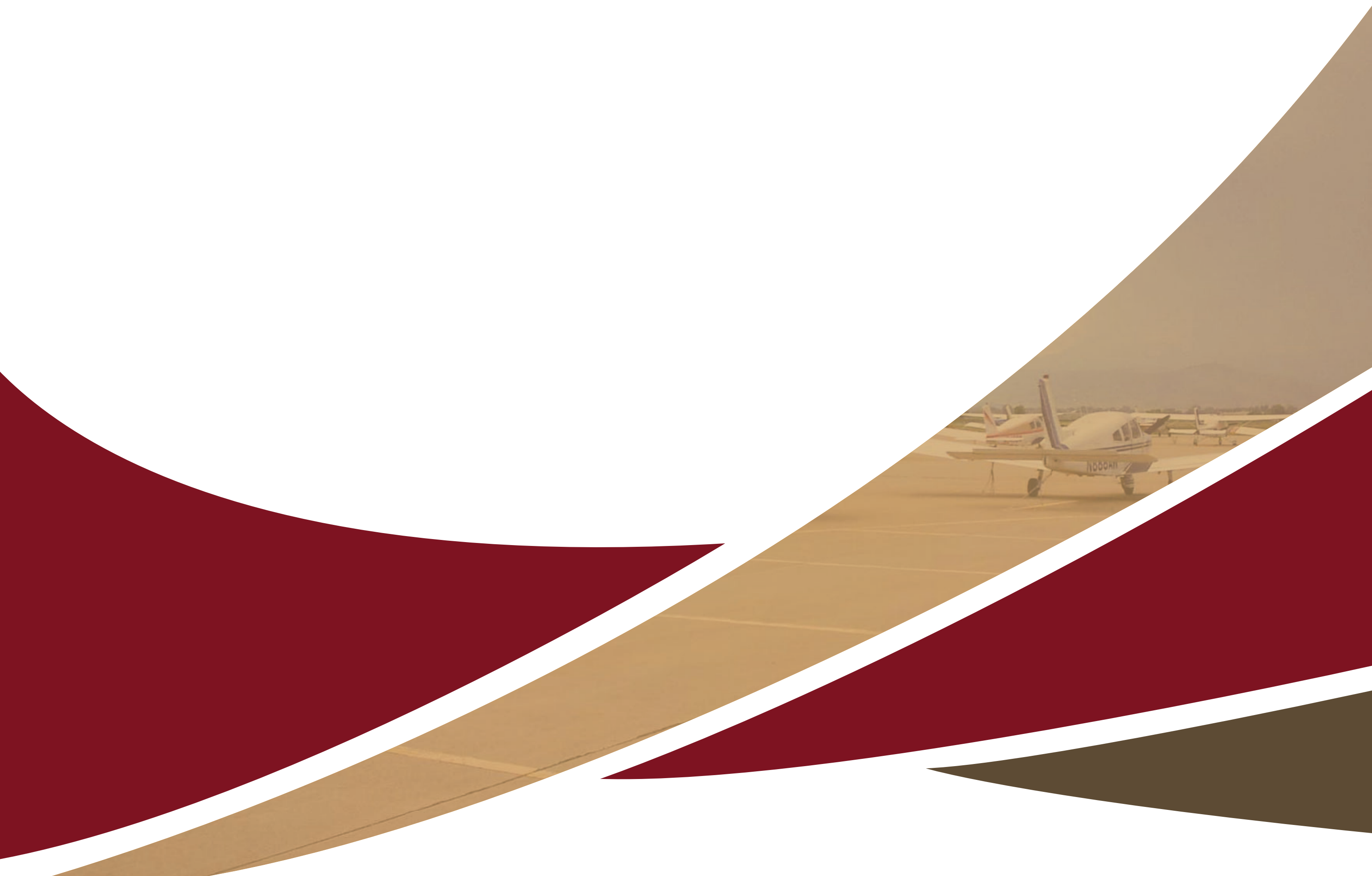
CITY OF PLATTEVILLE

PLATTEVILLE MUNICIPAL AIRPORT

APPENDIX A

Glossary of Terms



GLOSSARY OF TERMS

A

Above Ground Level: The elevation of a point or surface above the ground.

Accelerate-Stop Distance Available (ASDA): See declared distances.

Advisory Circular: External publications issued by the FAA consisting of non-regulatory material providing for the recommendations relative to a policy, guidance and information relative to a specific aviation subject.

Air Carrier: An operator which: (1) performs at least five round trips per week between two or more points and publishes flight schedules which specify the times, days of the week, and places between which such flights are performed; or (2) transports mail by air pursuant to a current contract with the U.S. Postal Service. Certified in accordance with Federal Aviation Regulation (FAR) Parts 121 and 127.

Air Route Traffic Control Center (ARTCC): A facility established to provide air traffic control service to aircraft operating on an IFR flight plan within controlled airspace and principally during the enroute phase of flight.

Air Taxi: An air carrier certificated in accordance with FAR Part 121 and FAR Part 135 and authorized to provide, on demand, public transportation of persons and property by aircraft. Generally operates small aircraft "for hire" for specific trips.

Air Traffic Control: A service operated by an appropriate organization for the purpose of providing for the safe, orderly, and expeditious flow of air traffic.

Air Traffic Control System Command Center: A facility operated by the FAA which is responsible for the central flow control, the central altitude reservation system, the airport reservation position system, and the air traffic service contingency command for the air traffic control system.

Air Traffic Hub: A categorization of commercial service airports or group of commercial service airports in a metropolitan or urban area based upon the proportion of annual national enplanements existing at the airport or airports. The categories are large hub, medium hub, small hub, or non-hub. It forms the basis for the apportionment of entitlement funds.

Air Transport Association Of America: An organization consisting of the principal U.S. airlines that represents the interests of the airline industry on major aviation issues before federal, state, and local government bodies. It promotes air transportation safety by coordinating industry and governmental safety programs and it serves as a focal point for industry efforts to standardize practices and enhance the efficiency of the air transportation system.

Aircraft: A transportation vehicle that is used or intended for use for flight.

Aircraft Approach Category: A grouping of aircraft based on 1.3 times the stall speed in their landing configuration at their maximum certificated landing weight. The categories are as follows:

- **Category A:** Speed less than 91 knots.
- **Category B:** Speed 91 knots or more, but less than 121 knots.
- **Category C:** Speed 121 knots or more, but less than 141 knots.

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- **Category D:** Speed 141 knots or more, but less than 166 knots.
- **Category E:** Speed greater than 166 knots

Aircraft Operation: The landing, takeoff, or touch-and-go procedure by an aircraft on a runway at an airport.

Aircraft Operations Area (AOA): A restricted and secure area on the airport property designed to protect all aspects related to aircraft operations.

Aircraft Owners And Pilots Association: A private organization serving the interests and needs of general aviation pilots and aircraft owners.

Aircraft Rescue And Fire Fighting: A facility located at an airport that provides emergency vehicles, extinguishing agents, and personnel responsible for minimizing the impacts of an aircraft accident or incident.

Airfield: The portion of an airport which contains the facilities necessary for the operation of aircraft.

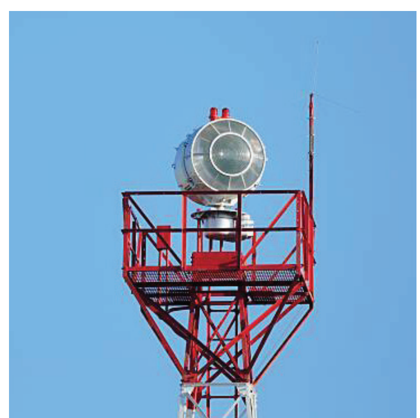
Airline Hub: An airport at which an airline concentrates a significant portion of its activity and which often has a significant amount of connecting traffic.

Airplane Design Group (ADG): A grouping of aircraft based upon wingspan. The groups are as follows:

- **Group I:** Up to but not including 49 feet.
- **Group II:** 49 feet up to but not including 79 feet.
- **Group III:** 79 feet up to but not including 118 feet.
- **Group IV:** 118 feet up to but not including 171 feet.
- **Group V:** 171 feet up to but not including 214 feet.
- **Group VI:** 214 feet or greater.

Airport Authority: A quasi-governmental public organization responsible for setting the policies governing the management and operation of an airport or system of airports under its jurisdiction.

Airport Beacon: A navigational aid located at an airport which displays a rotating light beam to identify whether an airport is lighted.


Airport Beacon

Airport Capital Improvement Plan: The planning program used by the Federal Aviation Administration to identify, prioritize, and distribute funds for airport development and the needs of the National Airspace System to meet specified national goals and objectives.

Airport Elevation: The highest point on the runway system at an airport expressed in feet above mean sea level (MSL).

Airport Improvement Program: A program authorized by the Airport and Airway Improvement Act of 1982 that provides funding for airport planning and development.

Airport Layout Drawing (ALD): The drawing of the airport showing the layout of existing and proposed airport facilities.

Airport Layout Plan (ALP): A scaled drawing of the existing and planned land and facilities necessary for the operation and development of the airport.

Airport Layout Plan Drawing Set: A set of technical drawings depicting the current and future airport conditions. The individual sheets comprising the set can vary with the complexities of the airport, but the FAA-required drawings include the Airport Layout Plan (sometimes referred to as the Airport Layout Drawing (ALD), the Airport Airspace Drawing, and the Inner Portion of the Approach Surface Drawing, On-Airport Land Use Drawing, and Property Map.

Airport Master Plan: A local planning document that serves as a guide for the long-term development of an airport.

Airport Movement Area Safety System: A system that provides automated alerts and warnings of potential runway incursions or other hazardous aircraft movement events.

Airport Obstruction Chart: A scaled drawing depicting the Federal Aviation Regulation (FAR) Part 77 surfaces, a representation of objects that penetrate these surfaces, runway, taxiway, and ramp areas, navigational aids, buildings, roads and other detail in the vicinity of an airport.

Airport Reference Code (ARC): A coding system used to relate airport design criteria to the operational (Aircraft Approach Category) to the physical characteristics (Airplane Design Group) of the airplanes intended to operate at the airport.

Airport Reference Point (ARP): The latitude and longitude of the approximate center of the airport.

Airport Sponsor: The entity that is legally responsible for the management and operation of an airport, including the fulfillment of the requirements of laws and regulations related thereto.

Airport Surface Detection Equipment: A radar system that provides air traffic controllers with a visual representation of the movement of aircraft and other vehicles on the ground on the airfield at an airport.

Airport Surveillance Radar: The primary radar located at an airport or in an air traffic control terminal area that receives a signal at an antenna and transmits the signal to air traffic control display equipment defining the location of aircraft in the air. The signal provides only the azimuth and range of aircraft from the location of the antenna.

Airport Traffic Control Tower (ATCT): A central operations facility in the terminal air traffic control system, consisting of a tower, including an associated instrument flight rule (IFR) room if radar equipped, using air/ground communications and/or radar, visual signaling and other devices to provide safe and expeditious movement of terminal air traffic.

Airside: The portion of an airport that contains the facilities necessary for the operation of aircraft.

Airspace: The volume of space above the surface of the ground that is provided for the operation of aircraft.

Alert Area: See special-use airspace.

Altitude: The vertical distance measured in feet above mean sea level.

Annual Instrument Approach (AIA): An approach to an airport with the intent to land by an aircraft in accordance with an IFR flight plan when visibility is less than three miles and/or when the ceiling is at or below the minimum initial approach altitude.

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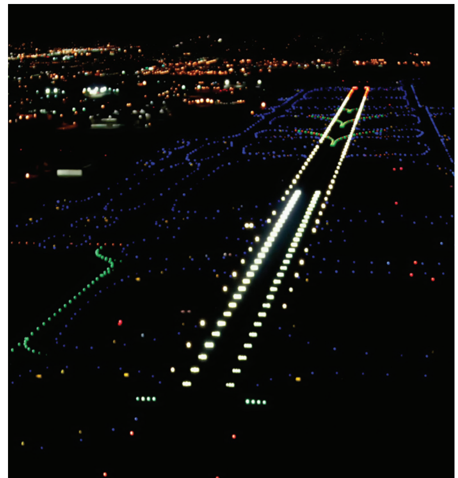
Approach Lighting System (ALS): An airport lighting facility which provides visual guidance to landing aircraft by radiating light beams by which the pilot aligns the aircraft with the extended centerline of the runway on final approach and landing.


Approach Lighting System

Approach Minimums: The altitude below which an aircraft may not descend while on an IFR approach unless the pilot has the runway in sight.

Approach Surface: An imaginary obstruction limiting surface defined in FAR Part 77 which is longitudinally centered on an extended runway centerline and extends outward and upward from the primary surface at each end of a runway at a designated slope and distance based upon the type of available or planned approach by aircraft to a runway.

Apron: A specified portion of the airfield used for passenger, cargo or freight loading and unloading, aircraft parking, and the refueling, maintenance and servicing of aircraft.

Area Navigation: The air navigation procedure that provides the capability to establish and maintain a flight path on an arbitrary course that remains within the coverage area of navigational sources being used.

Automated Terminal Information Service (ATIS): The continuous broadcast of recorded non-control information at towered airports. Information typically includes wind speed, direction, and runway in use.

Automated Surface Observation System (ASOS): A reporting system that provides frequent airport ground surface weather observation data through digitized voice broadcasts and printed reports.

Automatic Weather Observation System (AWOS): Equipment used to automatically record weather conditions (i.e., cloud height, visibility, wind speed and direction, temperature, dew point, etc.)

Automatic Direction Finder (ADF): An aircraft radio navigation system which senses and indicates the direction to a non-directional radio beacon (NDB) ground transmitter.

Avigation Easement: A contractual right or a property interest in land over which a right of unobstructed flight in the airspace is established.

Azimuth: Horizontal direction expressed as the angular distance between true north and the direction of a fixed point (as the observer's heading).

B

Base Leg: A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline. See "traffic pattern."

Based Aircraft: The general aviation aircraft that use a specific airport as a home base.

Bearing: The horizontal direction to or from any point, usually measured clockwise from true north or magnetic north.

RETURN TO AGENDA

Blast Fence: A barrier used to divert or dissipate jet blast or propeller wash.

Blast Pad: A prepared surface adjacent to the end of a runway for the purpose of eliminating the erosion of the ground surface by the wind forces produced by airplanes at the initiation of takeoff operations.

Building Restriction Line (BRL): A line which identifies suitable building area locations on the airport.


Blast Fence

C

Capital Improvement Plan: The planning program used by the Federal Aviation Administration to identify, prioritize, and distribute Airport Improvement Program funds for airport development and the needs of the National Airspace System to meet specified national goals and objectives.

Cargo Service Airport: An airport served by aircraft providing air transportation of property only, including mail, with an annual aggregate landed weight of at least 100,000,000 pounds.

Ceiling: The height above the ground surface to the location of the lowest layer of clouds which is reported as either broken or overcast.

Circling Approach: A maneuver initiated by the pilot to align the aircraft with the runway for landing when flying a predetermined circling instrument approach under IFR.

Class A Airspace: See Controlled Airspace.

Class B Airspace: See Controlled Airspace.

Class C Airspace: See Controlled Airspace.

Class D Airspace: See Controlled Airspace.

Class E Airspace: See Controlled Airspace.

Class G Airspace: See Controlled Airspace.

Clear Zone: See Runway Protection Zone.

Commercial Service Airport: A public airport providing scheduled passenger service that enplanes at least 2,500 annual passengers.

Common Traffic Advisory Frequency (CTAF): A radio frequency identified in the appropriate aeronautical chart which is designated for the purpose of transmitting airport advisory information and procedures while operating to or from an uncontrolled airport.

Compass Locator (LOM): A low power, low/medium frequency radio-beacon installed in conjunction with the instrument landing system at one or two of the marker sites.

Conical Surface: An imaginary obstruction- limiting surface defined in FAR Part 77 that extends from the edge of the horizontal surface outward and upward at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

Controlled Airport: An airport that has an operating airport traffic control tower.

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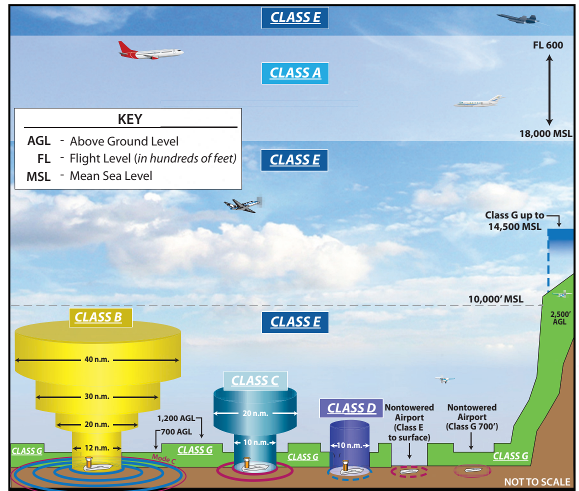
Controlled Airspace: Airspace of defined dimensions within which air traffic control services are provided to instrument flight rules (IFR) and visual flight rules (VFR) flights in accordance with the airspace classification. Controlled airspace in the United States is designated as follows:

CLASS A: Generally, the airspace from 18,000 feet mean sea level (MSL) up to but not including flight level FL600. All persons must operate their aircraft under IFR.

CLASS B: Generally, the airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports. The configuration of Class B airspace is unique to each airport, but typically consists of two or more layers of air space and is designed to contain all published instrument approach procedures to the airport. An air traffic control clearance is required for all aircraft to operate in the area.



Airspace Classifications

CLASS C: Generally, the airspace from the surface to 4,000 feet above the airport elevation (charted as MSL) surrounding those airports that have an operational control tower and radar approach control and are served by a qualifying number of IFR operations or passenger enplanements. Although individually tailored for each airport, Class C airspace typically consists of a surface area with a five nautical mile (nm) radius and an outer area with a 10 nautical mile radius that extends from 1,200 feet to 4,000 feet above the airport elevation. Two-way radio communication is required for all aircraft.

CLASS D: Generally, that airspace from the surface to 2,500 feet above the airport elevation (charted as MSL) surrounding those airports that have an operational control tower. Class D airspace is individually tailored and configured to encompass published instrument approach procedure. Unless otherwise authorized, all persons must establish two-way radio communication.

CLASS E: Generally, controlled airspace that is not classified as Class A, B, C, or D. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Class E airspace encompasses all Victor Airways. Only aircraft following instrument flight rules are required to establish two-way radio communication with air traffic control.

CLASS G: Generally, that airspace not classified as Class A, B, C, D, or E. Class G airspace is uncontrolled for all aircraft. Class G airspace extends from the surface to the overlying Class E airspace.

Controlled Firing Area: See special-use airspace.

Crosswind: A wind that is not parallel to a runway centerline or to the intended flight path of an aircraft.

Crosswind Component: The component of wind that is at a right angle to the runway centerline or the intended flight path of an aircraft.

Crosswind Leg: A flight path at right angles to the landing runway off its upwind end. See "traffic pattern."

D

Decibel: A unit of noise representing a level relative to a reference of a sound pressure 20 micro newtons per square meter.

Decision Height/Decision Altitude: The height above the end of the runway surface at which a decision must be made by a pilot during the ILS or Precision Approach Radar approach to either continue the approach or to execute a missed approach.

Declared Distances: The distances declared available for the airplane's takeoff runway, takeoff distance, accelerate-stop distance, and landing distance requirements. The distances are:

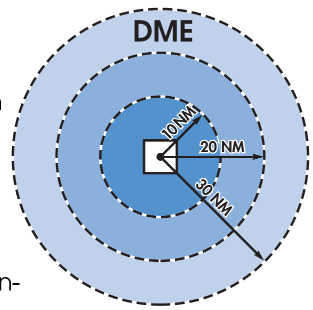
- **Takeoff Run Available (TORA):** The runway length declared available and suitable for the ground run of an airplane taking off.
- **Takeoff Distance Available (TODA):** The TORA plus the length of any remaining runway and/or clear way beyond the far end of the TORA.
- **Accelerate-stop Distance Available (ASDA):** The runway plus stopway length declared available for the acceleration and deceleration of an aircraft aborting a takeoff.
- **Landing Distance Available (LDA):** The runway length declared available and suitable for landing.

Department Of Transportation: The cabinet level federal government organization consisting of modal operating agencies, such as the Federal Aviation Administration, which was established to promote the coordination of federal transportation programs and to act as a focal point for research and development efforts in transportation.

Discretionary Funds: Federal grant funds that may be appropriated to an airport based upon designation by the Secretary of Transportation or Congress to meet a specified national priority such as enhancing capacity, safety, and security, or mitigating noise.

Displaced Threshold: A threshold that is located at a point on the runway other than the designated beginning of the runway.

Distance Measuring Equipment (DME): Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME navigational aid.



DNL: The 24-hour average sound level, in decibels, obtained after the addition of ten decibels to sound levels for the periods between 10 p.m. and 7 a.m. as averaged over a span of one year. It is the FAA standard metric for determining the cumulative exposure of individuals to noise.

Downwind Leg: A flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg. Also see "traffic pattern."

E

Easement: The legal right of one party to use a portion of the total rights in real estate owned by another party. This may include the right of passage over, on, or below the property; certain air rights above the property, including view rights; and the rights to any specified form of development or activity, as well as any other legal rights in the property that may be specified in the easement document.

Elevation: The vertical distance measured in feet above mean sea level.

Enplaned Passengers: The total number of revenue passengers boarding aircraft, including originating, stop-over, and transfer passengers, in scheduled and nonscheduled services.

Enplanement: The boarding of a passenger, cargo, freight, or mail on an aircraft at an airport.

Entitlement: Federal funds for which a commercial service airport may be eligible based upon its annual passenger enplanements.

Environmental Assessment (EA): An environmental analysis performed pursuant to the National Environmental Policy Act to determine whether an action would significantly affect the environment and thus require a more detailed environmental impact statement.

Environmental Audit: An assessment of the current status of a party's compliance with applicable environmental requirements of a party's environmental compliance policies, practices, and controls.

Environmental Impact Statement (EIS): A document required of federal agencies by the National Environmental Policy Act for major projects or legislative proposals affecting the environment. It is a tool for decision-making describing the positive and negative effects of a proposed action and citing alternative actions.

Essential Air Service: A federal program which guarantees air carrier service to selected small cities by providing subsidies as needed to prevent these cities from such service.

F

Federal Aviation Regulations: The general and permanent rules established by the executive departments and agencies of the Federal Government for aviation, which are published in the Federal Register. These are the aviation subset of the Code of Federal Regulations.

Federal Inspection Services: The provision of customs and immigration services including passport inspection, inspection of baggage, the collection of duties on certain imported items, and the inspections for agricultural products, illegal drugs, or other restricted items.

Final Approach: A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway. See "traffic pattern."

Final Approach and Takeoff Area (FATO): A defined area over which the final phase of the helicopter approach to a hover, or a landing is completed and from which the takeoff is initiated.

Final Approach Fix: The designated point at which the final approach segment for an aircraft landing on a runway begins for a non-precision approach.

Finding Of No Significant Impact (FONSI): A public document prepared by a Federal agency that presents the rationale why a proposed action will not have a significant effect on the environment and for which an environmental impact statement will not be prepared.

Fixed Base Operator (FBO): A provider of services to users of an airport. Such services include, but are not limited to, hangaring, fueling, flight training, repair, and maintenance.

Flight Level: A measure of altitude used by aircraft flying above 18,000 feet. Flight levels are indicated by three digits representing the pressure altitude in hundreds of feet. An airplane flying at flight level 360 is flying at a pressure altitude of 36,000 feet. This is expressed as FL 360.

Flight Service Station (FSS): An operations facility in the national flight advisory system which utilizes data interchange facilities for the collection and dissemination of Notices to Airmen, weather, and administrative data and which provides preflight and in-flight advisory services to pilots through air and ground based communication facilities.

Frangible Navaid: A navigational aid which retains its structural integrity and stiffness up to a designated maximum load, but on impact from a greater load, breaks, distorts, or yields in such a manner as to present the minimum hazard to aircraft.

G

General Aviation: That portion of civil aviation which encompasses all facets of aviation except air carriers holding a certificate of convenience and necessity, and large aircraft commercial operators.

General Aviation Airport: An airport that provides air service to only general aviation.

Glideslope (GS): Provides vertical guidance for aircraft during approach and landing. The glideslope consists of the following:

- Electronic components emitting signals which provide vertical guidance by reference to airborne instruments during instrument approaches such as ILS; or
- Visual ground aids, such as PAPI, which provide vertical guidance for VFR approach or for the visual portion of an instrument approach and landing.

Global Positioning System (GPS): A system of satellites used as reference points to enable navigators equipped with GPS receivers to determine their latitude, longitude, and altitude.

Ground Access: The transportation system on and around the airport that provides access to and from the airport by ground transportation vehicles for passengers, employees, cargo, freight, and airport services.

Ground Based Augmentation System (GBAS): A program that augments the existing GPS system by providing corrections to aircraft in the vicinity of an airport in order to improve the accuracy of these aircrafts' GPS navigational position

H

Helipad: A designated area for the takeoff, landing, and parking of helicopters.

High Intensity Runway Lights (HIRL): The highest classification in terms of intensity or brightness for lights designated for use in delineating the sides of a runway.

High-speed Exit Taxiway: An acute-angled exit taxiway forming a 30 degree angle with the runway centerline, designed to allow an aircraft to exit a runway without having to decelerate to typical taxi speed.

Horizontal Surface: An imaginary obstruction-limiting surface defined in FAR Part 77 that is specified as a portion of a horizontal plane surrounding a runway located 150 feet above the established airport elevation. The specific horizontal dimensions of this surface are a function of the types of approaches existing or planned for the runway.

Hot Spot: A location on an airport movement area with a history of potential risk of collision or runway incursion, and where heightened attention by pilots and drivers is necessary.

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I

Initial Approach Fix: The designated point at which the initial approach segment begins for an instrument approach to a runway.

Instrument Approach Procedure: A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing, or to a point from which a landing may be made visually.

Instrument Flight Rules (IFR): Procedures for the conduct of flight in weather conditions below Visual Flight Rules weather minimums. The term IFR is often also used to define weather conditions **and the type of flight plan under which an aircraft is operating.**

Instrument Landing System (ILS): A precision instrument approach system which normally consists of the following electronic components and visual aids:

1. Localizer	3. Outer Marker	5. Approach Lights
2. Glide Slope	4. Middle Marker	

Instrument Meteorological Conditions: Meteorological conditions expressed in terms of specific visibility and ceiling conditions that are less than the minimums specified for visual meteorological conditions.

Itinerant Operations: Operations by aircraft that are arriving from outside the traffic pattern or departing the airport traffic pattern.

K

Knots: A unit of speed length used in navigation that is equivalent to the number of nautical miles traveled in one hour.

L

Landside: The portion of an airport that provides the facilities necessary for the processing of passengers, cargo, freight, and ground transportation vehicles.

Landing Distance Available (LDA): See declared distances.

Large Airplane: An airplane that has a maximum certified takeoff weight in excess of 12,500 pounds.

Local Operations: Aircraft operations performed by aircraft that operate in the local traffic pattern or within sight of the airport, that are known to be departing for or arriving from flights in local practice areas within a prescribed distance from the airport, or that execute simulated instrument approaches at the airport. Typically, this includes touch and-go training operations.

Localizer: The component of an ILS which provides course guidance to the runway.

Localizer Type Directional Aid (LDA): A facility of comparable utility and accuracy to a localizer but is not part of a complete ILS and is not aligned with the runway.


Localizer

Low Intensity Runway Lights: The lowest classification in terms of intensity or brightness for lights designated for use in delineating the sides of a runway.

M

Medium Intensity Runway Lights: The middle classification in terms of intensity or brightness for lights designated for use in delineating the sides of a runway.

Military Operations: Aircraft operations that are performed in military aircraft.

Military Operations Area (MOA): See special-use airspace

Military Training Route: An air route depicted on aeronautical charts for the conduct of military flight training at speeds above 250 knots.

Missed Approach Course (MAC): The flight route to be followed if, after an instrument approach, a landing is not affected, and occurring normally:

- When the aircraft has descended to the decision height and has not established visual contact; or
- When directed by air traffic control to pull up or to go around again.

Movement Area: The runways, taxiways, and other areas of an airport which are utilized for taxiing/hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports with a tower, air traffic control clearance is required for entry onto the movement area.

N

National Airspace System (NAS): The network of air traffic control facilities, air traffic control areas, and navigational facilities through the U.S.

National Plan Of Integrated Airport Systems (NPIAS): The national airport system plan developed by the Secretary of Transportation on a biannual basis for the development of public use airports to meet national air transportation needs.

National Transportation Safety Board: A federal government organization established to investigate and determine the probable cause of transportation accidents, to recommend equipment and procedures to enhance transportation safety, and to review on appeal the suspension or revocation of any certificates or licenses issued by the Secretary of Transportation.

Nautical Mile: A unit of length used in navigation which is equivalent to the distance spanned by one minute of arc in latitude, that is, 1,852 meters or 6,076 feet. It is equivalent to approximately 1.15 statute mile.

Navaid: A term used to describe any electrical or visual air navigational aids, lights, signs, and associated supporting equipment (i.e., PAPI, VASI, ILS, etc.)

Navigational Aid: A facility used as, available for use as, or designed for use as an aid to air navigation.

Noise Contour: A continuous line on a map of the airport vicinity connecting all points of the same noise exposure level.

Non-directional Beacon (NDB): A beacon transmitting non-directional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine their bearing to and from the radio beacon and home on, or track to, the station. When the radio beacon is installed in conjunction with the Instrument Landing System marker, it is normally called a Compass Locator.


NDB

Non-precision Approach Procedure: A standard instrument approach procedure in which no electronic glide slope is provided, such as VOR, TACAN, NDB, or LOC.

Notice To Air Missions (NOTAM): A notice containing information concerning the establishment, condition, or change in any component of or hazard in the National Airspace System, the timely knowledge of which is considered essential to personnel concerned with flight operations.

O

Object Free Area (OFA): An area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

Obstacle Free Zone (OFZ): The airspace below 150 feet above the established airport elevation and along the runway and extended runway centerline that is required to be kept clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance for aircraft landing or taking off from the runway, and for missed approaches.

Operation: The take-off, landing, or touch-and-go procedure by an aircraft on a runway at an airport.

Outer Marker (OM): An ILS navigation facility in the terminal area navigation system located four to seven miles from the runway edge on the extended centerline, indicating to the pilot that he/she is passing over the facility and can begin final approach.

P

Pilot-controlled Lighting: Runway lighting systems at an airport that are controlled by activating the microphone of a pilot on a specified radio frequency.

Precision Approach: A standard instrument approach procedure which provides runway alignment and glide slope (descent) information. It is categorized as follows:

- CATEGORY I (CAT I): A precision approach which provides for approaches with a decision height of not less than 200 feet and visibility not less than 1/2 mile or Runway Visual Range (RVR) 2400 (RVR 1800) with operative touchdown zone and runway centerline lights.
- CATEGORY II (CAT II): A precision approach which provides for approaches with a decision height of not less than 100 feet and visibility not less than 1200 feet RVR.
- CATEGORY III (CAT III): A precision approach which provides for approaches with minimal less than Category II.


Precision Approach Path Indicator

Precision Approach Path Indicator (PAPI): A lighting system providing visual approach slope guidance to aircraft during a landing approach. A PAPI normally consists of four light units but an abbreviated system of two lights is acceptable for some categories of aircraft.

Precision Approach Radar: A radar facility in the terminal air traffic control system used to detect and display with a high degree of accuracy the direction, range, and elevation of an aircraft on the final approach to a runway.

Precision Object Free Zone (POFZ): An area centered on the extended runway centerline, beginning at the runway threshold and extending behind the runway threshold that is 200 feet long by 800 feet wide. The POFZ is a clearing standard which requires the POFZ to be kept clear of above ground objects protruding above the runway safety area edge elevation (except for frangible NAVAIDS). The POFA is only in effect when the approach includes vertical guidance, the reported ceiling is below 250 feet, and an aircraft is on final approach within two miles of the runway threshold.

Primary Airport: A commercial service airport that enplanes at least 10,000 annual passengers.

Primary Surface: An imaginary obstruction limiting surface defined in FAR Part 77 that is specified as a rectangular surface longitudinally centered about a runway. The specific dimensions of this surface are a function of the types of approaches existing or planned for the runway.

Prohibited Area: See special-use airspace.

PVC: Poor visibility and ceiling. Used in determining Annual Service Volume. PVC conditions exist when the cloud ceiling is less than 500 feet and visibility is less than one mile.

R

Radial: A navigational signal generated by a Very High Frequency Omni-directional Range or VORTAC station that is measured as an azimuth from the station.

Regression Analysis: A statistical technique that seeks to identify and quantify the relationships between factors associated with a forecast.

Remote Communications Outlet (RCO): An unstaffed transmitter receiver/facility remotely controlled by air traffic personnel. RCOs serve flight service stations (FSSs). RCOs were established to provide ground-to-ground communications between air traffic control specialists and pilots at satellite airports for delivering enroute clearances, issuing departure authorizations, and acknowledging instrument flight rules cancellations or departure/landing times.

Remote Transmitter/receiver (RTR): See remote communications outlet. RTRs serve ARTCCs.

Reliever Airport: An airport to serve general aviation aircraft which might otherwise use a congested air-carrier served airport.

Restricted Area: See special-use airspace.

RNAV: Area navigation - airborne equipment which permits flights over determined tracks within prescribed accuracy tolerances without the need to overfly ground-based navigation facilities. Used enroute and for approaches to an airport.

Runway: A defined rectangular area on an airport prepared for aircraft landing and takeoff. Runways are normally numbered in relation to their magnetic direction, rounded off to the nearest 10 degrees. For example, a runway with a magnetic heading of 180 would be designated Runway 18. The runway heading on the opposite end of the runway is 180 degrees from that runway end. For example, the opposite runway heading for Runway 18 would be Runway 36 (magnetic heading of 360). Aircraft can takeoff or land from either end of a runway, depending upon wind direction.

Runway Alignment Indicator Light (RAIL): A series of high intensity sequentially flashing lights installed on the extended centerline of the runway usually in conjunction with an approach lighting system.

Runway Design Code: A code signifying the FAA design standards to which the runway is to be built.

Runway End Identification Lighting (REIL): Two synchronized flashing lights, one on each side of the runway threshold, which provide rapid and positive identification of the approach end of a particular runway.


REIL

Runway Gradient: The average slope, measured in percent, between the two ends of a runway.

Runway Protection Zone (RPZ): An area off the runway end to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape. Its dimensions are determined by the aircraft approach speed and runway approach type and minimal.

Runway Reference Code: A code signifying the current operational capabilities of a runway and taxiway.

Runway Safety Area (RSA): A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

Runway Visibility Zone (RVZ): An area on the airport to be kept clear of permanent objects so that there is an unobstructed line of sight from any point five feet above the runway centerline to any point five feet above an intersecting runway centerline.

Runway Visual Range (RVR): An instrumentally derived value, in feet, representing the horizontal distance a pilot can see down the runway from the runway end.

S

Scope: The document that identifies and defines the tasks, emphasis, and level of effort associated with a project or study.

Segmented Circle: A system of visual indicators designed to provide traffic pattern information at airports without operating control towers, often co-located with a wind cone.

Shoulder: An area adjacent to the edge of paved runways, taxiways, or aprons providing a transition between the pavement and the adjacent surface; support for aircraft running off the pavement; enhanced drainage; and blast protection. The shoulder Does Not Necessarily Need To Be Paved.

Slant-range Distance: The straight line distance between an aircraft and a point on the ground.

Small Aircraft: An aircraft that has a maximum certified takeoff weight of up to 12,500 pounds.

Special-use Airspace: Airspace of defined dimensions identified by a surface area wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities. Special-use airspace classifications include:

- **ALERT AREA:** Airspace which may contain a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft.
- **CONTROLLED FIRING AREA:** Airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons or property on the ground.
- **MILITARY OPERATIONS AREA (MOA):** Designated airspace with defined vertical and lateral dimensions established outside Class A airspace to separate/segregate certain military activities from instrument flight rule (IFR) traffic and to identify for visual flight rule (VFR) traffic where these activities are conducted.
- **PROHIBITED AREA:** Designated airspace within which the flight of aircraft is prohibited.
- **RESTRICTED AREA:** Airspace designated under Federal Aviation Regulation (FAR) 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use. When not in use by the using agency, IFR/VFR operations can be authorized by the controlling air traffic control facility.
- **WARNING AREA:** Airspace which may contain hazards to nonparticipating aircraft.

Standard Instrument Departure (SID): A preplanned coded air traffic control IFR departure routing, preprinted for pilot use in graphic and textual form only.

Standard Instrument Departure Procedures: A published standard flight procedure to be utilized following takeoff to provide a transition between the airport and the terminal area or enroute airspace.

Standard Terminal Arrival Route (STAR): A preplanned coded air traffic control IFR arrival routing, preprinted for pilot use in graphic and textual or textual form only.

Stop-and-go: A procedure wherein an aircraft will land, make a complete stop on the runway, and then commence a takeoff from that point. A stop-and-go is recorded as two operations: one operation for the landing and one operation for the takeoff.

Stopway: An area beyond the end of a takeoff runway that is designed to support an aircraft during an aborted takeoff without causing structural damage to the aircraft. It is not to be used for takeoff, landing, or taxiing by aircraft.

Straight-in Landing/approach: A landing made on a runway aligned within 30 degrees of the final approach course following completion of an instrument approach.

RETURN TO AGENDA

T

Tactical Air Navigation (TACAN): An ultrahigh frequency electronic air navigation system which provides suitably equipped aircraft a continuous indication of bearing and distance to the TACAN station.

Takeoff Runway Available (TORA): See declared distances.

Takeoff Distance Available (TODA): See declared distances.

Taxilane: A taxiway designed for low speed and precise taxiing. Taxilanes are usually, but not always, located outside the movement area and provide access to from taxiways to aircraft parking positions and other terminal areas.

Taxiway: A defined path established for the taxiing of aircraft from one part of an airport to another.

Taxiway Design Group: A classification of airplanes based on outer to outer Main Gear Width (MGW) and Cockpit to Main Gear (CMG) distance.

Taxiway Safety Area (TSA): A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway.

Terminal Instrument Procedures: Published flight procedures for conducting instrument approaches to runways under instrument meteorological conditions.

Terminal Radar Approach Control: An element of the air traffic control system responsible for monitoring the enroute and terminal segment of air traffic in the airspace surrounding airports with moderate to high levels of air traffic.

Tetrahedron: A device used as a landing direction indicator. The small end of the tetrahedron points in the direction of landing.

Tetrahedron

Threshold: The beginning of that portion of the runway available for landing. In some instances, the threshold may be displaced.

Touch-and-go: An operation by an aircraft that lands and departs on a runway without stopping or exiting the runway. A touch-and-go is recorded as two operations: one operation for the landing and one operation for the takeoff.

Touchdown: The point at which a landing aircraft makes contact with the runway surface.

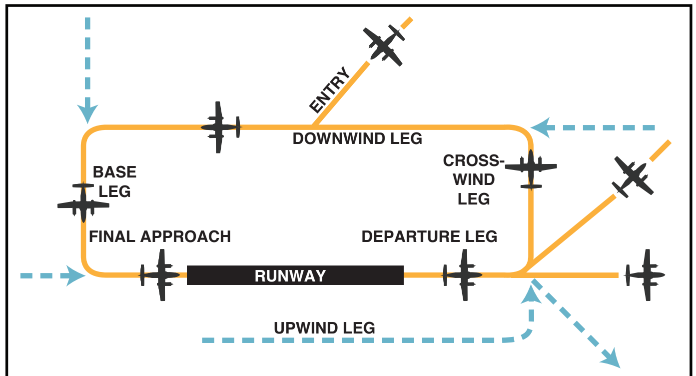
Touchdown and Lift-off Area (TLOF): A load bearing, generally paved area, normally centered in the FATO, on which a helicopter lands or takes off.

Touchdown Zone (TDZ): The first 3,000 feet of the runway beginning at the threshold.

Touchdown Zone Elevation (TDZE): The highest elevation in the touchdown zone.

Touchdown Zone Lighting: Two rows of transverse light bars located symmetrically about the runway centerline normally at 100-foot intervals. The basic system extends 3,000 feet along the runway.

Traffic Pattern: The traffic flow that is prescribed for aircraft landing at or taking off from an airport. The components of a typical traffic pattern are the upwind leg, crosswind leg, downwind leg, base leg, and final approach.



Traffic Pattern

U

Uncontrolled Airport: An airport without an airport traffic control tower at which the control of Visual Flight Rules traffic is not exercised.

Uncontrolled Airspace: Airspace within which aircraft are not subject to air traffic control.

Universal Communication (UNICOM): A non-government communication facility which may provide airport information at certain airports. Locations and frequencies of UNICOMs are shown on aeronautical charts and publications.

Upwind Leg: A flight path parallel to the landing runway in the direction of landing. See "traffic pattern."

V

Vector: A heading issued to an aircraft to provide navigational guidance by radar.

Very High Frequency Omni-directional Range (VOR): A ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the national airspace system. The VOR periodically identifies itself by Morse Code and may have an additional voice identification feature.

Very High Frequency Omni-directional Range/Tactical Air Navigation (VORTAC): A navigation aid providing VOR azimuth, TACAN azimuth, and TACAN distance-measuring equipment (DME) at one site.

Victor Airway: A system of established routes that run along specified VOR radials, from one VOR station to another.

Visual Approach: An approach wherein an aircraft on an IFR flight plan, operating in VFR conditions under the control of an air traffic control facility and having an air traffic control authorization, may proceed to the airport of destination in VFR conditions.

Visual Approach Slope Indicator (VASI): An airport lighting facility providing vertical visual approach slope guidance to aircraft during approach to landing. The VASI is now obsolete and is being replaced with the PAPI.

Visual Flight Rules (VFR): Rules that govern the procedures for conducting flight under visual conditions. The term VFR is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.

Visual Meteorological Conditions: Meteorological conditions expressed in terms of specific visibility and ceiling conditions which are equal to or greater than the threshold values for instrument meteorological conditions.

Visual Runway: A runway without an existing or planned instrument approach.

VOR: See "Very High Frequency Omni-directional Range."

VORTAC: See "Very High Frequency Omni-directional Range/Tactical Air Navigation."

W

Warning Area: See special-use airspace.

Wide Area Augmentation System: An enhancement of the Global Positioning System that includes integrity broadcasts, differential corrections, and additional ranging signals for the purpose of providing the accuracy, integrity, availability, and continuity required to support all phases of flight.

Windsock/Windcone: A visual aid that indicates the prevailing wind direction and intensity at a particular location.


Windsock/Windcone

RETURN TO AGENDA

Abbreviations

AC: advisory circular

ACIP: airport capital improvement program

ADF: automatic direction finder

ADG: airplane design group

AFSS: automated flight service station

AGL: above ground level

AIA: annual instrument approach

AIP: Airport Improvement Program

AIR-21: Wendell H. Ford Aviation Investment and Reform Act for the 21st Century

ALS: approach lighting system

ALSF-1: standard 2,400-foot high intensity approach lighting system with sequenced flashers (CAT I configuration)

ALSF-2: standard 2,400-foot high intensity approach lighting system with sequenced flashers (CAT II configuration)

AOA: Aircraft Operation Area

APRC: approach reference code

APV: instrument approach procedure with vertical guidance

ARC: airport reference code

ARFF: aircraft rescue and fire fighting

ARP: airport reference point

ARTCC: air route traffic control center

ASDA: accelerate-stop distance available

ASR: airport surveillance radar

ASOS: automated surface observation station

ASV: annual service volume

ATC: airport traffic control

ATCT: airport traffic control tower

ATIS: automated terminal information service

AVGAS: aviation gasoline - typically 100 low lead (100LL)

AWOS: automatic weather observation station

BRL: building restriction line

CFR: Code of Federal Regulation

CIP: capital improvement program

DME: distance measuring equipment

DNL: day-night noise level

DPRC: departure reference code

DWL: runway weight bearing capacity of aircraft with dual-wheel type landing gear

DTWL: runway weight bearing capacity of aircraft with dual-tandem type landing gear

FAA: Federal Aviation Administration

FAR: Federal Aviation Regulation

FBO: fixed base operator

FY: fiscal year

GA: general aviation

GPS: global positioning system

GS: glide slope

HIRL: high intensity runway edge lighting

IFR: instrument flight rules (FAR Part 91)

ILS: instrument landing system

IM: inner marker

LDA: localizer type directional aid

LDA: landing distance available

LIRL: low intensity runway edge lighting

LMM: compass locator at middle marker

LNAV: lateral navigation

LOC: localizer

LOM: compass locator at outer marker

LP: localizer performance

LPV: localizer performance with vertical guidance

MALS: medium intensity approach lighting system

MALSR: MALS with runway alignment indicator lights

MALSF: MALS with sequenced flashers

MIRL: medium intensity runway edge lighting

MITL: medium intensity taxiway edge lighting

MLS: microwave landing system

MM: middle marker

MOA: military operations area

MSL: mean sea level

MTOW: maximum takeoff weight

NAVAID: navigational aid

NDB: non-directional radio beacon

NEPA: National Environmental Policy Act

NM: nautical mile (6,076.1 feet)

NPDES: National Pollutant Discharge Elimination System

NPIAS: National Plan of Integrated Airport Systems

NPRM: notice of proposed rule making

ODALS: omni-directional approach lighting system

OFA: object free area

OFZ: obstacle free zone

OM: outer marker

PAPI: precision approach path indicator

PFC: porous friction course

PFC: passenger facility charge

PCI: pavement condition index

PCL: pilot-controlled lighting

PIW: public information workshop

POFZ: precision object free zone

PVC: poor visibility and ceiling

RCO: remote communications outlet

RDC: runway design code

REIL: runway end identification lighting

RNAV: area navigation

RPZ: runway protection zone

RSA: runway safety area

RTR: remote transmitter/receiver

RVR: runway visibility range

RVZ: runway visibility zone

SALS: short approach lighting system

SASP: state aviation system plan

SEL: sound exposure level

SID: standard instrument departure

SM: statute mile (5,280 feet)

SRE: snow removal equipment

SSALF: simplified short approach lighting system with runway alignment indicator lights

STAR: standard terminal arrival route

SWL: runway weight bearing capacity for aircraft with single-wheel tandem type landing gear

TACAN: tactical air navigational aid

TAF: Federal Aviation Administration (FAA) Terminal Area Forecast

TDG: taxiway design group

TLOF: Touchdown and lift-off

TDZ: touchdown zone

TDZE: touchdown zone elevation

TODA: takeoff distance available

TORA: takeoff runway available

TRACON: terminal radar approach control

VASI: visual approach slope indicator

VFR: visual flight rules (FAR Part 91)

VHF: very high frequency

VOR: very high frequency omni-directional range

VORTAC: very high frequency omni-directional range/tactical air navigation

WAAS: wide area augmentation system

RETURN TO AGENDA

CITY OF PLATTEVILLE

PLATTEVILLE MUNICIPAL AIRPORT

APPENDIX B

FAA Forecast Approval Letter

RETURN TO AGENDA

U.S. Department
of Transportation
**Federal Aviation
Administration**

Chicago Airports District Office
2300 E. Devon Avenue
Des Plaines, Illinois 60018

August 24, 2020

Ms. Alaine Olthafer-Lange
Airport Manager
5157 Hwy 80 South
Platteville, WI 53818

Platteville Municipal Airport (PVB)
Platteville, WI
Approval of Forecast

Dear Ms. Olthafer-Lange:

The Federal Aviation Administration (FAA) is in receipt of the master plan forecast chapter for Platteville Municipal Airport, dated February 25, 2020.

This aviation forecast was scoped and prepared prior to the effects of the Coronavirus Disease 2019 (COVID-19) outbreak. It is uncertain if there are, or will be, impacts to this forecast. For this reason, the FAA approval of the information provided in this forecast document is limited to the reasonability of the methodologies used and analysis completed. This is not an assessment of the forecasted number of operations or enplanements. FAA approval of the forecast does not provide justification to begin construction of airport development. Further documentation of actual activity levels reaching the forecasted activity levels will be needed prior to FAA participation in funding for those types of projects.

Given the above, the FAA approves, for planning purposes only, the forecast provided in the following two tables.

FAA also approves A-II for the existing and B-II for the future critical aircraft for the airport and primary Runway 15/33. The wind coverage on Runway 7/25 is less than 95% at 13 knots, so provided that subsequent chapters are able to document 500 regular use operations, the critical aircraft for this runway is also A-II existing and B-II future.

Comparison of Airport Planning and FAA TAF Forecasts

AIRPORT NAME/LOCATION ID: **Platteville Municipal Airport/PVB**
Date: **4/30/2020**

	Year	Airport Forecast	FAA TAF	AF/TAF (% Difference)
Passenger Enplanements				
Base yr.	2018	0	0	#DIV/0!
Base yr. + 5yrs.	2024	0	0	#DIV/0!
Base yr. + 10yrs.	2029	0	0	#DIV/0!
Base yr. + 15yrs.	2039	0	0	#DIV/0!
Commercial Operations				
Base yr.	2018	0	0	#DIV/0!
Base yr. + 5yrs.	2024	0	0	#DIV/0!
Base yr. + 10yrs.	2029	0	0	#DIV/0!
Base yr. + 15yrs.	2039	0	0	#DIV/0!
Total Operations				
Base yr.	2018	10,401	20,550	49.1%
Base yr. + 5yrs.	2024	11,850	20,550	39.3%
Base yr. + 10yrs.	2029	12,750	20,550	33.9%
Base yr. + 15yrs.	2039	15,750	20,550	18.4%
Based Aircraft				
Base yr.	2018	21	28	20.0%
Base yr. + 5yrs.	2024	24	28	10.5%
Base yr. + 10yrs.	2029	26	28	5.0%
Base yr. + 15yrs.	2039	32	28	8.7%

Note: TAF data is on a U.S. government fiscal year basis (October through September).

RETURN TO AGENDA

Summary of Documention for Airport Planning Forecast

AIRPORT NAME/LOCATION ID: Platteville Municipal Airport/PVB
Date: 4/30/2020

Forecast Levels and Growth Rates

Base year: 2018

	2018	2019	2024	2029	2034	Average Annual Compound Growth Rates: Base Yr. to +1	Base Yr. to +5	Base Yr. to +10	Base Yr. to +15
Operations									
Itinerant									
Air carrier	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Commuter/air taxi	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total Air Taxi Operations	**0**	**0**	**0**	**0**	**0**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
General aviation	5,406	5,552	6,340	6,850	7,608	2.7%	3.2%	2.4%	2.3%
Military	50	50	50	50	50	0.0%	0.0%	0.0%	0.0%
Local									
General aviation	4,945	5,027	5,460	5,850	6,512	1.7%	2.0%	1.7%	1.9%
Military	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Sub-total Operations	10,401	10,629	11,850	12,750	14,170	2.2%	2.6%	2.1%	2.1%
TOTAL OPERATIONS	**10,401**	**10,629**	**11,850**	**12,750**	**14,170**	**2.2%**	**2.6%**	**2.1%**	**2.1%**
Design Hour Operations	5	5	6	6	7	0.0%	3.7%	1.8%	2.3%
Based Aircraft									
Single Engine (Nonjet)	16	16	18	18	20	0.0%	2.4%	1.2%	1.5%
Multi Engine (Nonjet)	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Jet Engine	4	4	5	6	7	0.0%	4.6%	4.1%	3.8%
Helicopter	0	0	0	1	1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Other	1	1	1	1	1	0.0%	0.0%	0.0%	0.0%
TOTAL	**21**	**21**	**24**	**26**	**29**	**0.0%**	**2.7%**	**2.2%**	**2.2%**

Operational Factors

	2018	2019	2024	2029	2034
Average aircraft size (seats)					
Air carrier	0.0	0.0	0.0	0.0	0.0
Commuter	0.0	0.0	0.0	0.0	0.0
Average enplaning load factor					
Air carrier	0.0%	0.0%	0.0%	0.0%	0.0%
Commuter	0.0%	0.0%	0.0%	0.0%	0.0%
Operations per based aircraft*	**495**	**506**	**494**	**490**	**489**

Note: Show base plus one year if forecast was done.
If planning effort did not include all forecast years shown interpolate years as needed, using average annual compound growth rates.

The FAA concurs with the use of the forecast contained in the above referenced forecast summary for the remainder of your current master planning efforts only.

If you have any questions, I can be reached at 847-294-8253 or at sandy.lyman@faa.gov,

Sincerely,

Sandra A. Lyman
Community Planner
Chicago Airports District Office

cc: Josh Holbrook, Wisconsin Bureau of Aeronautics

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Coffman Associates Airport Consultants

www.coffmanassociates.com

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RETURN TO AGENDA

CITY OF PLATTEVILLE AIRPORT COMMISSION

FINANCIAL REPORT

MARCH 31, 2023

RETURN TO AGENDA

CITY OF PLATTEVILLE

BALANCE SHEET

MARCH 31, 2023

FUND 200 - AIRPORT FUND

		BEGINNING BALANCE	CURRENT ACTIVITY	YTD ACTIVITY	ENDING BALANCE
	ASSETS				
200-10001-000-000	ALLOCATED CASH	.00	.00	.00	.00
200-10002-000-000	TREASURER'S CASH	346,348.02	82,258.15	(256,957.84)	89,390.18
200-10003-000-000	AIRPORT CASH - RESTRICTED BAL	38,234.85	.00	.00	38,234.85
200-11110-000-000	AIRPORT INVESTMENTS	8,911.44	547.48	301,304.79	310,216.23
200-13911-000-000	ACCOUNTS RECEIVABLE MISC.	25,516.08	(11,030.54)	(25,516.08)	.00
200-16120-000-000	AIRPORT FUEL INVENTORY	48,101.71	.00	(48,101.71)	.00
200-17238-000-000	AIRPORT LOAN RECEIVABLE	.00	.00	.00	.00
	TOTAL ASSETS	467,112.10	71,775.09	(29,270.84)	437,841.26
	LIABILITIES AND EQUITY				
	LIABILITIES				
200-21211-000-000	VOUCHERS PAYABLE	(29,628.06)	.00	29,628.06	.00
200-21220-000-000	WAGES PAYABLE CLEARING	.00	.00	.00	.00
200-21313-000-000	6.20% SOC. SEC. EES	.00	.00	.00	.00
200-21314-000-000	1.45% SOC. SEC. EES	.00	.00	.00	.00
200-21315-000-000	6.20% SOC. SEC. ERS	.00	.00	.00	.00
200-21316-000-000	1.45% SOC. SEC. ERS	.00	.00	.00	.00
200-21700-000-000	1.45% SOC. SEC. ERS	.00	.00	.00	.00
200-23160-000-000	PREPAYMENTS	.00	.00	.00	.00
200-26000-000-000	DEFERRED (PREPAID) REVENU	.00	.00	.00	.00
200-27015-000-000	ADVANCE FROM GENERAL FUND	.00	.00	.00	.00
200-27238-000-000	AIRPORT SHORT-TERM LOAN	.00	.00	.00	.00
	TOTAL LIABILITIES	(29,628.06)	.00	29,628.06	.00
	FUND EQUITY				
200-30000-000-000	BUDGET VARIANCE	.00	.00	.00	.00
200-31110-000-000	AIRPORT FUND BALANCE	(437,484.04)	.00	.00	(437,484.04)
200-34000-000-000	RESERVE FOR ADV. FROM GEN	.00	.00	.00	.00
200-34110-000-000	P.O. ENCUMBRANCE	.00	.00	.00	.00
	NET INCOME/LOSS	.00	(71,775.09)	(357.22)	(357.22)
	TOTAL FUND EQUITY	(437,484.04)	(71,775.09)	(357.22)	(437,841.26)
	TOTAL LIABILITIES AND EQUITY	(467,112.10)	(71,775.09)	29,270.84	(437,841.26)

RETURN TO AGENDA

CITY OF PLATTEVILLE

DETAIL REVENUES WITH COMPARISON TO BUDGET
FOR THE 3 MONTHS ENDING MARCH 31, 2023

FUND 200 - AIRPORT FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET AMOUNT	VARIANCE	% OF BUDGET	ENC BALANCE	UNENC BALANCE
	PUBLIC CHARGES FOR SERVICE							
200-46340-460-000	AVIATION FUEL CASH SALES	3,473.90	9,650.76	123,378.00	(113,727.24)	7.82	.00	(113,727.24)
200-46340-461-000	AVIATION FUEL CREDIT CARD	2,080.03	7,431.58	185,068.00	(177,636.42)	4.02	.00	(177,636.42)
200-46340-463-000	LAND RENT FOR PRIVATE HANGA	.00	.00	6,177.00	(6,177.00)	.00	.00	(6,177.00)
200-46340-464-000	HANGAR RENT	2,782.44	16,594.03	36,000.00	(19,405.97)	46.09	.00	(19,405.97)
200-46340-466-000	INTEREST AIRPORT INVESTMENT	547.48	1,304.79	.00	1,304.79	.00	.00	1,304.79
200-46340-467-000	INTEREST - NOW ACCOUNT	231.42	1,002.86	3,132.00	(2,129.14)	32.02	.00	(2,129.14)
200-46340-468-000	LAND RENTAL PARCEL A	62,162.64	62,162.64	134,500.00	(72,337.36)	46.22	.00	(72,337.36)
200-46340-470-000	LAND RENTAL PARCEL B	.00	.00	7,400.00	(7,400.00)	.00	.00	(7,400.00)
200-46340-471-000	LAND RENTAL PARCEL C	.00	.00	795.00	(795.00)	.00	.00	(795.00)
200-46340-473-000	MISCELLANEOUS	.00	60.00	.00	60.00	.00	.00	60.00
200-46340-475-000	INS PAYMENTS	9,485.27	9,485.27	.00	9,485.27	.00	.00	9,485.27
200-46340-480-000	A & A HANGAR RENT	.00	167.07	1,455.00	(1,287.93)	11.48	.00	(1,287.93)
200-46340-485-000	CIP PAYMENT FROM CITY	.00	.00	15,000.00	(15,000.00)	.00	.00	(15,000.00)
200-46750-675-000	AIRPORT VENDING SALES	.00	39.78	.00	39.78	.00	.00	39.78
	TOTAL PUBLIC CHARGES FOR SE	80,763.18	107,898.78	512,905.00	(405,006.22)	21.04	.00	(405,006.22)
	TOTAL FUND REVENUE	80,763.18	107,898.78	512,905.00	(405,006.22)	21.04	.00	(405,006.22)

RETURN TO AGENDA

CITY OF PLATTEVILLE

DETAIL EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 3 MONTHS ENDING MARCH 31, 2023

FUND 200 - AIRPORT FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET AMOUNT	VARIANCE	% OF BUDGET	ENC BALANCE	UNENC BALANCE
	AIRPORT							
200-53510-120-000	AIRPORT: OTHER WAGES	3,256.25	6,436.25	10,000.00	3,563.75	64.36	.00	3,563.75
200-53510-132-000	AIRPORT: SOC SEC	201.89	399.05	600.00	200.95	66.51	.00	200.95
200-53510-133-000	AIRPORT: MEDICARE	47.22	93.33	150.00	56.67	62.22	.00	56.67
200-53510-804-000	AIRPORT: ATTORNEY FEES	.00	.00	1,500.00	1,500.00	.00	.00	1,500.00
200-53510-805-000	AIRPORT: FUEL 100LL	.00	36,813.06	113,012.00	76,198.94	32.57	.00	76,198.94
200-53510-806-000	AIRPORT: FUEL JET-A PURCHASE	.00	42,752.59	161,065.00	118,312.41	26.54	.00	118,312.41
200-53510-807-000	AIRPORT: FUEL MAINTENANCE	.00	98.00	1,100.00	1,002.00	8.91	.00	1,002.00
200-53510-809-000	AIRPORT: FAHERTY RECYCLING	69.00	138.00	700.00	562.00	19.71	.00	562.00
200-53510-810-000	AIRPORT: BUILDINGS & GROUND	553.24	1,986.72	60,000.00	58,013.28	3.31	.00	58,013.28
200-53510-814-000	AIRPORT: FUEL PURCHASES	547.98	955.07	6,400.00	5,444.93	14.92	.00	5,444.93
200-53510-815-000	AIRPORT: FUEL FLOWAGE (TO M	.00	.00	10,000.00	10,000.00	.00	.00	10,000.00
200-53510-816-000	AIRPORT: FED/WI GRANT PROJEC	.00	.00	10,000.00	10,000.00	.00	.00	10,000.00
200-53510-817-000	AIRPORT: CREDIT CARD FEES	49.70	197.15	4,000.00	3,802.85	4.93	.00	3,802.85
200-53510-820-000	AIRPORT: GENERAL SUPPLIES	434.13	1,824.07	600.00	(1,224.07)	304.01	.00	(1,224.07)
200-53510-821-000	AIRPORT: PROPANE	1,372.80	1,372.80	6,500.00	5,127.20	21.12	.00	5,127.20
200-53510-823-000	AIRPORT: LIABILITY INS	.00	2,807.00	6,800.00	3,993.00	41.28	.00	3,993.00
200-53510-824-000	AIRPORT: AIRPORT MGR'S CONT	.00	6,114.00	85,000.00	78,886.00	7.19	.00	78,886.00
200-53510-827-000	AIRPORT: POSTAGE	5.40	10.53	50.00	39.47	21.06	.00	39.47
200-53510-828-000	AIRPORT: PR & ADVERTISING	.00	.00	500.00	500.00	.00	.00	500.00
200-53510-830-000	AIRPORT: SALES TAX	306.09	710.20	2,500.00	1,789.80	28.41	.00	1,789.80
200-53510-833-000	AIRPORT: TELEPHONE	191.25	547.86	3,000.00	2,452.14	18.26	.00	2,452.14
200-53510-836-000	AIRPORT: ALLIANT	797.74	1,843.50	7,600.00	5,756.50	24.26	.00	5,756.50
200-53510-841-000	AIRPORT: TRAVEL & CONFERENC	.00	641.30	.00	(641.30)	.00	.00	(641.30)
200-53510-847-000	AIRPORT: AVIATION FUEL TAX	.00	.00	2,500.00	2,500.00	.00	.00	2,500.00
200-53510-848-000	AIRPORT: EQUIPMENT EXPENSES	1,155.40	1,801.08	15,000.00	13,198.92	12.01	.00	13,198.92
	TOTAL AIRPORT	8,988.09	107,541.56	508,577.00	401,035.44	21.15	.00	401,035.44
	TOTAL FUND EXPENDITURES	8,988.09	107,541.56	508,577.00	401,035.44	21.15	.00	401,035.44
	NET REV OVER EXP	71,775.09	357.22	4,328.00	(3,970.78)	8.25	.00	357.22

RETURN TO AGENDA

Report Criteria:
Report type: GL detail
Bank.Bank Number = 2

GL Period	Check Issue Date	Check Number	Payee	Description	Invoice Number	Inv Seq	Invoice Amount	Check Amount
92856								
04/23	04/10/2023	92856	AIRPORT MANAGEMENT	INTERIM MANAGER PAYMENT	03.19.2023	1	1,461.00	1,461.00
04/23	04/10/2023	92856	AIRPORT MANAGEMENT	MILEAGE	03.19.2023	2	116.60	116.60
Total 92856:								1,577.60
92857								
04/23	04/10/2023	92857	ALLEGIANT OIL LLC	AIRPORT CHARGES	314929	1	551.20	551.20
Total 92857:								551.20
92858								
04/23	04/10/2023	92858	ALLIANT ENERGY/WP&L	AIRPORT ELEC SERVICE	4.10.2023	1	68.90	68.90
04/23	04/10/2023	92858	ALLIANT ENERGY/WP&L	AIR SIGN-AIRPORT	4.10.2023	2	21.83	21.83
04/23	04/10/2023	92858	ALLIANT ENERGY/WP&L	OFFICE-AIRPORT	4.10.2023	3	93.68	93.68
04/23	04/10/2023	92858	ALLIANT ENERGY/WP&L	WELL-AIRPORT	4.10.2023	4	21.37	21.37
04/23	04/10/2023	92858	ALLIANT ENERGY/WP&L	FUEL PUMP-AIRPORT	4.10.2023	5	107.28	107.28
04/23	04/10/2023	92858	ALLIANT ENERGY/WP&L	BEACON-AIRPORT	4.10.2023	6	330.89	330.89
04/23	04/10/2023	92858	ALLIANT ENERGY/WP&L	WEATHER-AIRPORT	4.10.2023	7	40.81	40.81
04/23	04/10/2023	92858	ALLIANT ENERGY/WP&L	FUEL ISLAND-AIRPORT	4.10.2023	8	124.58	124.58
Total 92858:								809.34
92859								
04/23	04/10/2023	92859	AMAZON CAPITAL SERVI	AIRPORT SUPPLIES	1LRD-CL6X-	1	501.19	501.19
04/23	04/10/2023	92859	AMAZON CAPITAL SERVI	AIRPORT SUPPLIES	1MJW-MJVV-	1	468.92	468.92
Total 92859:								970.11
92860								
04/23	04/10/2023	92860	CAREYS SEAMLESS GUT	AIRPORT CHARGES	20661	1	431.08	431.08
Total 92860:								431.08
92861								
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	US CELLULAR PHONE BILL	25900	1	31.09	31.09
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	SALES TAX-AIRPORT	25900	2	141.49	141.49
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	CENTURYLINK	25900	3	245.36	245.36
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	CENTURYLINK	25900	4	245.36	245.36
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	POSTAGE-AIRPORT	25900	5	7.20	7.20
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	CENTURYLINK	25900	6	.16	.16
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	WAGES-AIRPORT	25900	7	2,705.00	2,705.00
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	WAGES-AIRPORT	25900	8	153.13	153.13
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	SOCIAL SECURITY TAXES-AIRPORT	25900	9	167.71	167.71
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	SOCIAL SECURITY TAXES-AIRPORT	25900	10	9.49	9.49
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	MEDICARE TAXES-AIRPORT	25900	11	39.22	39.22
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	MEDICARE TAXES-AIRPORT	25900	12	2.22	2.22

RETURN TO AGENDA

GL Period	Check Issue Date	Check Number	Payee	Description	Invoice Number	Inv Seq	Invoice Amount	Check Amount
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	AXLEY AIRPORT	25900	13	2,489.20	2,489.20
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	AIRPORT CHARGES	25900	14	150.00	150.00
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	AIRPORT CHARGES	25900	15	30.00	30.00
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	AIRPORT CHARGES	25900	16	275.60	275.60
04/23	04/10/2023	92861	CITY OF PLATTEVILLE	GAS/DIESEL FUEL	25900	17	261.42	261.42
Total 92861:								6,953.65
92862								
04/23	04/10/2023	92862	COMELEC INTERNET SE	WIRELESS INTERNET-AIRPORT	6563	1	80.00	80.00
Total 92862:								80.00
92863								
04/23	04/10/2023	92863	FAHERTY INC	DISPOSAL-AIRPORT	360945	1	69.00	69.00
Total 92863:								69.00
92864								
04/23	04/10/2023	92864	FIRE & SAFETY EQUIP III	AIRPORT CHARGES	73903	1	264.00	264.00
Total 92864:								264.00
92865								
04/23	04/10/2023	92865	MENARDS	AIRPORT CHARGES	13342	1	73.89	73.89
04/23	04/10/2023	92865	MENARDS	AIRPORT CHARGES	13654	1	33.98	33.98
04/23	04/10/2023	92865	MENARDS	AIRPORT CHARGES	13755	1	53.98	53.98
Total 92865:								161.85
92866								
04/23	04/10/2023	92866	PIONEER FORD SALES L	AIRPORT - VEHICLE REPAIR/MAINTENANCE	300496	1	108.68	108.68
04/23	04/10/2023	92866	PIONEER FORD SALES L	AIRPORT - VEHICLE REPAIR/MAINTENANCE	300497	1	289.30	289.30
Total 92866:								397.98
92867								
04/23	04/10/2023	92867	WALMART COMMUNITY/	AIRPORT CHARGES	596631962	1	95.72	95.72
Total 92867:								95.72
Grand Totals:								12,361.53

RETURN TO AGENDA

Report Criteria:
Report type: Summary
Bank.Bank Number = 2

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Amount
04/23	04/10/2023	92856	32866	AIRPORT MANAGEMENT SERVICES &	1,577.60
04/23	04/10/2023	92857	26366	ALLEGIANT OIL LLC	551.20
04/23	04/10/2023	92858	425	ALLIANT ENERGY/WP&L	809.34
04/23	04/10/2023	92859	32508	AMAZON CAPITAL SERVICES	970.11
04/23	04/10/2023	92860	26696	CAREYS SEAMLESS GUTTERS &	431.08
04/23	04/10/2023	92861	3415	CITY OF PLATTEVILLE	6,953.65
04/23	04/10/2023	92862	31193	COMELEC INTERNET SERVICES LLC	80.00
04/23	04/10/2023	92863	6395	FAHERTY INC	69.00
04/23	04/10/2023	92864	6745	FIRE & SAFETY EQUIP III LLC	264.00
04/23	04/10/2023	92865	25566	MENARDS	161.85
04/23	04/10/2023	92866	15750	PIONEER FORD SALES LTD	397.98
04/23	04/10/2023	92867	21950	WALMART COMMUNITY/CAPITAL ONE	95.72
Grand Totals:					12,361.53

The above listed bills are OK for payment and are thus recommended to the Airport Commission for payment. Exceptions are noted and may be discussed at the Airport Commission meeting.

___________________________________ Date: _______________ Dennis R. Cooley, Chairman

___________________________________ Date: _______________ Doug DuPlessis, Treasurer

___________________________________Date: _______________ Nicola Maurer, Interim City Manager

RETURN TO AGENDA

Platteville Airport Manager's Report

March 2023

Fuel Sales for March 2022

100LL 2,158 Gallons

Jet A 3,887 Gallons

Fuel Sales for March 2023

100LL 362 Gallons

Jet A 758 Gallons

Flight Activity March 2022

Total Flights	1,297
Personal	107
Business	180
Instruction	1,010

Flight Activity March 2023

Total Flights	1,309
Personal	75
Business	61
Instruction	1,173

Fuel Purchased/Delivered & Current Price

100LL	0	$5.85
Jet A	0	$5.25

Hangar Status

Two old 6 bay hangars available (both need maintenance on bifold doors)

Two on waiting list:

Mike Dalecki (608-732-7336)

Alaine Olthafer (608-988-6864)

RETURN TO AGENDA

Other Notable Issues

Fuel Reconciliation

For JetA, the difference in dispensed fuel and sold fuel is -4.51 gallons (-0.595%). For 100LL, the difference in dispensed fuel and sold fuel is -0.13 gallons (-0.036%).

Arlo Cameras

Three more cameras have been purchased and installed facing the parking lot, back door to the pilot's lounge, and Northeast side of the main hangar.

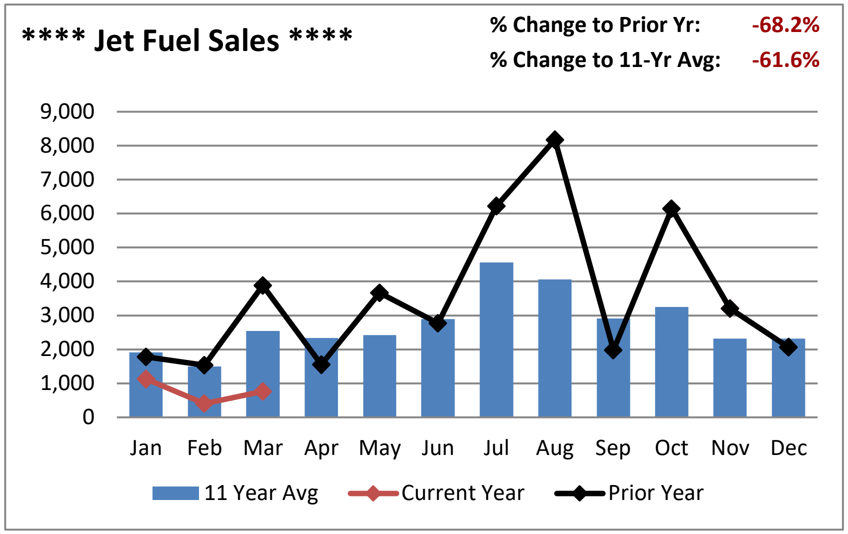
Airfield Lighting

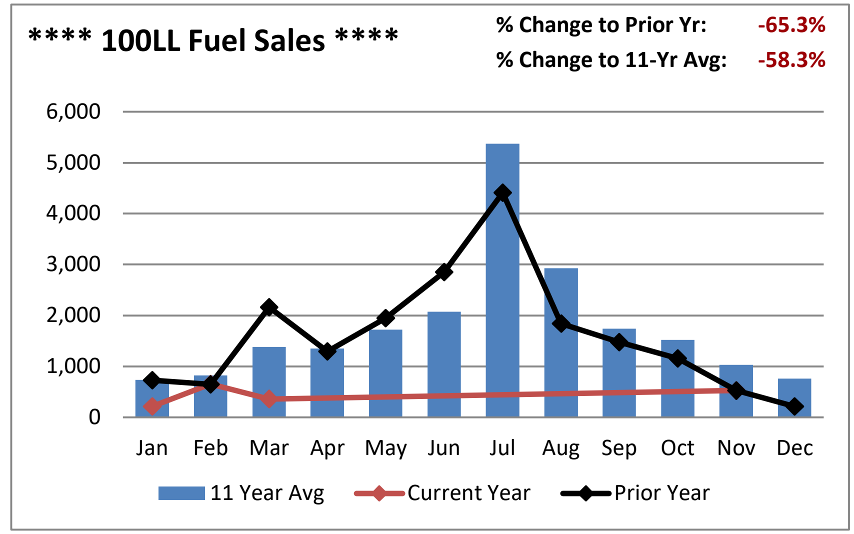
On April 4th, Highway Lighting replaced inoperative taxiway lights due to the lightning strike incident in August 2022. The project is now complete. The total cost for the project will be noted on a future manager's report after we receive the final bill

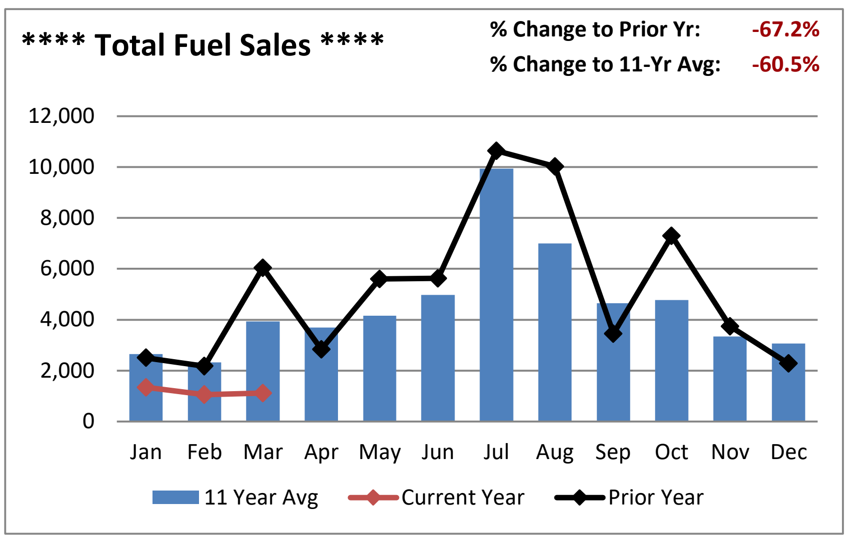
RETURN TO AGENDA

Platteville Municipal Airport
Airport Management

As of Mar-2023



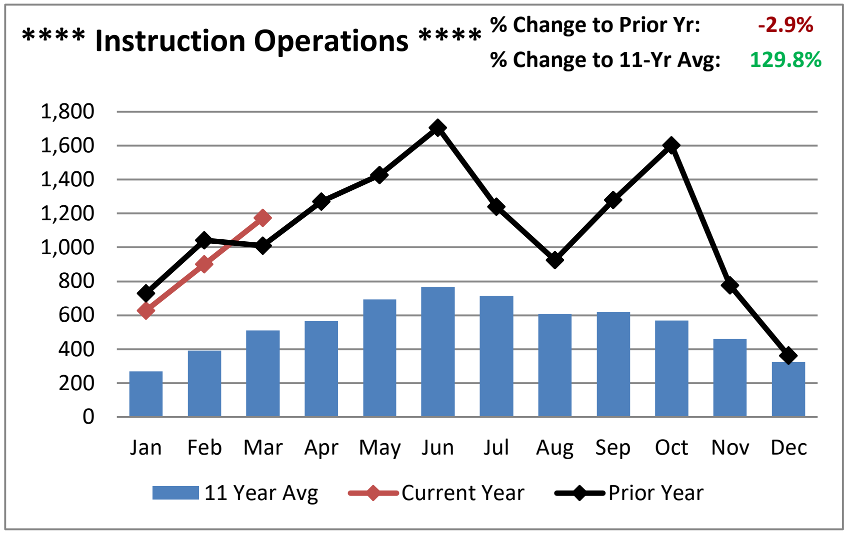


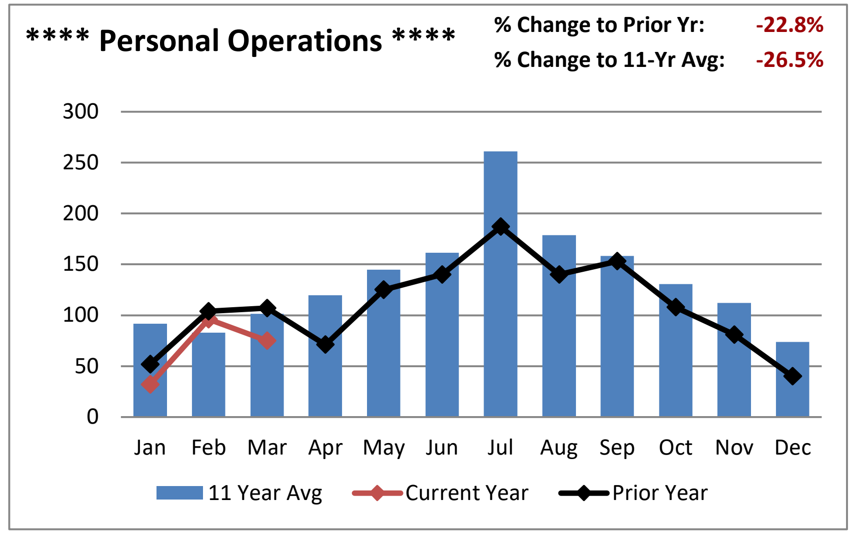


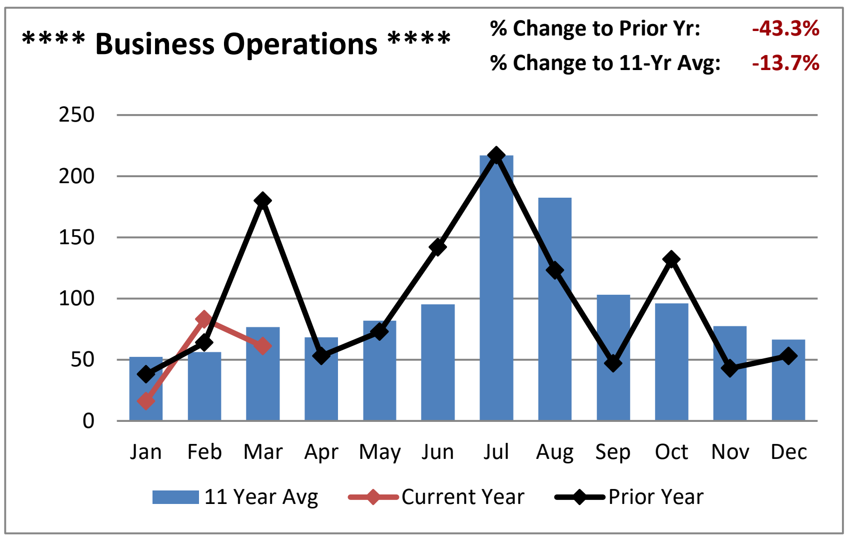
RETURN TO AGENDA

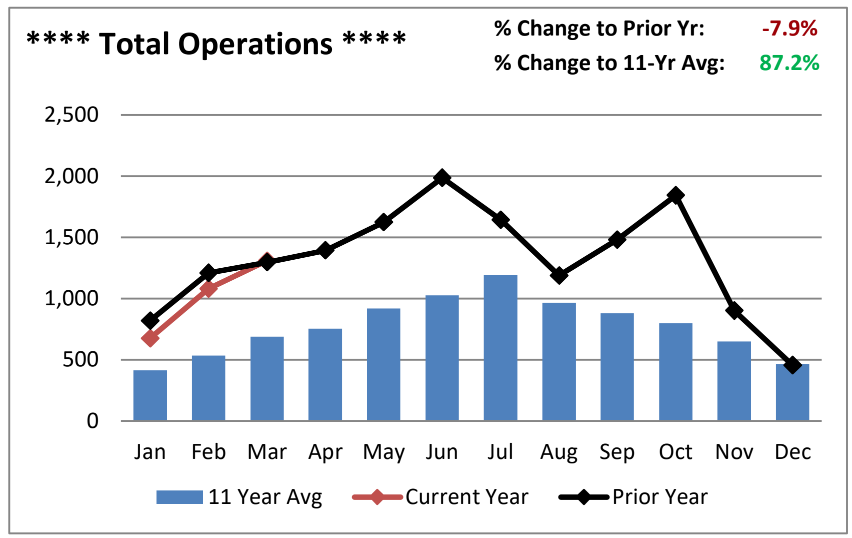
Platteville Municipal Airport
Airport Management

As of Mar-2023









RETURN TO AGENDA

2023

Hanger	Name	Rate	January	February	March	April	May	June	July	August	September	October	November	December	Total
10 Bay No.-13	Noah Stader	$ 142.43	$ 142.43	$ 142.43	$ 142.43	$ 142.43									$ 569.72
10 Bay No.-14	Ben Headings	$ 142.43													$ -
10 Bay No.-15	Joe Sener	$ 142.43	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.57	$ 139.57	$ 139.57	$ 139.57	$ 1,674.92
10 Bay No.-16	Joe Olthafer	$ 142.43	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.57	$ 139.57	$ 139.57	$ 139.57	$ 1,674.92
10 Bay No.-17	Doug Bartlett	$ 142.43	$ 149.18	$ 149.18	$ 149.18										$ 447.54
10 Bay No.-18	Burbach	$ 142.43													$ -
10 Bay No.-19	Brian Adams	$ 142.43	$ 142.43	$ 142.43	$ 142.43										$ 427.29
10 Bay No.-20	Gavin Mewhirter	$ 142.43	$ 142.43	$ 142.42	$ 136.73										$ 421.58
10 Bay No.-21	Gary Newt	$ 142.43													$ -
10 Bay No.-22	Patrick Holcomb	$ 142.43		$106.82	$142.43	$142.43									$ 391.68
10 Bay West End	Jim Jordon	$ 52.75	$ 51.70	$ 51.70	$ 51.70	$ 51.70	$ 51.70	$ 51.70	$ 51.69	$ 51.69	$ 51.69	$ 51.69	$ 51.69	$ 51.69	$ 620.34
10 Bay East. End	Joe Olthafer	$ 52.75	$ 51.70	$ 51.70	$ 51.70	$ 51.70	$ 51.70	$ 51.70	$ 51.69	$ 51.69	$ 51.69	$ 51.69	$ 51.69	$ 51.69	$ 620.34
New 6 Bay Hangars															
6 Bay No.-4	A&A Aviation	$ 142.43	$ 142.43	$142.43	$142.43										$ 427.29
6 Bay No.-5	Jack Momchilovich	$ 142.43	$142.50	$ 139.57	$ 139.57	$ 139.57	$ 139.57	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 1,677.84
6 Bay No.-6	Joe Olthafer	$ 142.43	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.57	$ 139.57	$ 139.57	$ 139.57	$ 1,674.92
6 Bay No.-10	Jamie Miller	$ 142.43	$142.43	$142.43	$142.43	$142.43									$ 569.72
6 Bay No.-11	Eric McWethy	$ 142.43	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 139.58	$ 1,674.96
6 Bay No.-12	John Utley	$ 142.43	$ 142.43	$142.43	$142.43	$142.43	$142.43	$142.43							$ 854.58
6 W. End	Greg Barnet	$ 84.40	$ 84.40	$ 84.40	$ 84.40	$ 84.40	$ 84.40	$ 84.40	$ 84.40	$ 84.40	$ 84.40	$ 84.40	$ 84.40	$ 84.40	$ 1,012.80
6 E. End	Doug Stephens	$ 84.40	$84.40	$84.40	$84.40	$84.40	$84.40	$84.40	$84.40	$84.40					$ 675.20
Old 6 Bay Hangars															
6 Bay No.-1	Bill Fitch	$ 94.61	$ 94.61	$94.61	$94.61	$94.61									$ 378.44
6 Bay No.-2	Paul Lindholm	$ 94.61			$142.50	$ 46.72									$ 189.22
6 Bay No.-3	Tom Kleiber	$ 94.61	$ 94.61	$ 94.61											$ 189.22
6 Bay No.-8	Tracy Wiegel	$ 94.61													$ -
6 Bay No.-9	**Unusable**	$ 94.61													$ -
6 Bay No.-7	**Available**	$ 94.61													$ -
End Storage	Dana Harkness	$ 52.75	$ 52.75	$ 52.75	$ 52.75	$ 52.75	$ 52.75	$ 52.75	$ 52.75	$ 52.75	$ 52.75	$ 52.75	$ 52.75	$ 52.75	$ 633.00
Main Hangar		$ 123.75	$ 123.75	$ 43.32											$ 167.07
Total															$ 16,972.59

Private Hangar Land Lease		Rate	Date Due	Paid?	Waiting List
	Gary Newt	$468.00	6/1/2022		Mike
	Kaiser	$3,300.00	12/1/2022		
	Jet Services of Iowa	$1,770.00	12/1/2022		
	Jason Klovning	$639.00	9/1/2022		

RETURN TO AGENDA

Fuel Reconciliation - March 2023

JetA

Veeder-Root Inventory Report (TC gallons)	3/1/2023	8631				
	3/31/2023	7871	**Difference**	**760**		
Gallons Received	0					
Meter Reading at Dispenser	3/1/2023	107933.1				
	3/31/2023	108695.35	**Gallons Dispensed**	**762.25**	-4.51	gallons
QT Pod Recorded Sales to Date	3/1/2023	104653.76			-0.595%	
	3/31/2023	105411.5	**Gallons Sold**	**757.74**		
			Gross Sales	**4357.01**		

Credit Card Sales	6
Proprietary Card Sales	5
Net Sales	$4,198.33
Unpaid Proprietary Card Statements	1
	$3,490.80

RETURN TO AGENDA

Fuel Reconciliation - March 2023

100LL

Veeder-Root Inventory Report (TC gallons)	3/1/2023	8631			
	3/31/2023	7795	**Difference**	**836**	
Gallons Received	0				
Meter Reading at Dispenser	3/1/2023	70639.8			
	3/31/2023	71002	**Gallons Dispensed**	**362.2**	-0.13 gallons
QT Pod Recorded Sales to Date	3/1/2023	67046.9			-0.036%
	3/31/2023	67408.97	**Gallons Sold**	**362.07**	
			Gross Sales	**2081.90**	

Credit Card Sales	10
Proprietary Card Sales	9
Net Sales	$2,189.00
Unpaid Proprietary Card Statements	1
	$1,065.61