REPORT APPENDICES

AIRPORT MASTER PLAN (PHASE 1)

PORTAGE MUNICIPAL AIRPORT (C47)

MAEL FIELD

PORTAGE, WISCONSIN

APRIL 2021 | DRAFT REPORT

FAA AIP #3-55-0066-05



Prepared by:

TKDA

Prepared for:

PORTAGE WISCONSIN

Bureau of Aeronautics WISCONSIN DEPARTMENT OF TRANSPORTATION

APPENDIX A

PUBLIC INVOLVEMENT

PORTAGE MUNICIPAL AIRPORT

AIRPORT MASTER PLAN – PHASE 1

TKDA

November 12, 2018

PUBLIC NOTICE
PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN
OPEN HOUSE

The City of Portage, the owner and operator of the Portage Municipal Airport, is hosting an airport master plan open house on Wednesday, November 14, 2018, from 4:00 p.m. to 6:00 p.m. in the Municipal Building Council Chambers located at 115 West Pleasant St., Portage, WI 53901.

The airport master plan study recently began in October 2018. The open house will be an opportunity for members of the community to learn more about the airport study, and provide feedback. Attendees can view study information at their own pace and ask questions of city, Wisconsin Department of Transportation, and project consultant staff. A study briefing will begin at 4:30 p.m.

For more information, please contact Aaron Jahncke PE, Director of Public Works/City Engineer at 608-742-2176.

Portage Municipal Airport
Airport Master Plan Study
Project Newsletter #1: November 2018

Background
An Airport Master Plan study analyzes an airport's built and natural environment, identifies aviation demand, reviews development options, evaluates potential impacts, and creates a "roadmap" that will guide future airport improvements. Understanding current issues and identifying future opportunities will help the airport meet the needs of the community.

Be A Part of the Airport's Future!

Public Open House
November 14, 2018: 4pm - 6pm
Portage City Municipal Building

The Portage Municipal Airport opened in 1941. It supports business and personal aviation serving Portage and neighboring communities. The airport has a paved primary runway 18-36 (3,768' x 60'), a paved crosswind runway (2,559' x 40'), and is home to 25 based aircraft.



Local Considerations
The Portage Municipal Airport is constrained by the natural and man-made environment. An updated airport master plan is needed to review the viability of the existing airport site to meet aviation demand in the Portage area. The goal is to allow the City to make an informed decision on the future investment at the airport.

Key study objectives include:
- Identify area aviation demand and facility needs
- Document airport design standard deficiencies
- Review feasibility of meeting needs on existing airport site
- Engage local stakeholders throughout the study
- Develop a decision-making document on the future of the airport
- Identify a realistic action plan moving forward

How to Be Engaged
The City of Portage encourages stakeholder engagement throughout this study.
A diverse Technical Advisory Committee (TAC) has been established to provide ongoing feedback to the city.

Please visit **www.portageairportplan.tkda.com** to view study information and submit comments to the study team. Two public open house meetings will be held to share information and collect feedback from community members before decisions are made.

Project Contacts

Aaron Jahncke, City of Portage — aaron.jahncke@portagewi.gov
Mark Graczykowski, Wisconsin Bureau of Aeronautics — mark.graczykowski@dot.wi.gov
Marcus Watson, TKDA — marcus.watson@tkda.com

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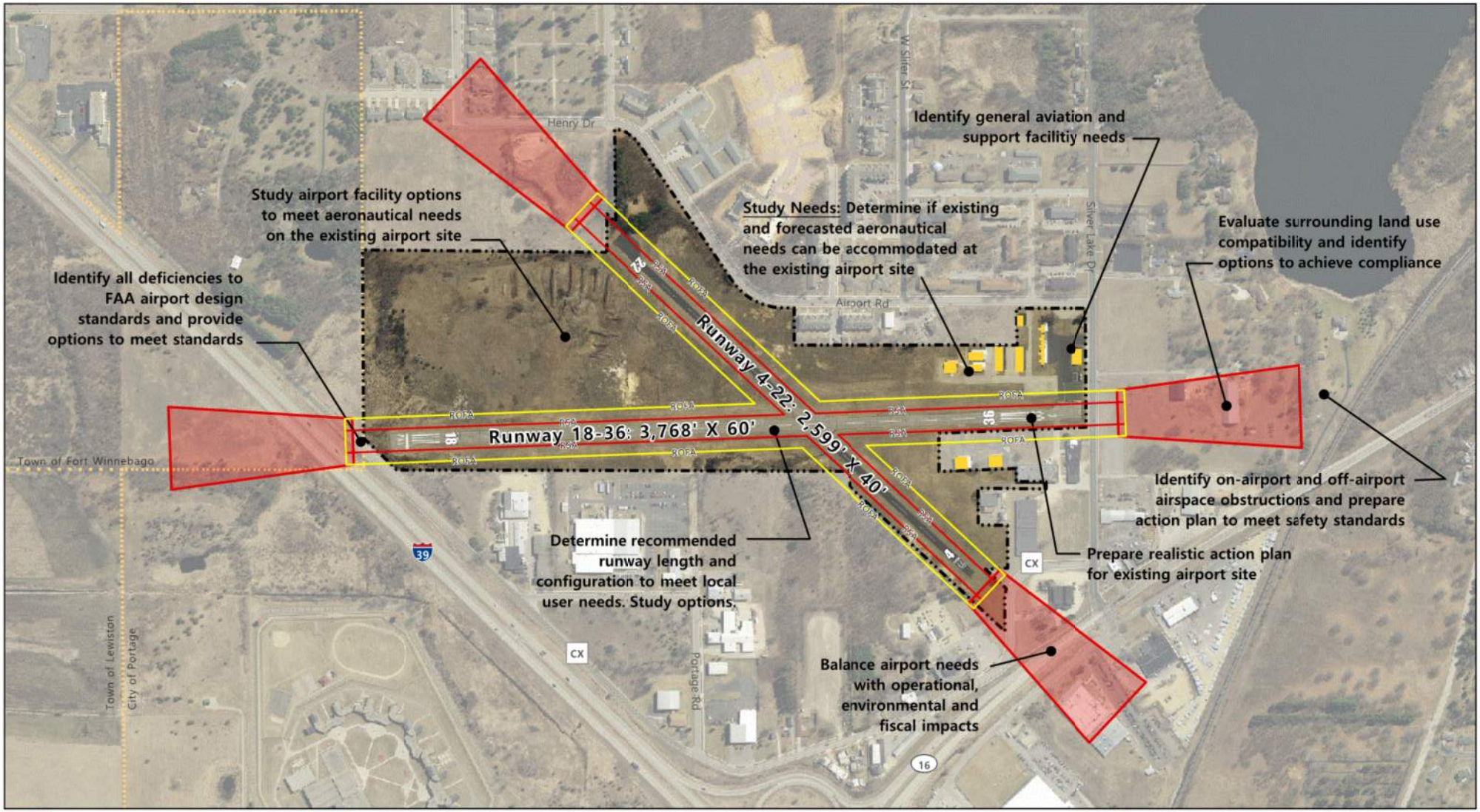
Current Study Schedule

Facility Needs	*Summer 2019*
Development Options	*Winter 2020*
Draft Study Documents	*Summer 2020*

TKDA

PORTAGE MUNICIPAL AIRPORT

Planning Considerations Map



Meeting Sign-In Sheet

Date:	November 14, 2018	**Location:**	Portage City Municipal Building
Project:	Portage Airport Master Plan	**Time:**	4:00 p.m. – 6:00 p.m.
Meeting:	Public Open House #1		

Name	E-Mail	Telephone
AARON JAHNCKE	aaron.jahncke@portagewi.gov	(608)742 2176
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RitaMaass	rita.maass@portagewi.gov	608-697-7242
Lyn Jerde	ljerde@wiscnews.com	608-745-3587
Rick Dodd	rick.dodd@portagewi.gov	608-697-7065
Jean Mohr	jean.mohr@ ✓	608-742-2176

Portage Municipal Airport (C47)

Airport Master Plan – Phase 1

Public Open House #1

TKDA

November 14, 2018

Introductions

- Aaron Jahncke, City of Portage (Airport Owner)
- Mark Graczykowski, Wisconsin Bureau of Aeronautics
- TKDA Representatives (Consultant)



What is a Master Plan?

- An airport master plan is a comprehensive study of an airport and describes the short-, medium-, and long-term development plans to meet future aviation demand
- Prepared by the airport owner to review needs for the next 20+ years
- Provides airport development framework to feed into Airport Layout Plan (ALP)

Need for New Airport Master Plan

- Previous studies did not fully document non-standard conditions and actions needed to achieve compliance
- Obligation to maintain a safe airport
- An updated study is needed to:
  1. Document non-standard conditions
  2. Review viability of the existing airport site to meet aviation demand and facility requirements
  3. Allow the airport sponsor to make an informed decision on future investment in the airport

Study Objectives

- Identify aviation demand and facility requirements local to the Portage area
- Document deficiencies to FAA airport design standards
- Review feasibility of achieving compliance with facility requirements, including options and costs
- Develop consensus with local stakeholders on understanding key airport planning challenges
- Develop a decision-making document to allow the city to determine the future of the airport
- Obtain FAA and State agency feedback
- Provide the framework for future studies and actions to meet facility needs

Master Plan Study Process



Master Plan Study Process

4. Identify & Evaluate Alternatives

- Evaluation solutions for to meet compliance
- Identify and evaluate development alternatives based on feasibility, operational, environmental and fiscal impacts
- Select preferred alternative for development plan

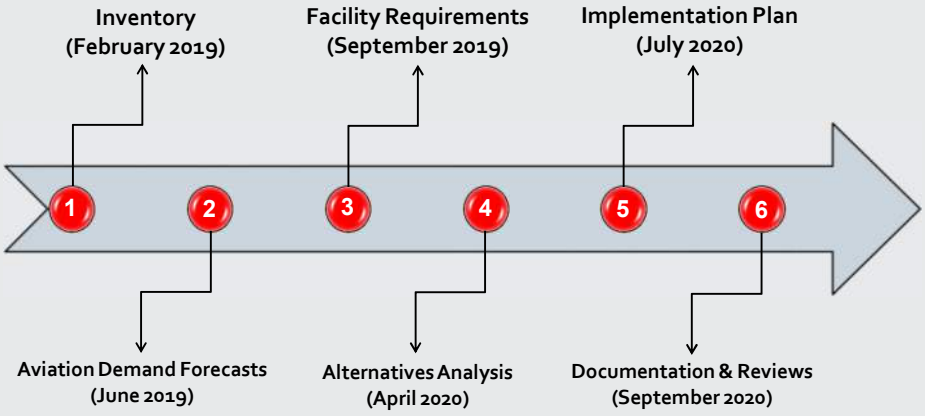
5. Implementation Plan & Financial Feasibility

- Identify plan implementation steps for preferred alternative
- Review financial feasibility and funding needs of future actions

6. Study Documentation & Reviews

- Prepare final plan documentation to review and approval by the city, WBOA and FAA

Proposed Project Schedule



***Schedule subject to change based on review timelines*

Airport Planning Considerations



Public Involvement Plan

- Provides opportunity to collect feedback to aid in decision-making
- Outreach & input opportunities
  - TAC Meetings
  - Public Open House Meetings
  - Business Open House Meeting
  - Agency Coordination Meetings
  - City Council Briefings
  - Project Newsletters
  - Project Website
  - Public Comment Portal



We Want to Hear from You!

- Visit with study team and ask questions
- Provide feedback
  - Fill out Comment Card
  - Submit Comment Online on the Project Website
  - Complete Business or Airport User Survey
- Please visit **www.portageairportplan.tkda.com** for study documents and updates



Please Proceed to Stations

Portage Municipal Airport
Airport Master Plan – Phase 1
Public Open House #1

November 14, 2018

TKDA

About the Airport Master Plan



- An airport master plan is a comprehensive study of an airport describing development plans to meet future aviation demand
- Previous studies did not fully document non-standard conditions and actions needed to achieve compliance
- The airport owner (City of Portage) has an obligation to maintain a safe airport
- An updated study is needed to:
  1. Document non-standard conditions
  2. Review viability of the existing airport site to meet aviation demand and facility requirements
  3. Allow the airport sponsor to make an informed decision on future investment in the airport

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Study Objectives

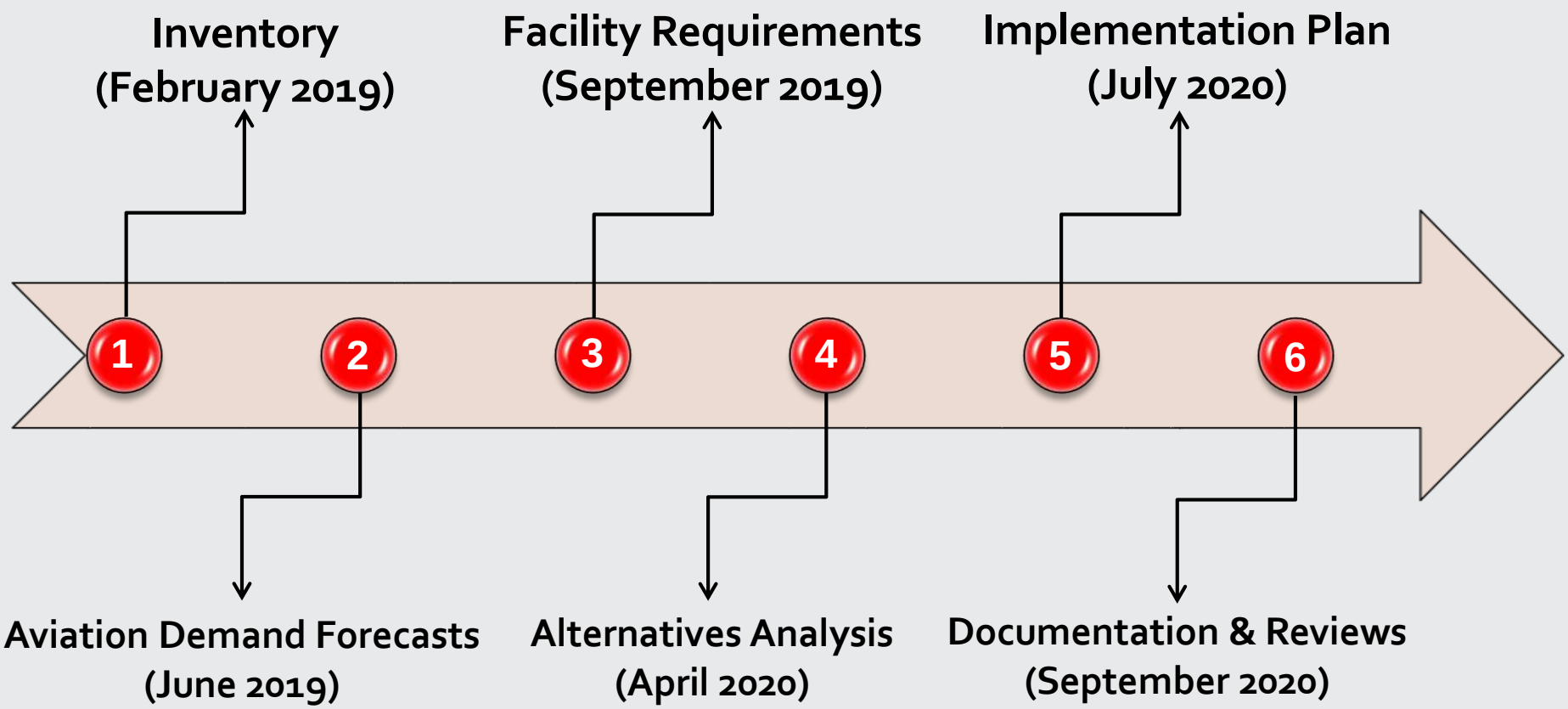


- Identify aviation demand and facility requirements in the Portage area
- Document deficiencies to airport design standards
- Review feasibility of achieving compliance with facility needs, including options and costs
- Develop consensus with local stakeholders on understanding key airport planning challenges
- Develop a decision-making document to allow the city to determine the future of the airport
- Obtain FAA and State agency feedback
- Provide the framework for future studies and actions to meet facility needs

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Study Steps & Schedule





***Schedule subject to change based on review timelines*

Public Involvement

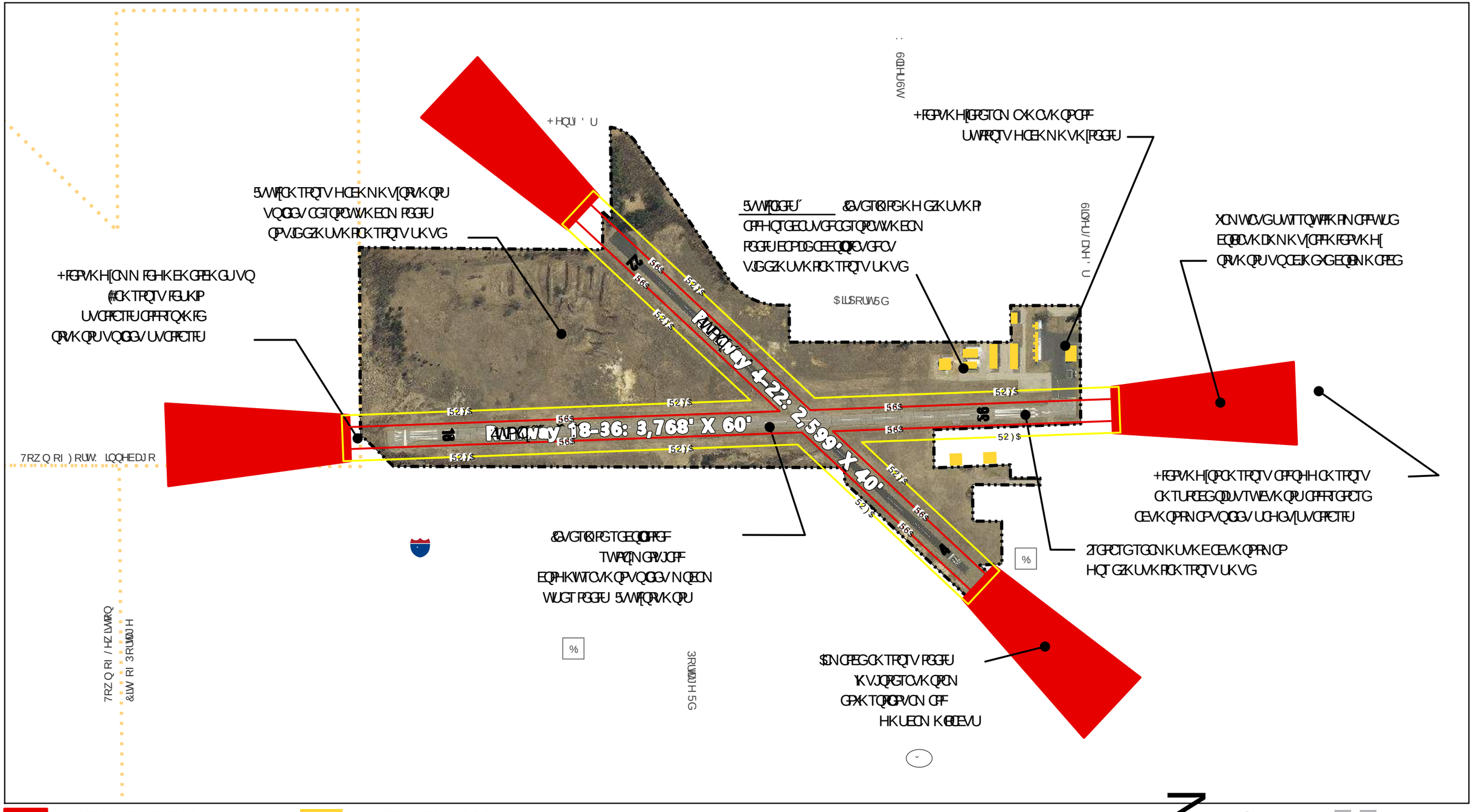


- Provide Feedback
  - Fill out a comment card for the study team
  - Submit a comment on project website
- Stay Engaged
  - Please visit **www.portageairportplan.tkda.com** for study documents and updates
- Strategies
  - Technical Advisory Committee
  - Open House Meetings
  - Community Meetings
  - Digital Content

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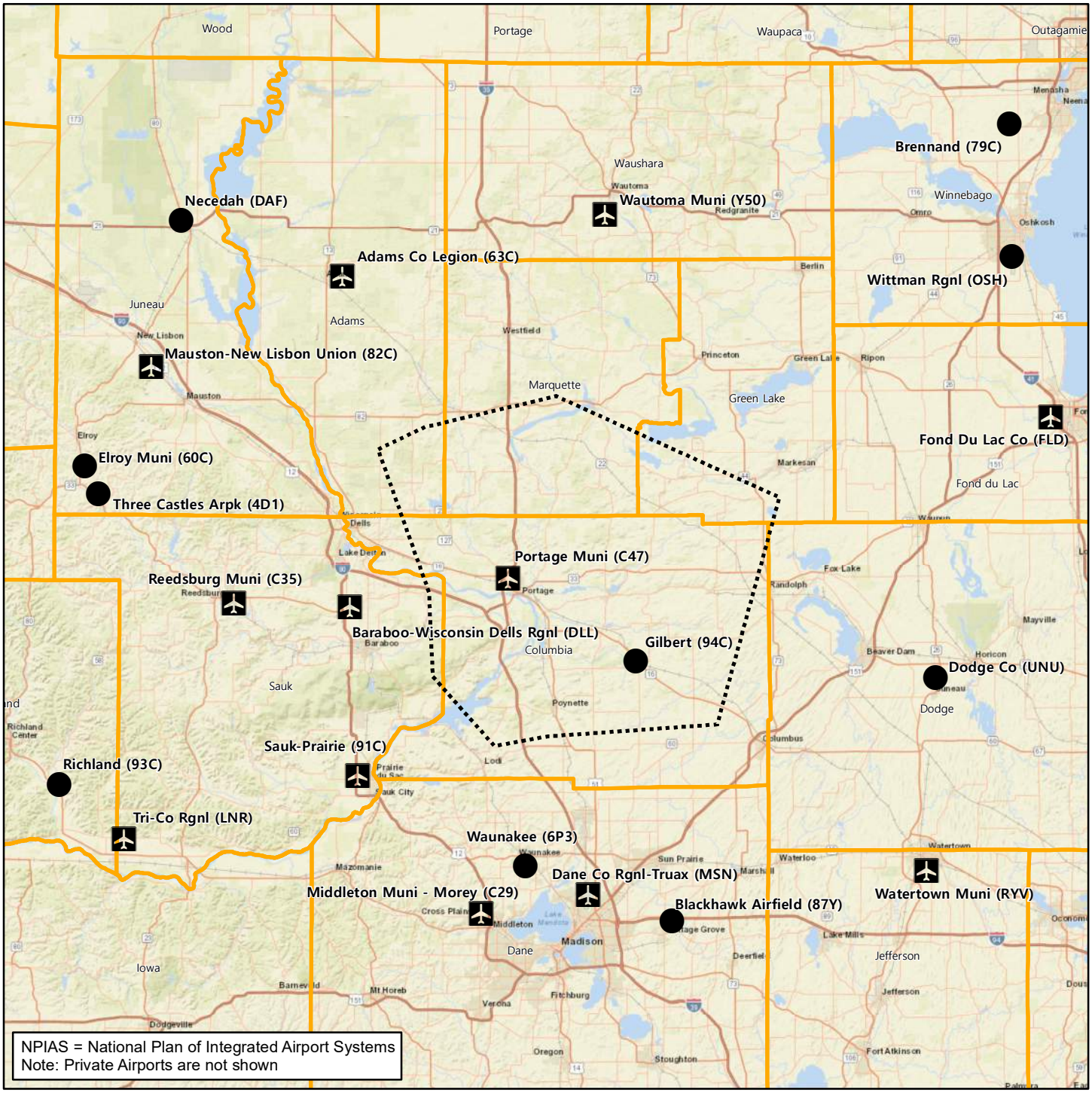
2019 Airport Layout Plan

Planning Considerations


Runway 4-22: 2,599' X 40'
Runway 18-36: 3,768' X 60'
56$
52)$
Runway 18-36: 3,768' X 60'
Runway 4-22: 2,599' X 40'

PORTAGE MUNICIPAL AIRPORT

Airport Service Area



Non-NPIAS, Public Use Airports

NPIAS Airports

Service Zone (Estimated)

County Boundaries

0 5 10 20 Miles

N

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Engineering
Architecture
Planning

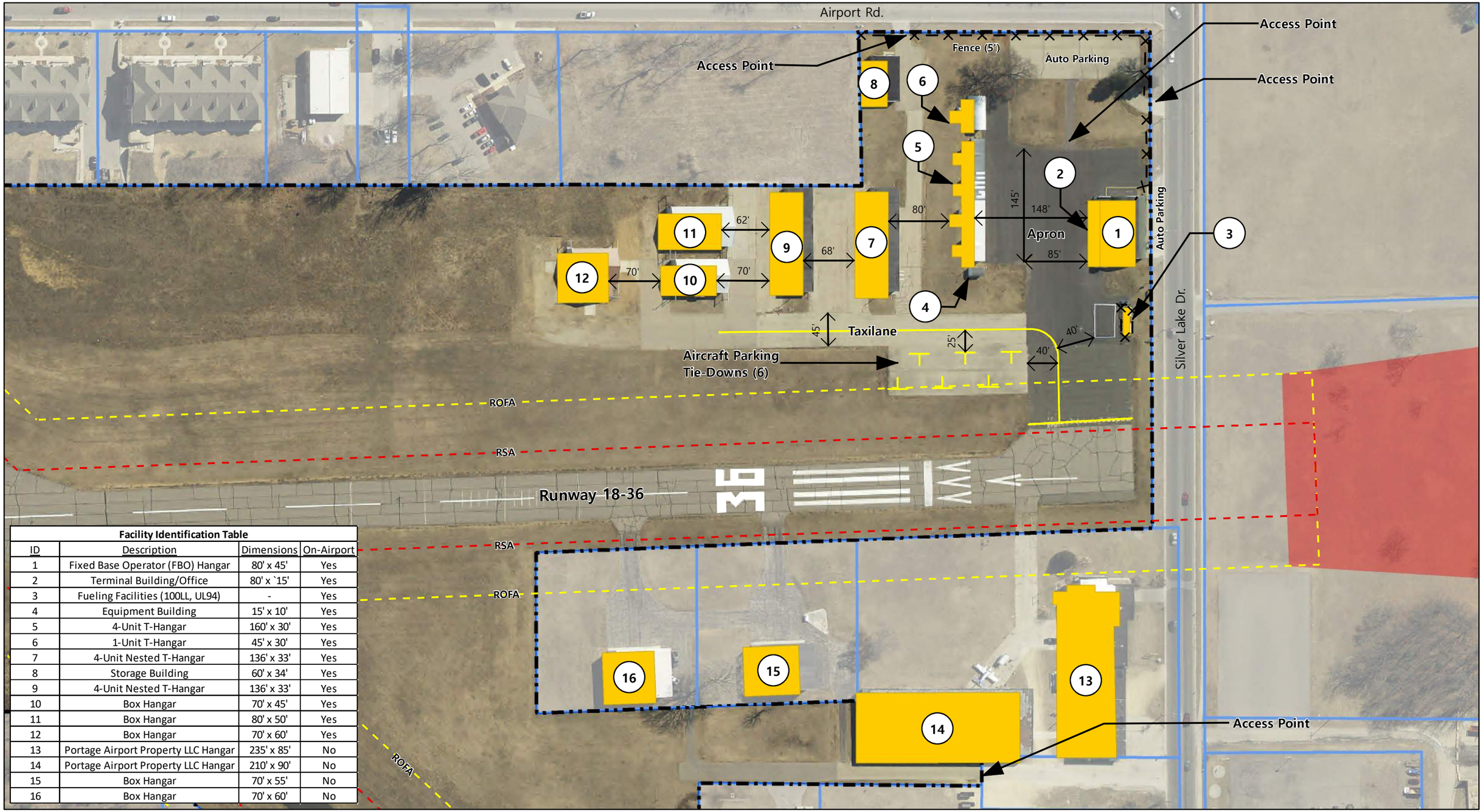
TKDA

444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

Data Sources: FAA, WI DNR

PORTAGE MUNICIPAL AIRPORT

Building Area Facilities



Facility Identification Table			
ID	Description	Dimensions	On-Airport
1	Fixed Base Operator (FBO) Hangar	80' x 45'	Yes
2	Terminal Building/Office	80' x `15'	Yes
3	Fueling Facilities (100LL, UL94)	-	Yes
4	Equipment Building	15' x 10'	Yes
5	4-Unit T-Hangar	160' x 30'	Yes
6	1-Unit T-Hangar	45' x 30'	Yes
7	4-Unit Nested T-Hangar	136' x 33'	Yes
8	Storage Building	60' x 34'	Yes
9	4-Unit Nested T-Hangar	136' x 33'	Yes
10	Box Hangar	70' x 45'	Yes
11	Box Hangar	80' x 50'	Yes
12	Box Hangar	70' x 60'	Yes
13	Portage Airport Property LLC Hangar	235' x 85'	No
14	Portage Airport Property LLC Hangar	210' x 90'	No
15	Box Hangar	70' x 55'	No
16	Box Hangar	70' x 60'	No

Fence
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Protection Zone (RPZ)
Aeronautical Building
Airport Boundary
Parcels

N

0 60 120 240 Feet

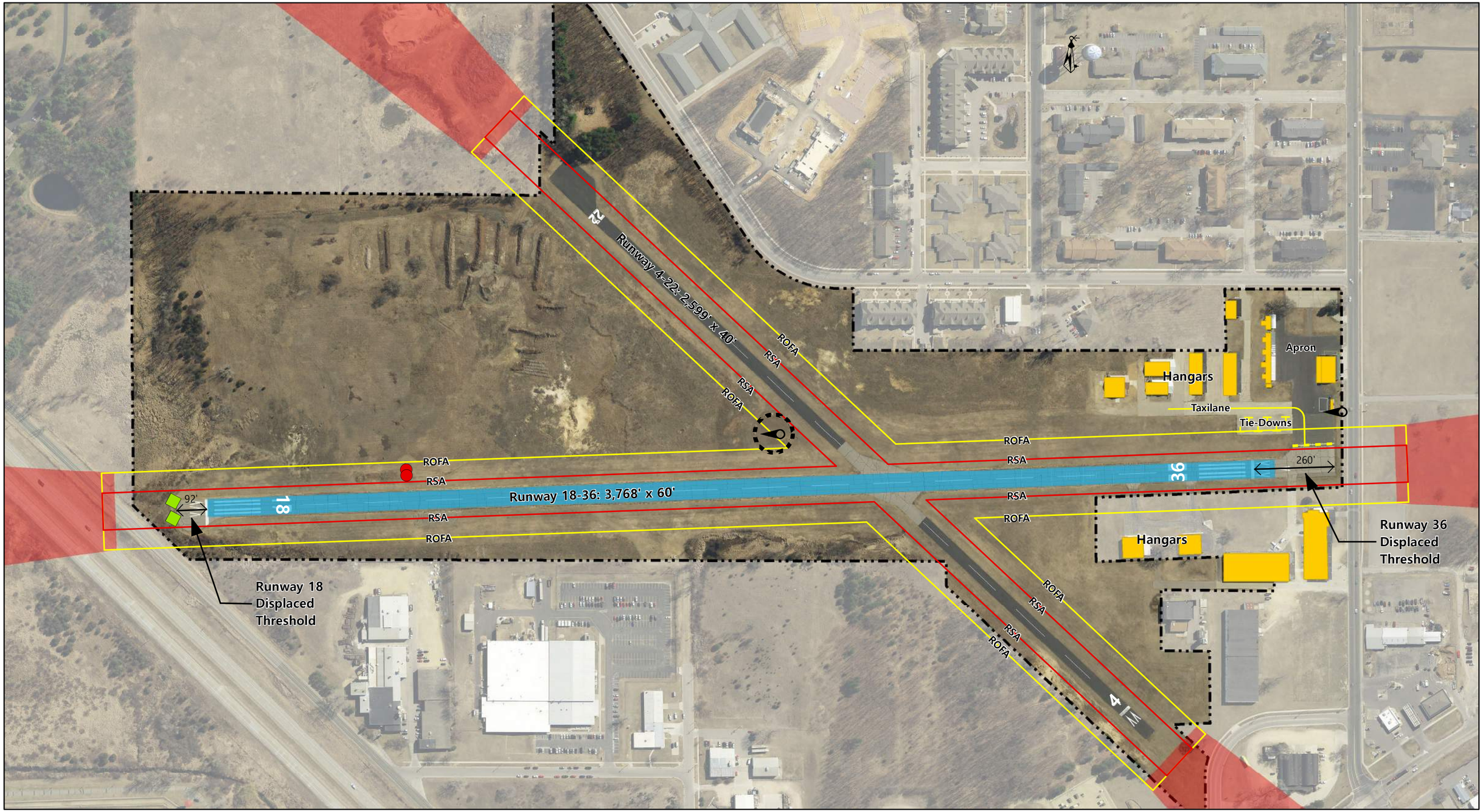
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Saint Paul, MN 55101
651.292.4400
tkda.com

Data source: Columbia County Land Information Department http://opendata-cclid.opendata.arcgis.com/

PORTAGE MUNICIPAL AIRPORT

Airfield Facilities



Airport Beacon
Wind Cone
Runway End Identifier Lights (REIL)
Precision Approach Path Indicator (PAPI) Lights
Runway Hold Position Marking
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Medium Intensity Runway Edge Lights (MIRL)
Runway Protection Zone (RPZ)
Aeronautical Building
Airport Boundary
Segmented Circle

0 150 300 600 Feet

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Data source: Columbia County Land Information Department http://opendata-cclid.opendata.arcgis.com/

https://www.wiscnews.com/portagedailyregister/news/local/portage-airports-future-under-intensive-study/article_9d829602-2f5e-5ef6-97a8-d1c00846c9c9.html

TOP STORY

Portage airport's future under intensive study

Lyn Jerde
Nov 15, 2018

SALE! Subscribe for $1/mo.



Portage Common Council Member Rita Maass, chairwoman of the city's Airport Commission, studies the propos scope of the process for drafting a master plan for the future of the Portage Municipal Airport, during Wednesday's open house at the Portage Municipal Building.

Lyn Jerde/Daily Register

Marcus Watson didn't need to conduct an in-depth study of the Portage Municipal Airport to arrive at one obvious conclusion.

A walk through the airport on Wednesday morning — its parking areas, its runways, its hangars, its other facilities — showed a cramped space, amid a city that grew up around it.

"Overall, it's a very constrained airport," said Watson, project manager for the St. Paul, Minnesota, architecture and engineering firm TKDA, which is embarking on a two-year effort to arrive at a master plan for the airport's future.

The public on Wednesday got the first look at the process for sorting out airport options, to be presented to the Portage Common Council for consideration sometime in 2020.

An open house at the Portage Municipal Building attracted city officials, TKDA personnel and one representative of the Wisconsin Department of Transportation's Bureau of Aeronautics.

The only member of the public to attend was Jerry Foellmi, president of General Engineering Corp. — a firm located just across Silver Lake Drive from the airport.

Foellmi said he isn't a user of the airport, but he's interested in the process from an engineering perspective.

One of the questions to be addressed by the study, according to Watson, is the level of demand for airport service on the part of existing and prospective Portage businesses.

"There are several things we have to look at," he said. "One is the demand for aviation in the city, and in surrounding areas. Once we determine that, we'll get an idea of what Portage's aviation needs are."

Already, members of the Portage Area Chamber of Commerce are providing some insight into that question.

About 40 Chamber members have responded to a survey about the airport, and results are just now being compiled — to determine whether businesspeople are interested in flying into and out of the Portage Municipal Airport, and if so, what kinds of runway and hangar facilities they would need or desire for their aircraft.

Support Local Journalism

Your membership makes our reporting possible.

SALE! Subscribe for $1/mo.

Portage Public Works Director Aaron Jahncke said the city won't have to dip into its coffers to pay for the study.

Ninety-five percent of its cost is covered by the Federal Aeronautics Administration and the state Bureau of Aeronautics. The city's share of the cost, about $14,000, was long ago set aside in a fund — at about the time, in the early 2000s, when city officials bought a 260-acre site north of the city, commonly known as the Evans property, as a potential new airport site.

Jahncke described the site as a “muck farm,” too wet to use as an airport.

Before the acquisition of the Evans property, Watson said, the city had looked at about nine other possible sites to relocate the airport, and they all had environmental issues that made them unsuitable as airport locations.

However, relocation of the airport is one of the possibilities that is likely to be considered as the study progresses.

“Nothing is off the table,” Watson said.

Mark Graczykowski of the Wisconsin Bureau of Aeronautics said studies of the Portage airport have been done repeatedly over the years, dating back as far as the 1970s.

“So many studies have been done,” he said. “Once this study has been done, it should provide us with the answers.”

Watson said the next step is for the city to appoint a technical advisory committee, composed of various airport stakeholders, to provide ongoing feedback to the city regarding the airport.

The earliest stages of developing a master plan for the airport include collecting information about the built and natural environment of the existing airport, forecasting future demand for aviation services in Portage and determining the facility needs.

By the spring of 2020, Watson said, a set of alternatives, and their costs, should be ready to present to the Portage Common Council, which would determine the plan for implementation.

Wednesday's open house is not the public's only opportunity to weigh in. Here are other options:

- The study's website, portageairportplan.tkda.com, has information about the study, including a link to submit comments and links to surveys for businesses and airport users.
- A newsletter is available for people interested in the study who don't have access to the Internet. To get copies of the newsletter, contact Jahncke at 608-742-2176.
- Jahncke also is the contact for people interested in serving on the technical advisory council.
- Written comments can be directed to Watson at TKDA, 444 Cedar St., Suite 1500, USB Plaza, St. Paul, MN 55101.
- When the study's process of outlining airport options is completed in the spring of 2020, another public open house will be held.

Follow Lyn Jerde on Twitter @LynJerde or contact her at 608-745-3587.

About the Portage Municipal Airport

Location: 1011 Silver Lake Drive

Year established: 1941

Runways: A paved primary runway, 3,768 feet long and 60 feet wide, and a paved crosswind runway, 2,559 feet long and 40 feet wide.

Number of aircraft based at the airport: 25

Average aircraft operations per week: 91

Facilities: 24-hour fuel (with credit card), 24-hour pilots' lounge, hangars, tie-downs. No control tower.

Airport manager: John Poppy, 608-742-3300.

0 comments

Lyn Jerde
Reporter
Portage Daily Register Reporter

Related to this story

Portage panel mulls future of municipal airport

Nov 16, 2018



Portage Airport study pdf

Nov 15, 2018



Survey pinpoints Portage airport's issues

Feb 14, 2019



#1

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Saturday, November 17, 2018 8:25:45 AM
Last Modified: Saturday, November 17, 2018 8:34:02 AM
Time Spent: 00:08:16
IP Address: 71.94.104.18

Page 1: Public Comments

Q1

Contact Information

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City / Town	**Cottage Grove**
State / Province	**WI**
ZIP / Postal Code	**53527**
Email	**dan@silvers.net**

Q2

Airport user/tenant

What is your affiliation with the Portage Municipal Airport?

Q3

Please provide your comment on the study below:

I own a C182, based at MSN.

Portage airport has been a valuable airport for purchasing self-serve fuel up on trips to northern WI. Between 12/2015 and 3/18/2018 I have purchased 1,080 gallons of fuel (mostly Swift UL94 fuel) from Portage.

I have also used the airport as a diversion when storms were encroaching on MSN.

#2

COMPLETE

Collector: Web Link 1 (Web Link)
Started: Friday, January 18, 2019 4:55:49 PM
Last Modified: Friday, January 18, 2019 5:02:28 PM
Time Spent: 00:06:39
IP Address: 50.50.86.41

Page 1: Public Comments

Q1

Contact Information

Name	**Paula Basten-Erath**
Address	**2535 Lennon St**
City / Town	**Portage**
State / Province	**WI**
ZIP / Postal Code	**53901**
Email	**mppb4@frontier.com**

Q2

Community member/other

What is your affiliation with the Portage Municipal Airport?

Q3

Please provide your comment on the study below:

I’m both a community member and an airport user. My question is whether there will be or is there a “survey re: portage airport “for community members? There are a number of people who consider themselves “friends of the airport” but are not pilots or business owners.
Please let me know. Thank you

#3

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Thursday, February 14, 2019 8:45:02 PM
Last Modified:	Thursday, February 14, 2019 8:53:07 PM
Time Spent:	00:08:04
IP Address:	68.190.116.89

Page 1: Public Comments

Q1

Contact Information

Name	**Cory Otto**
Company/Organization	**Turning point realty**
Address	**309 Dewitt**
City / Town	**Portage**
State / Province	**WI**
ZIP / Postal Code	**53901**
Email	**cpotto@gmail.com**

Q2

Community member/other

What is your affiliation with the Portage Municipal Airport?

Q3

Please provide your comment on the study below:

Longer runway
Modern facilities
Car Rentals
Better location for airport

CITY OF PORTAGE
PUBLIC NOTICE

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN
OPEN HOUSE MEETING

The City of Portage, the owner and operator of the Portage Municipal Airport, is hosting an airport master plan Open House. The meeting will be held on Tuesday, September 29, 2020, from 4:30 p.m. to 6:30 p.m. outside of the main hangar at the Portage Municipal Airport located at 1011 Silver Lake Drive, Portage, WI 53901. In case of inclement weather the meeting will be held inside the main hangar where face masks and social distancing will be required due to COVID-19.

The open house is an opportunity for members of the community to learn more about the airport study findings to date, review the development options being considered, and provide feedback to the city. Attendees can view study information at their own pace and ask questions of city, Wisconsin Department of Transportation and project consultant staff. A study briefing will begin at 6:00 p.m.

Study content presented at the open house will be available online at www.portageairportplan.tkda.com. Public comments will also be accepted through October 13, 2020.

For more information, please contact Aaron Jahncke PE, Director of Public Works/City Engineer at 608-742-2176.



Portage Municipal Airport
Airport Master Plan Study
Project Newsletter #3: September 2020

Background
The Airport Master Plan study for the Portage Municipal Airport analyzes the airport facility, identifies aviation demand, reviews development options, evaluates potential impacts, a creates a "roadmap" that will guide future improvements at the existing airport site.

Public Open House
September 29, 2020
4:30 p.m. - 6:30 p.m
Portage Airport Main Hangar

Project Update
The study team completed the inventory, activity forecasts, facility requirements, and alternatives analysis elements of the study. Portage City Council was briefed on the study status on August 13, 2020. A public open house is scheduled for September 29, 2020. COVID-19 has delayed the overall project schedule.

Key Findings To Date
- The community's aviation needs are not fully met due to the size and design of the existing airport
- The airport has several deficiencies to FAA and State airport design standards; action is needed
- The recommended runway length to meet existing constrained activity is 3,300 feet
- Implementing a runway length of at least 3,800 feet results in greater impacts and is not cost effective at the existing airport site

Development Alternatives
The Technical Advisory Committee (TAC) evaluated eight initial on-site development alternatives at their November 2019 meeting. The TAC's consensus is that Alternative 1A (Safety & Compliance) best satisfies the aeronautical needs at the existing site considering operational, environmental, and fiscal impacts. This option has the fewest off-airport impacts and has the lowest cost of the "build" options evaluated. This option however decreases airport utility but could be an interim solution if a new airport site is explored. A graphic of this alternative is shown on the reverse side of this newsletter.

Local Decision on Airport
The City of Portage will evaluate information from the draft master plan study considering input from the public, TAC and Airport Commission before making a decision on the future of the Portage Municipal Airport. Options will include (1) Improve the Existing Site, (2) Move the Airport to a New Site, or (3) Close the Current Airport.

How to Stay Engaged
The City of Portage encourages stakeholder engagement. A public open house is scheduled for September 29, 2020 to share information and collect feedback from community members about the airport development alternatives before decisions are made on the future of the airport. Individuals can also view study and meeting materials online at **www.portageairportplan.tkda.com**. The public comment period will run through **October 13, 2020**.

Project Contacts

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Lucas Ward PE, Wisconsin Bureau of Aeronautics — lucas.ward@dot.wi.gov
Marcus Watson CM, TKDA — marcus.watson@tkda.com

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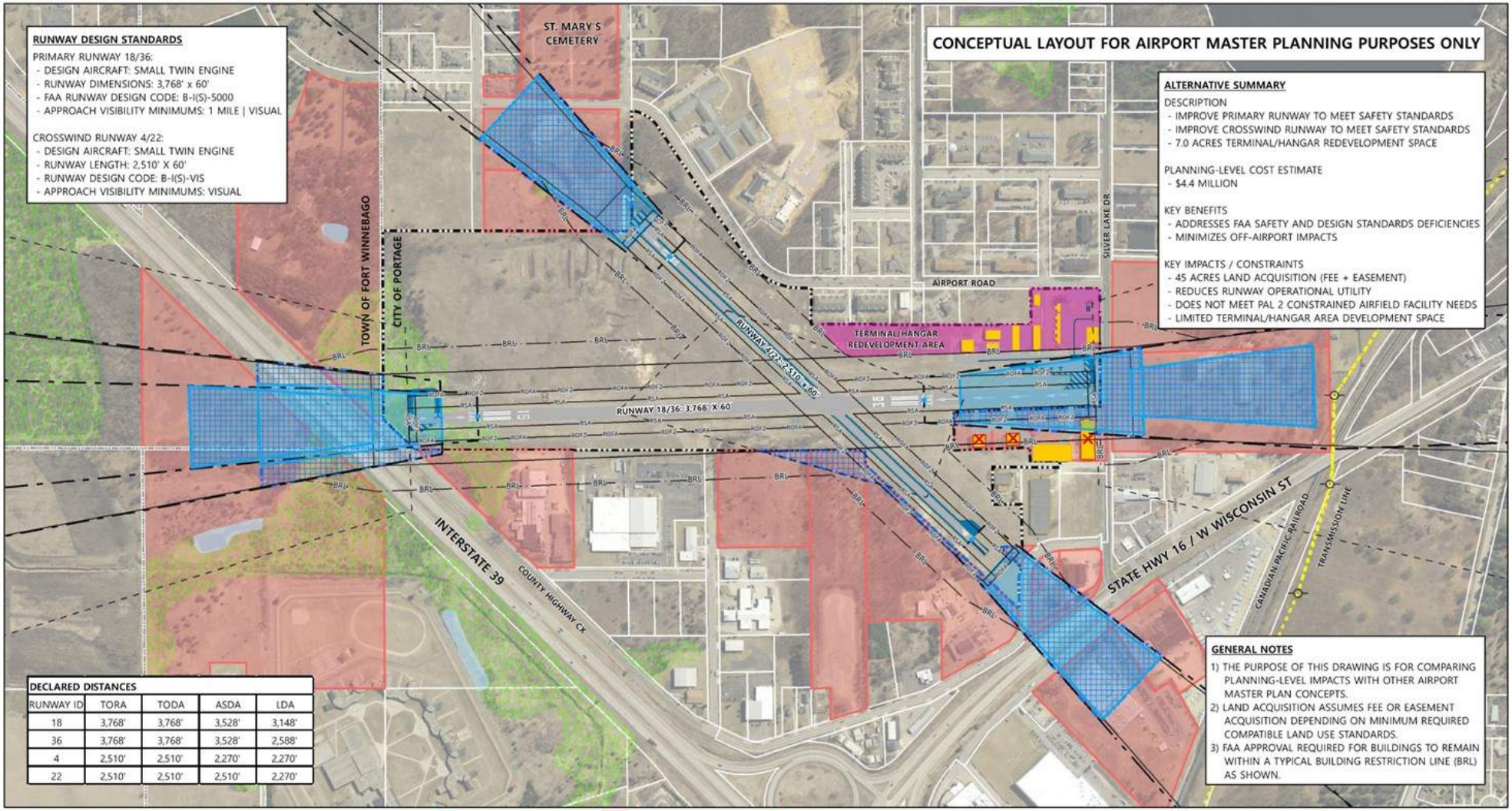
TKDA

FIGURE 5-1: ALTERNATIVE 1A - SAFETY & COMPLIANCE

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI



Meeting Sign-In Sheet

Date:	September 29, 2020	**Location:**	Portage Municipal Airport
Project:	Portage Airport Master Plan	**Time:**	4:30 p.m. – 6:30 p.m.
Meeting:	Public Open House #2		

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Gordon Tompkinson	gordon@filtrationcorp.ca	630-858-9030
Rick Dodd	rick.dodd@portagewi.gov	608-697-7065
LUCAS WARD	LUCAS.WARD@DOT.WI.GOV	608-266-2729
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Mark Graczykowski	mark.graczykowski@dot.wi.gov	608-266-0902
DAVID LYTLE	N5867L@ATT.NET	608 577-8270
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Eric Petersen	ep@flyhighwi.com	608-712-7796
LEIF GREGERSON	lgregerson1959@gmail.com	608 6177187

Portage Municipal Airport (C47)

Airport Master Plan – Phase 1

Public Open House #2

TKDA

September 29, 2020

Introductions

- ✈ Aaron Jahncke, PE - City of Portage (Airport Owner)
- ✈ Lucas Ward, PE - Wisconsin Bureau of Aeronautics
- ✈ TKDA Representatives (Consultant)

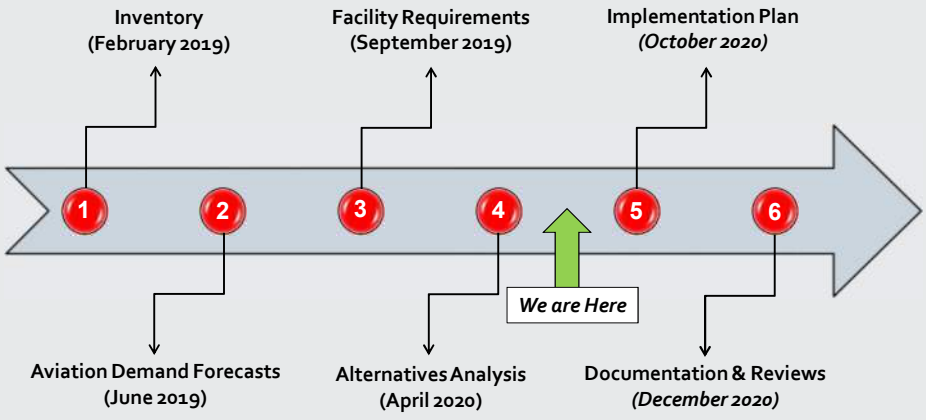


Airport Master Plan Study Goals

1. Document non-standard airport conditions.
2. Review viability of the existing airport site to meet aviation demand and facility requirements.
3. Allow the City of Portage to make an informed decision on future investment at the airport.



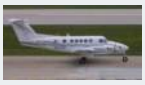
Current Project Schedule



**Schedule subject to change based on review timelines

Facility Needs Summary

- Planning Activity Levels (PAL)

Metric	Existing	PAL 2	PAL 3	PAL 4
Forecast Type	-	**Constrained**	Unconstrained	Unconstrained
Forecast Year	2018	**2038**	2023	2038
Annual Operations	3,788	**4,255**	9,740	10,955
Based Aircraft	25	**28**	37	40
FAA Design Standards	A-I, Small	**B-I, Small**	B-II, Small	B-II, Large Business Jet
Critical Aircraft				
Primary Runway Dimensions	3,768' x 60'*	**3,300' x 60'**	3,800' x 75'	5,500' x 75'

Airfield Alternatives

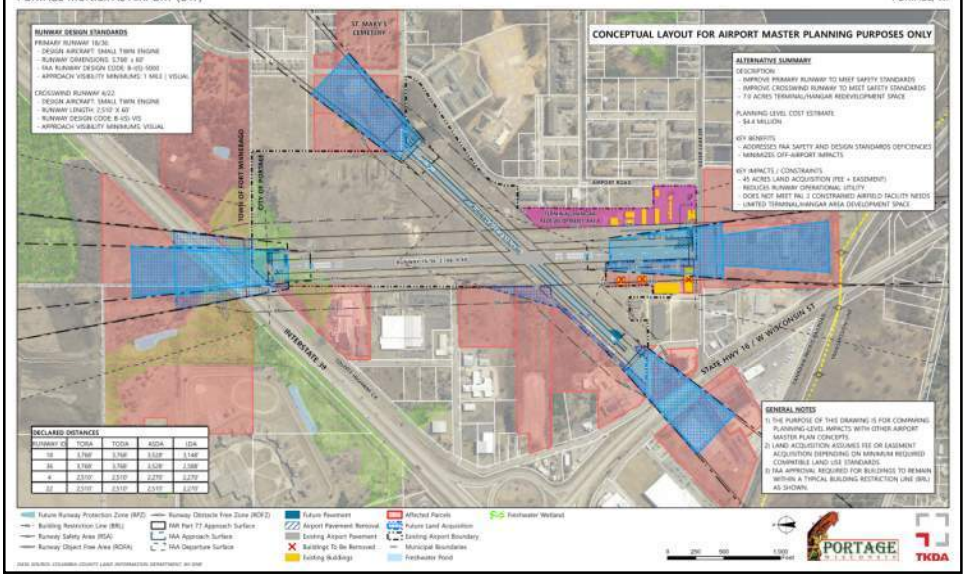
- Eight (8) on-site airfield "build" development options were developed
- Criteria was to meet FAA design standards and facility needs for various activity scenarios:
  - **3,300' Runway (PAL 2)**
  - 3,800' Runway (PAL 3)
  - 5,500' Runway (PAL 4)
- A planning-level impacts evaluation was completed for each option for comparative purposes
- After TAC and Agency feedback, the most feasible alternatives meet up to **PAL 2** requirements
  - Three (3) short-list options

Alternative 1A: Safety & Compliance

Total Estimated Cost: $4.4 million

FIGURE 5-1: ALTERNATIVE 1A - SAFETY & COMPLIANCE
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI

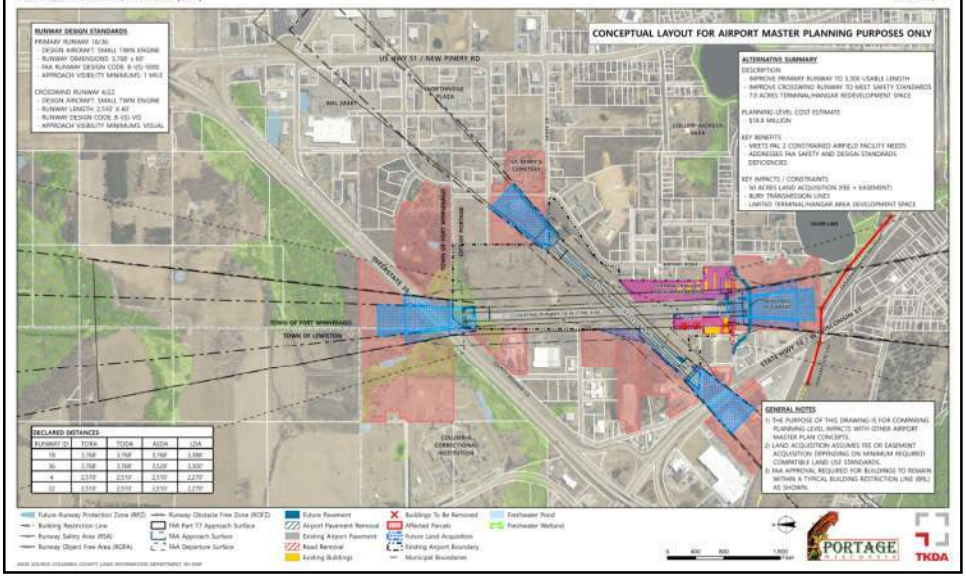


Alternative 2A: Improve Runway 18/36 to 3,300'

Total Estimated Cost: $18.8 million

FIGURE 5-2: ALTERNATIVE 2A - IMPROVE RUNWAY 18/36 TO 3,300 FEET USABLE LENGTH
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI

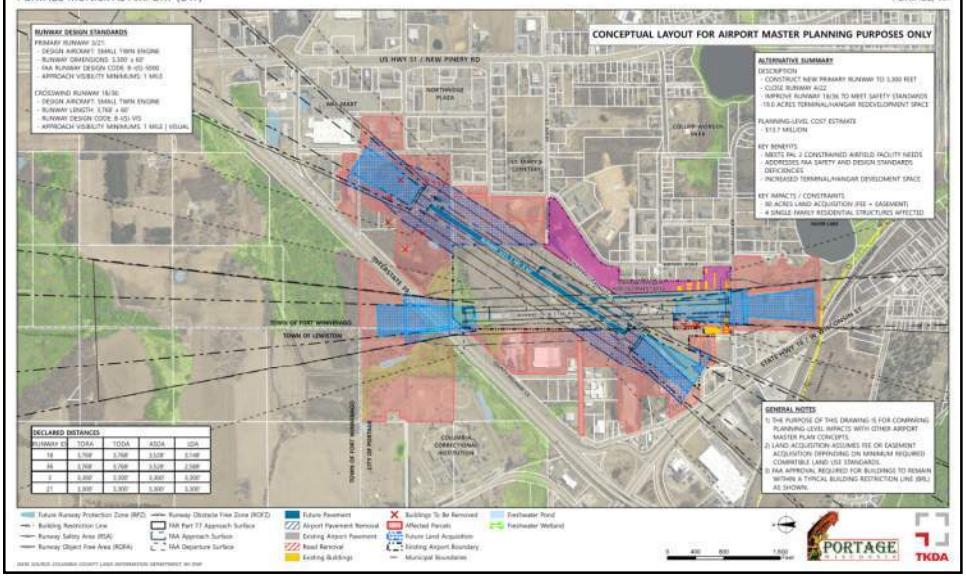


Alternative 2C: Construct New 3,300' Runway

Total Estimated Cost: $13.6 million

FIGURE 5-4: ALTERNATIVE 2C - CONSTRUCT NEW RUNWAY TO 3,300 FEET
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI



Airfield Alternatives Analysis

- The TAC's consensus is that **Alternative 1A** best satisfies the aeronautical needs at the existing airport site considering operational, environmental, and fiscal impacts.

Key considerations:

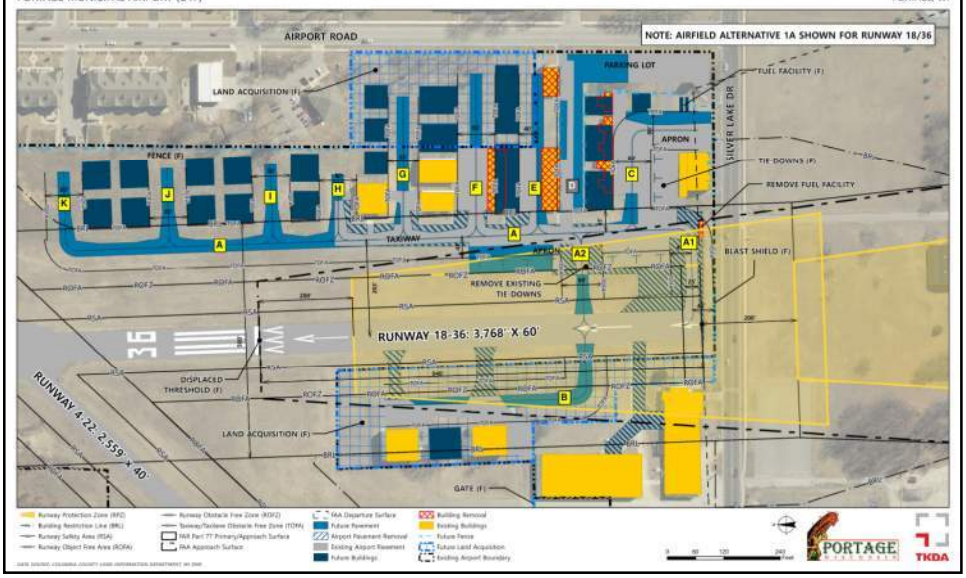
- **Fewest off-airport impacts and lowest cost** of "build" alternatives to meet basic airport safety needs.
- Heavily weighted impacts to landowners surrounding the airport and local share cost.
- **Decreases airport utility** by reducing usable runway length and eliminating instrument approaches – tradeoff.
- **Interim solution** while a new airport site is explored.
- Terminal/Hangar area concept compatible with Alternative 1A.

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Terminal/Hangar Area Development Concept

FIGURE 5-10: PREFERRED TERMINAL / HANGAR AREA ALTERNATIVE
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI



Future of the Portage Municipal Airport

City of Portage Decision



✈ **Improve the Existing Airport Site**
- Focus of current study alternatives

✈ **Move the Airport to a New Site**
- Requires new studies, approvals, etc.

✈ **Close the Current Airport**
- Requires WBOA management and FAA Headquarters approval

Public Involvement

- Public input is important for local decision making
- Visit with study team and ask questions
- Provide written feedback for the project record
  - Complete a Comment Card
  - Submit comment online on the Project Website
  - Comment period open through October 13, 2020
- Visit **www.portageairportplan.tkda.com** for study documents and updates



Study Next Steps

- Review Public Comments
- Technical Advisory Committee Meeting #4
  - Recommend preferred study alternative
- Local Approval of Airport Plan
  - Airport Commission
  - Common Council
- Complete Study Documentation
- Adopt Airport Master Plan Study



Questions & Answers

Portage Municipal Airport
Airport Master Plan – Phase 1
Public Open House #2

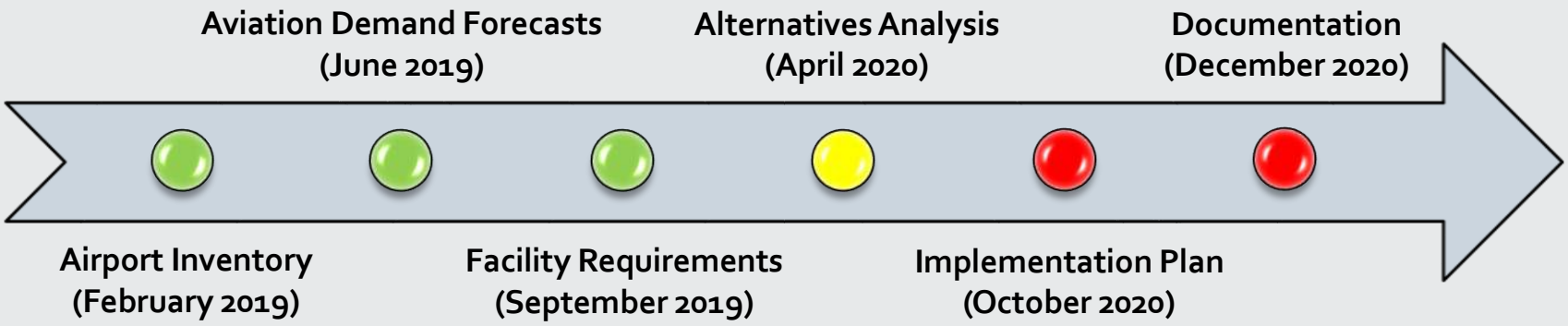
September 29, 2020

TKDA

Study Objectives & Schedule



- Identify aviation demand and facility requirements at the Portage Municipal Airport.
- Document deficiencies to airport design standards and review viability of existing airport site to meet needs.
- Develop a document to enable the city to make a determination on the future of the existing airport site.
  1. Improve Existing Airport Site
  2. Move the Airport to a New Site
  3. Close the Current Airport



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Key Study Findings to Date



- Airport has several safety deficiencies to FAA airport design standards, such as airspace obstructions.
- Aviation demand in constrained by the current airport facility; unmet demand exists.
- Recommended runway length is 3,300 feet to support a small single/multi-engine aircraft.
- Improvements to other supporting infrastructure recommended to meet safety and demand needs (e.g. taxiways, aircraft parking, hangars, terminal, fueling facilities, visual navigational aids)

Metric	2018 (Base)	2038 (Forecast)
Forecast Type	-	Constrained
Annual Operations	3,788	4,255
Based Aircraft	25	28
FAA Design Standards	A-I, Small	B-I, Small
Example Critical Aircraft		

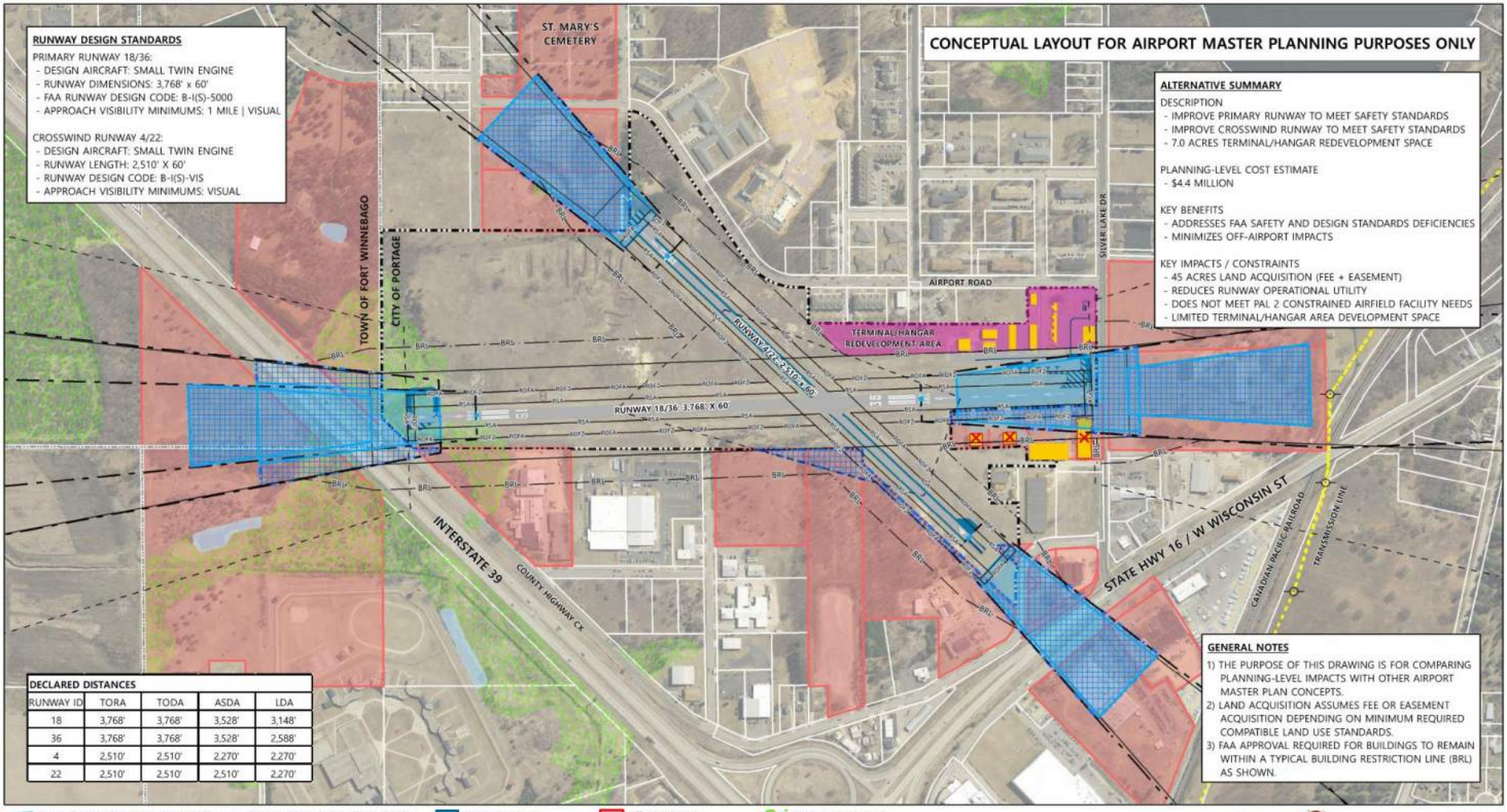
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Alternative 1A: Safety & Compliance

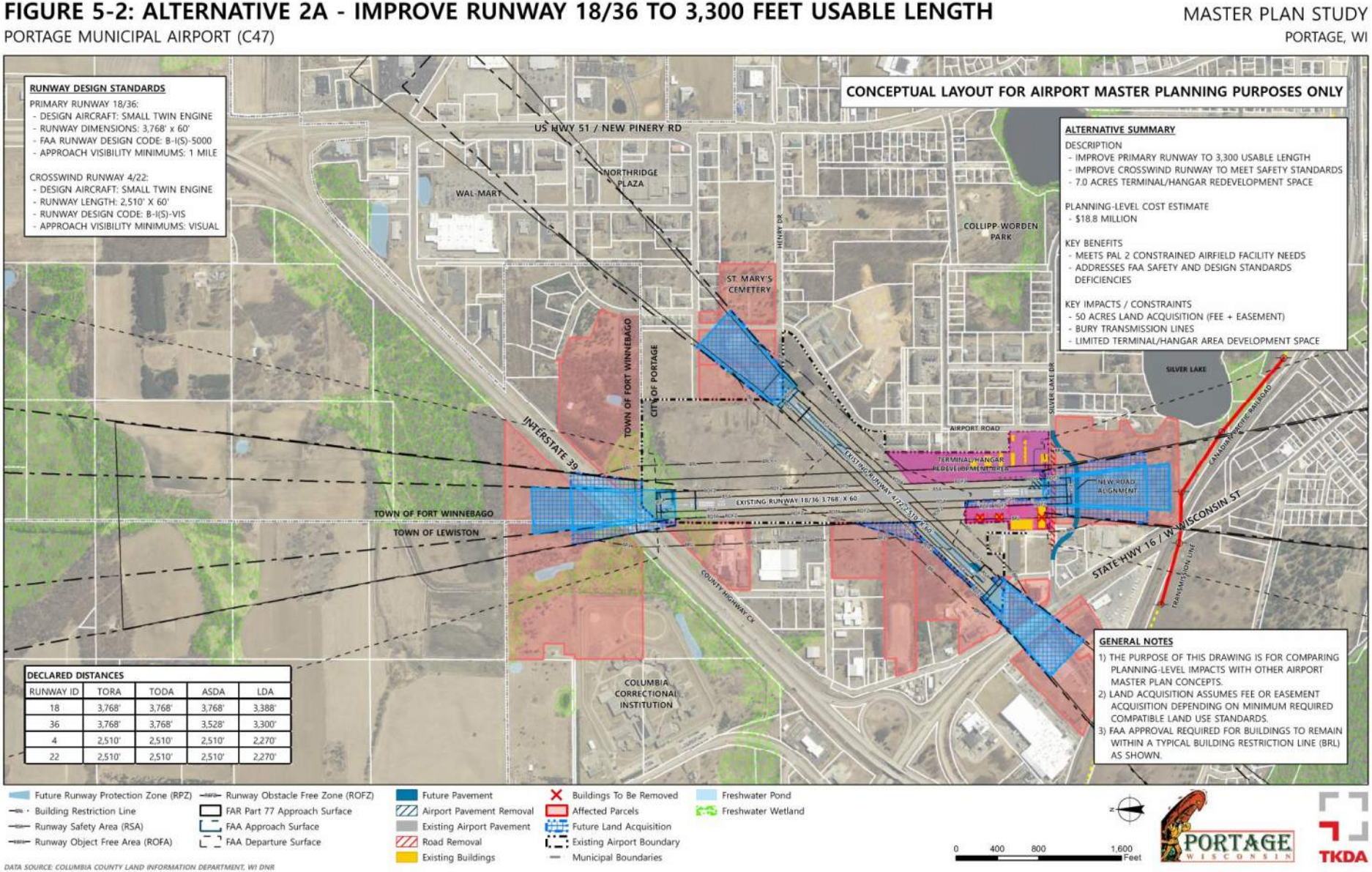
FIGURE 5-1: ALTERNATIVE 1A - SAFETY & COMPLIANCE

PORTAGE MUNICIPAL AIRPORT (C47)

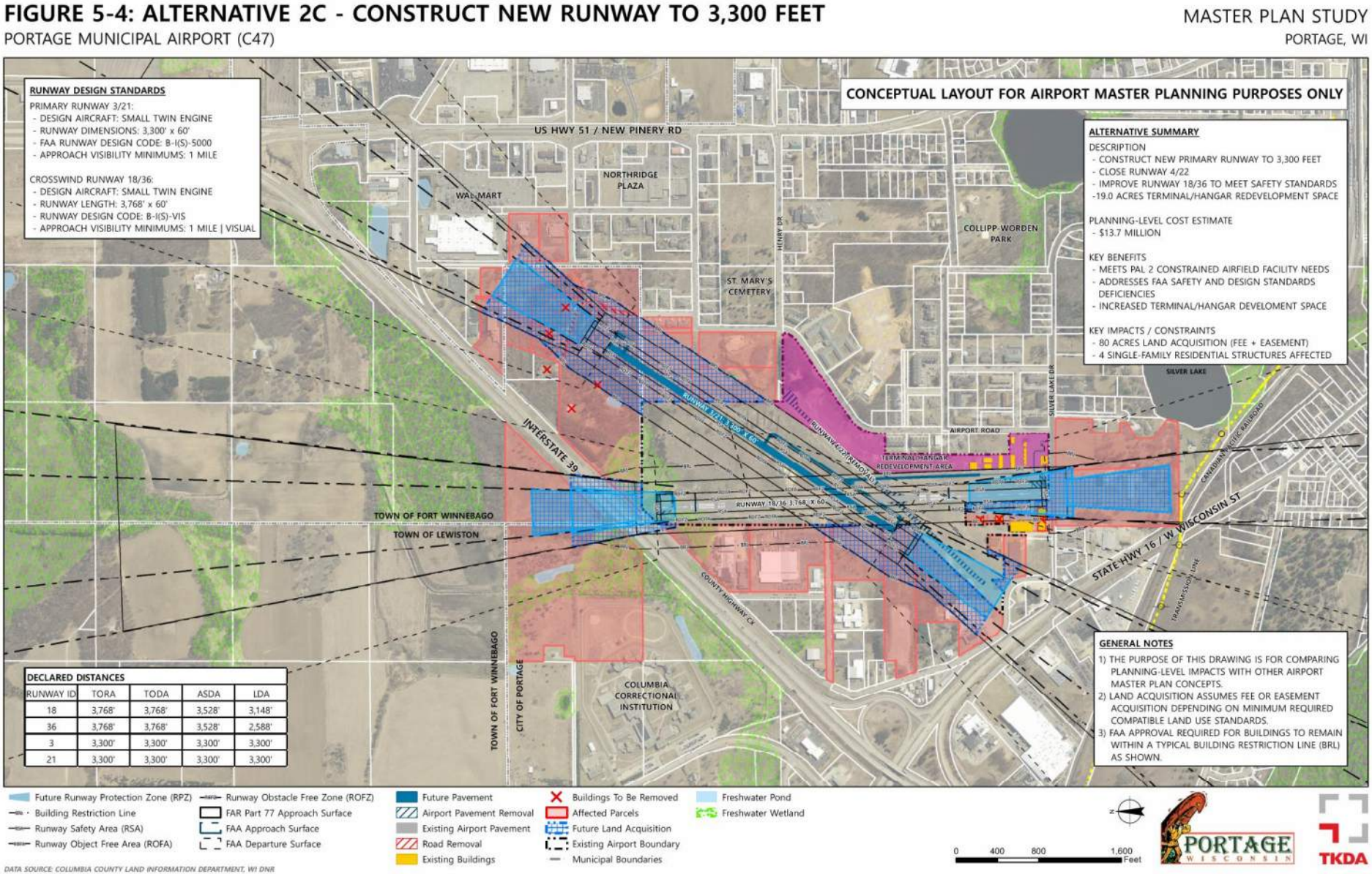
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Alternative 2A: Improve Runway 18/36 to 3,300’



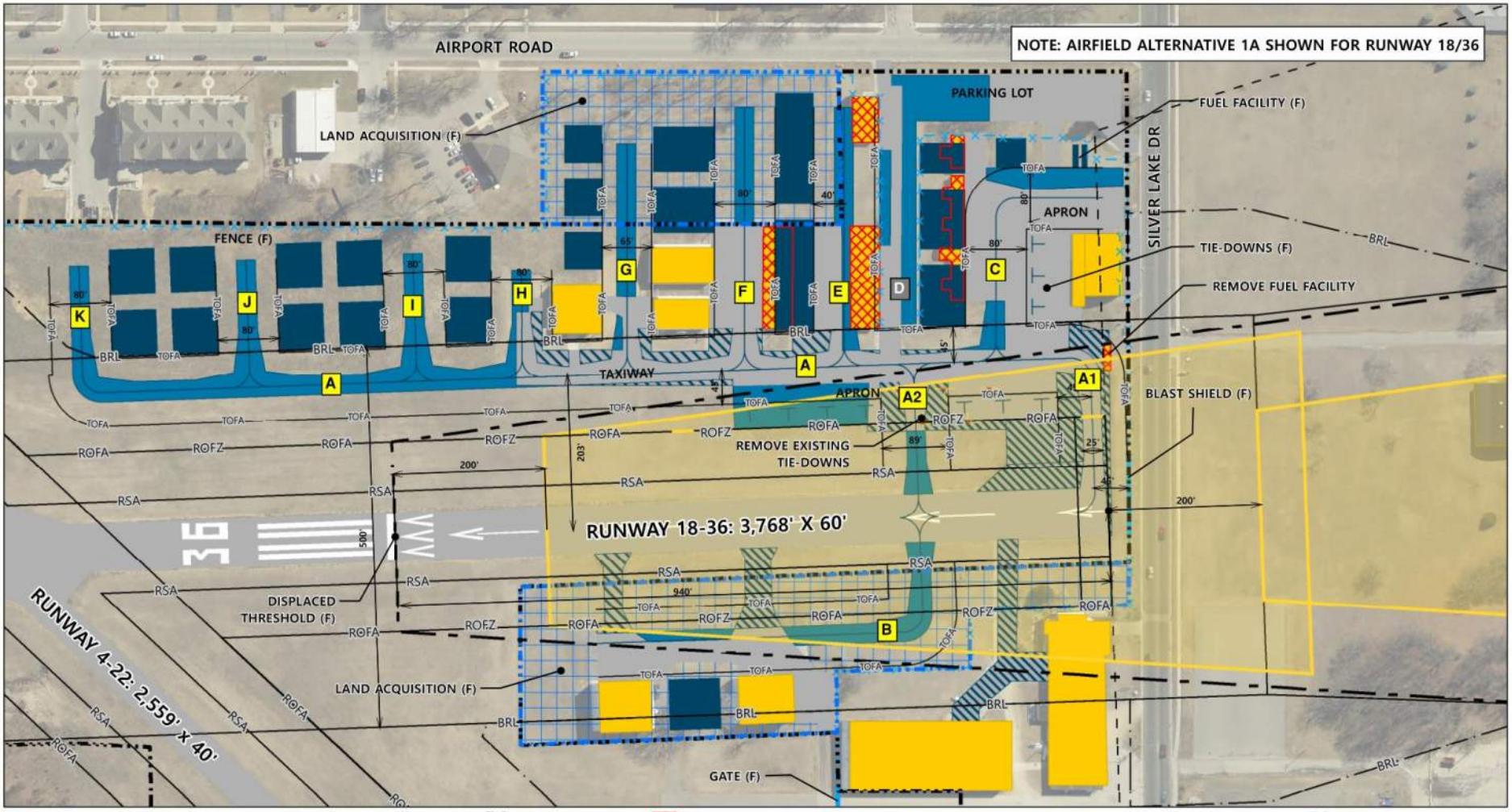
Alternative 2C: Construct New 3,300’ Runway



Terminal/Hangar Area Development Concept

FIGURE 5-10: PREFERRED TERMINAL / HANGAR AREA ALTERNATIVE
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI



Airfield Alternatives Impact Summary

Category	1A	2A	2B	2C	3A	3B	4A	4B
Minimum Primary Runway Distance	**2,588'**	**3,300'**	3,300'	**3,300'**	3,500'*	3,800'	5,500'	5,500'
Crosswind Runway	**Yes**	**Yes**	Yes	**Yes**	No	Yes	No	No
Meets Rec'd Runway Distances	**No**	**Yes**	Yes	**Yes**	Yes	Yes	Yes	Yes
Meets Basic FAA Design Standards	**Yes**	**Yes**	Yes	**Yes**	Yes	Yes	Yes	Yes
Transmission Line Impacts	**No**	**Yes**	No	**No**	Yes	No	Yes	No
Triggers Terminal Area Relocation	**No**	**No**	No	**No**	Yes	No	Yes	Yes
Roadway Impacts	**No**	**Yes**	Yes	**Yes**	Yes	Yes	Yes	Yes
Land Acquisition (acres)	**45 ac**	**50 ac**	75 ac	**80 ac**	60 ac	115 ac	215 ac	230 ac
Residential Structures Impacted	**0**	**0**	11	**4**	0	4	0	5
Other Structures Impacted	**3**	**3**	5	**5**	13	8	21	23
Planning-Level Cost	**$4.4m**	**$18.8m**	$23.3m	**$13.7m**	$26.1m	$43.8m	$82.6m	$102.2m
Local Share*	**$0.3m**	**$12.6m**	$1.3m	**$0.8m**	$14.5m	$3.8m	$17.8m	$7.2m
Development Practicality	**High**	**Medium**	Low	**Medium**	Medium	Medium	Low	Low
Generic New Airport Cost	***$21.3m***	***$21.3m***	*$21.3m*	***$21.3m***	*$26.6m*	*$26.6m*	*$44.9m*	*$44.9m*
Generic New Airport Local Share	**$3.2m**	**$3.2m**	$3.2m	**$3.2m**	$4.0m	$4.0m	$6.8m	$6.8m

**Assumes FAA/WBOA funding participation, crosswind runway eligible for FAA/WBOA funding, and no FAA/WBOA funding for transmission line actions*

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Conceptual Evaluation for Master Planning Purposes Only

Public Involvement



- Provide Feedback
  - Fill out a comment card for the study team
  - Submit a comment on project website
  - Comment period open until **October 13, 2020**
- Stay Engaged
  - Please visit **www.portageairportplan.tkda.com** for study documents and updates



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COMMENT CARD

AIRPORT MASTER PLAN STUDY
PORTAGE MUNICIPAL AIRPORT

PUBLIC OPEN HOUSE #2
SEPTEMBER 29, 2020

Please leave comments at Open House, submit online at www.portageairportplan.tkda.com, or send this completed form to:

Aaron Jahncke, Public Works Director / City Engineer
City of Portage
115 West Pleasant Street
Portage, WI 53901
aaron.jahncke@portagewi.gov

Public comment period ends October 13, 2020.

NAME: Roger and Marian Thistle

ORGANIZATION (If applicable):

ADDRESS: N2142 Lake Drive Lodi WI 53555

TELEPHONE #: 608 592-4445

E-MAIL: flyingazywi@gmail.com

AFFILIATION WITH THE AIRPORT (Please Check One):

- ☑ Airport user or tenant
- ☐ Government agency or elected official
- ☐ Community member or other

COMMENT (Please Print):

We feel its time to improve the airport as it has NOT Had any improvements for years, has gone downhill!
Improve the cross runway as is very rough the way it is now.

Notes: Additional comment space on reverse side of this form. Comments received will be reviewed by the project team incorporated into the study as appropriate.

https://www.wiscnews.com/portagedailyregister/news/local/updated-4-4-million-in-improvements-recommended-for-portage-airport-city-costs-estimated-at-300/article_8b823394-8962-5aff-b2e9-e1c651116ef3.html

ALERT TOP STORY

UPDATED: $4.4 million in improvements recommended for Portage airport; City costs estimated at $300,000

Nicole Aimone
Oct 2, 2020

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Portage residents gathered just outside an aircraft hanger at the Portage Municipal Airport Tuesday to hear the city's plan to upgrade aspects of the airport to make it safer and more usable.

NICOLE AIMONE/Daily Register

Portage Municipal Airport needs upgrades to qualify for federal funds and meet potential needs of businesses and recreational aviators, according to findings from a 2018 study.

The city, along with TKDA Engineering out of Downers Grove, Illinois, presented the findings of a use study and plans to upgrade the airport at 1011 Silver Lake Drive, to residents in a public meeting Tuesday night. About 22 people attended including Mayor Rick Dodd.

The use study was conducted in 2018 by TKDA and served to document the current uses and conditions of the airport.

According to Marcus Watson, project manager with TKDA, the study revealed that due to runway length and tall objects blocking airpaths, the airport is not currently up to Federal Aviation Administration guidelines.

“We looked at the demand and what can the facility handle right now. One of the key things we found is there is demand here for both business and recreational, that cannot use the airport because of the deficiencies in the facilities,” said Watson. “For example, the runway length isn’t sufficient there are airspace obstructions that do not allow for safe flight.”

Watson said the FAA classifies the airport as constrained, meaning it is not able to support the current aviation use, or potential growth without upgrades. The airport operates with approximately a 3,700 foot runway, with about 4,255 take-offs and landings yearly. There are 28 aircrafts based in hangars at the airport.

Portage Airport video

The current design of the airport is functional for small aircrafts that can seat up to six passengers.

The city has three development options to upgrade the airport. The first would cost approximately $4.4 million and would require the city to acquire nearby land. City costs for that option would be about $300,000 due to the availability of state and federal funds.

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Option one would include shortening the usable length of the runways, from about 3,700 feet to 3,300 feet and redeveloping current hangers and terminals to bring the airport into safety compliance with the FAA.

“This is the safety and compliance option,” said Watson. “It does not impact any surrounding roads, it does not impact any surrounding residential property. Overall, of the options, this is the least impactful option.”

While this option is the most inexpensive and least disruptive to residents and nearby homes, it would decrease the usable space and traffic at the airport.

The second option would cost $18.8 million and would improve the whole usable length of the airport, but would require rerouting of Silver Lake Drive and burying powerlines underground.

The third option would include constructing an entirely new 3,300 foot runway, and would cost approximately $13 million, and would require much more construction time and equipment which could cause disruption to nearby residents.

Members of TKDA and the city's advisory committee working on the project recommended option one.

The city can choose any three of the options to improve the existing airport, choose to move the airport to a new location and build from scratch or choose to close the current airport which would require approval from the department of transportation and aviation and FAA. Building a new airport would require an entirely new set of studies, plans and permits.

"I just want to thank everyone for showing up. It's been a long drawn out process," said Aaron Jahncke, the city's public works director and engineer. "At this point, we're trying make a decision. I appreciate everyone attending this, and if you have any

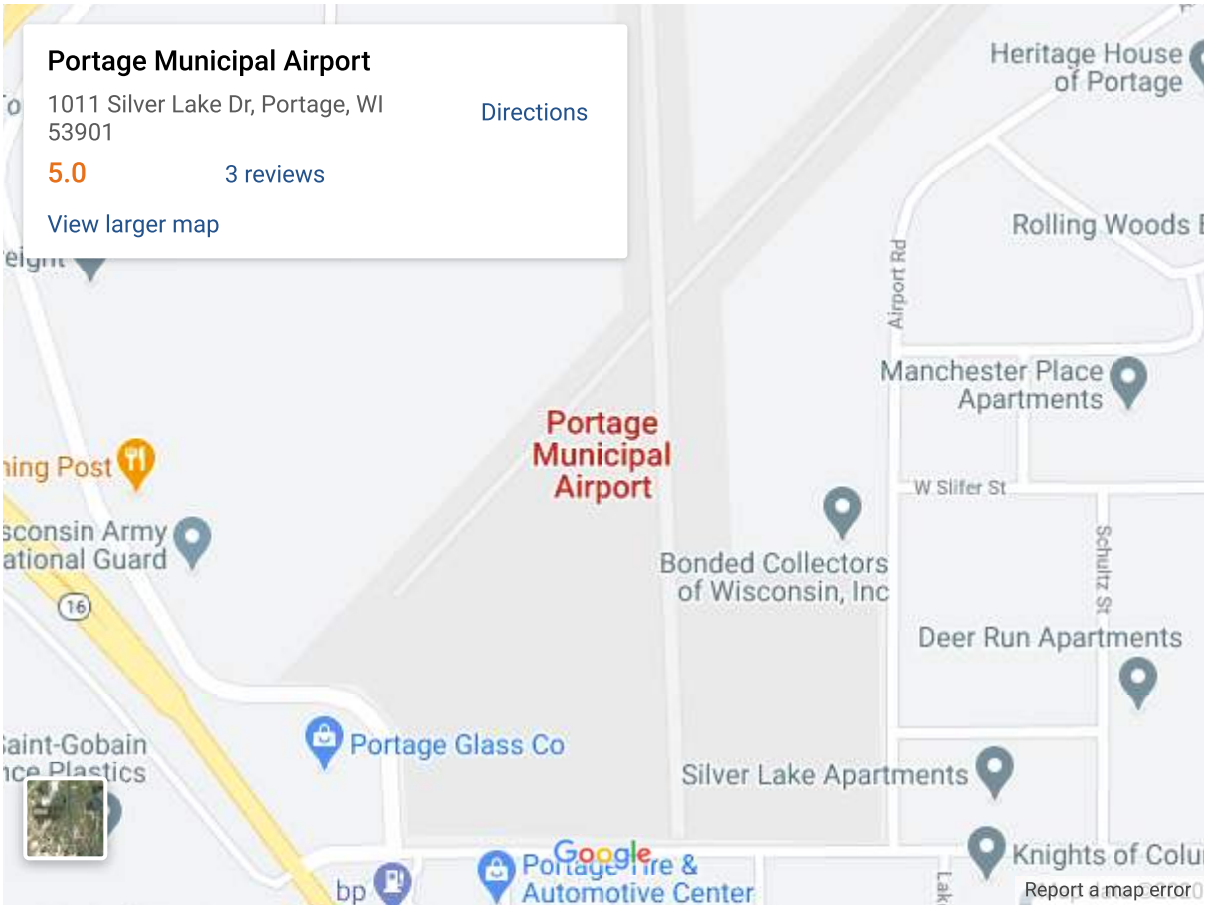
comments to make please do."

Residents can contact Jahncke with comments via phone, email or mail prior to Oct. 13, or visit **portageairportplan.tkda.com** to learn about the provided plans or make a comment prior the Oct. 13 deadline.

This story was updated Oct. 2 to include the potential costs to the city for the project.

Follow Nicole on Twitter **@Nicole_Aimone**

0 comments



Nicole Aimone

Related to this story

Portage Municipal Airport

Feb 14, 2019

Marcus Watson

From: Aaron Jahncke <Aaron.Jahncke@portagewi.gov>
Sent: Wednesday, May 8, 2019 11:29 AM
To: Marcus Watson
Subject: RE: [EXTERNAL EMAIL] Portage Airport TAC

Aaron Jahncke, Chairperson;

Steve Sobiek, City Business Development and Zoning Vice-Chair;

Bill Barthen Plan commission member
Kurt Calkins Columbia County Zoning and Planning ,

Leif Gregerson, Airport User

Dave Gunderson local business person,

Doug Klapper Council Member,

Jeff Liegel Culvers,

Rita Maass Airport Comm Chair ,

John Poppy Airport Manager

Aaron J. Jahncke, P.E.
Director of Public Works/City Engineer
City of Portage
115 West Pleasant St.
Portage, WI 53901
(608) 742-2176 ext. 325

From: Marcus Watson [mailto:marcus.watson@tkda.com]
Sent: Wednesday, April 10, 2019 7:35 AM
To: Aaron Jahncke
Subject: [EXTERNAL EMAIL] Portage Airport TAC

** THIS IS AN EXTERNAL EMAIL **
Aaron – when you have a chance, can you please send me the final list of TAC members including the organizations they represent? Thanks!

Marcus Watson | Group Manager Aviation Planning

444 Cedar Street, Suite 1500, Saint Paul, MN 55101
P **651.292.4599** | C **651.448.3013**
marcus.watson@tkda.com
tkda.com

This email is on a publicly owned system, subject to open records and archival requirements under Wisconsin State Law. This email and any attachments may contain confidential information that is exempt from disclosure under applicable law. If you received this email in error, please notify the sender, delete the email and any attachments and do not use, disclose, or store the information it contains

Meeting Sign-In Sheet

Date:	February 13, 2019	**Location:**	Portage City Municipal Building
Project:	Portage Airport Master Plan	**Time:**	3:30 p.m. – 4:30 p.m.
Meeting:	Technical Advisory Committee #1		

Name	E-Mail	Telephone
Jeff Liegel	Jeff@Bleedblue.net	
Paula Basten-Erath	aspenfcpaula@gmail.com	
Barry Erath airport commission	erathb@aspenfc.com	
Kurt Calkins	Kurt.Calkins@cocolabs.com	
Mark Graczykowski	mark.graczykowski@dot.wi.gov	
Steve Sobiek	steven.sobiek@portagewi.gov	745-0038

ADHOC AIRPORT MASTER PLAN TECHNICAL ADVISORY COMMITTEE

ADHOC AIRPORT MASTER PLAN TECHNICAL ADVISORY COMMITTEE MINUTES

ADHOC AIRPORT MASTER PLAN TECHNICAL ADVISORY COMMITTEE PACKETS

KEY CONTACT

Aaron Jahncke
Director of Public Works, City Engineer
Municipal Building
115 West Pleasant Street
Portage, WI 53901
608-742-2176, Ext. 325
Aaron.Jahncke@portagewi.gov

Bill Barthen
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bill.barthen@gmail.com

Kurt Calkins
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Kurt.Calkins@co.columbia.wi.us

Leif Gregerson
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lgregerson1959@gmail.com

Dave Gunderson
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dave@gundersondesignbuild.com

Aaron Jahncke
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Aaron.Jahncke@portagewi.gov

Doug Klapper
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Jeff Liegel
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Rita Maass
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John Poppy
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poppy@air-portage.com

Steve Sobiek
115 W Pleasant St Portage
Steven.Sobiek@portagewi.gov

TKDA
444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

Memorandum

To:	Portage Airport TAC	**Reference:**	Portage Airport Master Plan
Copies To:	City of Portage		Background Information
	WisDOT Bureau of Aeronautics		
		Project No.:	17011
From:	Marcus Watson, TKDA	**Date:**	November 7, 2018

Airport Background

The Portage Municipal Airport opened in 1941. It supports business and personal aviation serving Portage and neighboring communities. The airport has a paved primary runway 18-36 (3,768' x 60'), a paved crosswind runway (2,559' x 40'), and is home to 25-based aircraft.

The Portage Municipal Airport is constrained by the natural and man-made environment. There are many deficiencies to Federal airport design standards. Several studies were completed in the past evaluating the existing airport and a potential new airport site.

Airport Master Plan

An Airport Master Plan study analyzes an airport's built and natural environment, identifies aviation demand, reviews development options, evaluates potential impacts, and creates a "roadmap" that will guide future airport improvements. Understanding current issues and identifying future opportunities will help the airport meet the needs of the community.

A new airport master plan study at Portage is needed to:

- Document non-standard conditions
- Review viability of the existing airport site to meet aviation demand and facility requirements
- Allow the City of Portage to make an informed decision on future investment in the airport

Key study objectives include:

- Identify area aviation demand and facility needs
- Document airport design standard deficiencies
- Review feasibility of meeting needs on the existing airport site
- Engage local stakeholders throughout the study
- Develop a decision-making document on the future of the airport
- Identify a realistic action plan moving forward

The study *Planning Considerations Map* is included on the second page of this memo for reference.

Technical Advisory Committee

The role of the TAC is to review technical elements of the airport master plan study, provide feedback, and make a recommendation to the City of Portage on future airport development. Five (5) TAC meetings are scheduled at key points in the study to share information and collect feedback. The TAC is one element of the study's public involvement plan.

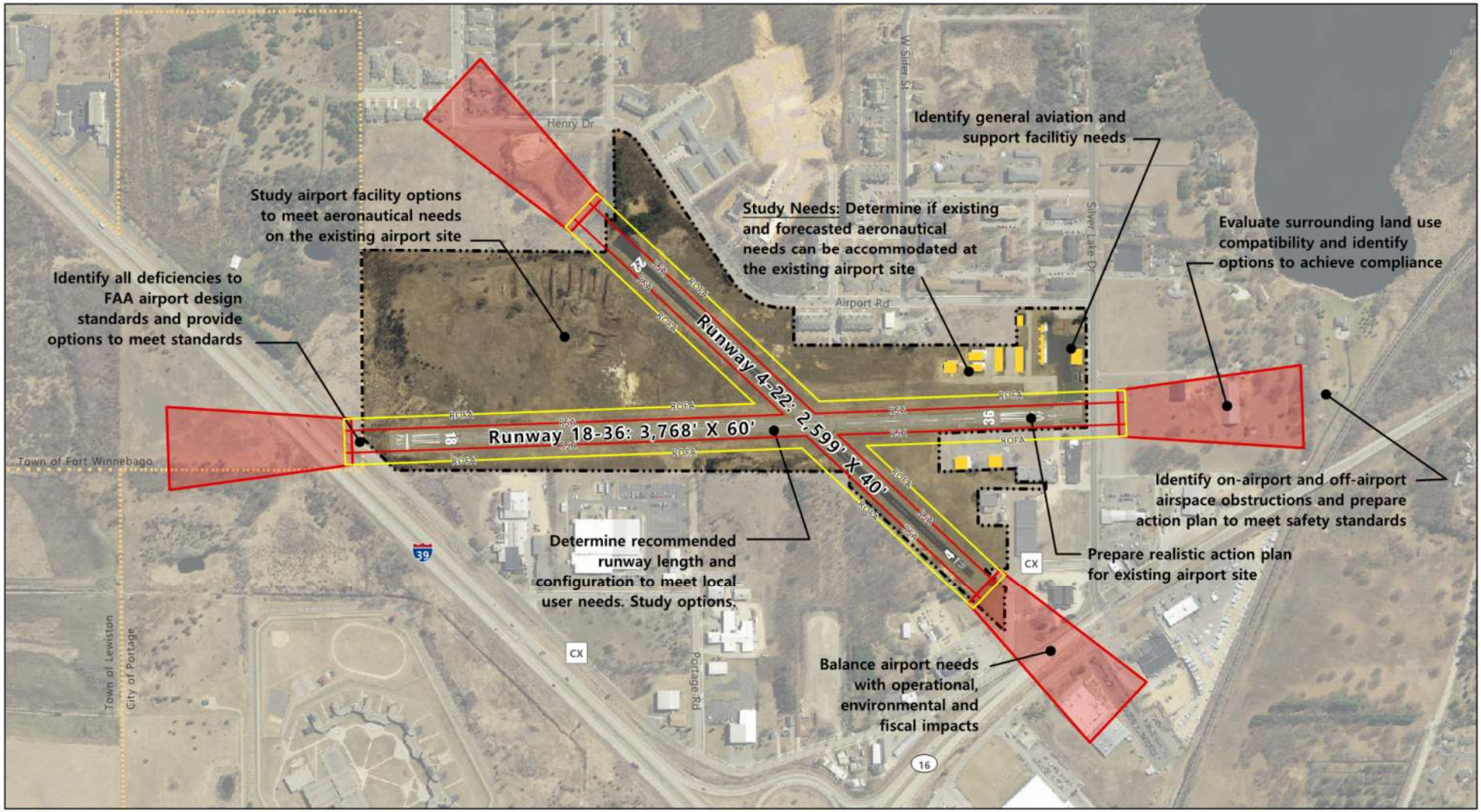
Study Schedule

The study began in October 2018, and is expected to be completed in 24 months. A preferred development option for the existing airport site is expected to be completed in the April 2020.

An employee-owned company promoting affirmative action and equal opportunity.

PORTAGE MUNICIPAL AIRPORT

Planning Considerations Map



Runway Protection Zone (RPZ)

Runway Obstacle Free Area (ROFA)

Runway Saftey Area (RSA)

Aeronautical Buildings

Airport Boundary

City Boundary

0 250 500 1,000 Feet

PORTAGE WISCONSIN

TKDA

Engineering
Architecture
Planning

444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

Data source: Columbia County Land Information Department http://opendata-cclid.opendata.arcgis.com/

Portage Municipal Airport (C47)

Airport Master Plan – Phase 1
Technical Advisory Committee (TAC)
Meeting #1

TKDA

February 13, 2019

Introductions

- Aaron Jahncke, City of Portage (Airport Owner)
- Mark Graczykowski, Wisconsin Bureau of Aeronautics
- Marcus Watson, TKDA (Consultant)
- Meeting Attendees



Kickoff Meeting Objectives

- Introduce TAC to the airport planning process
- Review airport challenges & opportunities
- Obtain TAC input on the airport
- Provide tentative project & meeting schedule



Feedback Point

- What are the first things to come to mind when someone says "Portage Airport"?



Technical Advisory Committee (TAC) Role

- **Provide guidance and recommendations to the city to make decisions on airport development**
- Represent a cross-section of community stakeholders
- Review technical elements of study
- Collaborate as a team to provide input
- Provide recommendation to the city



What is a Master Plan?

- An airport master plan is a comprehensive study of an airport and describes the short-, medium-, and long-term development plans to meet future aviation demand
- Prepared by the airport owner to review needs for the next 20+ years
- Provides airport development framework to feed into Airport Layout Plan (ALP)

Previous Studies at C47

- Airport Established (1941)
- Airport Relocation Study (1972)
- Airport Site Selection Study (1992)
- Runway Feasibility Study (1994)
- Phase 1 Feasibility Study (2002)
- Phase 2 Feasibility Study (2003)
- Environmental Assessment for New Airport Site (2007)
- Airport Master Plan (2011)



Need for New Airport Master Plan

- Previous studies did not fully document non-standard conditions and actions needed to achieve compliance
- Obligation to maintain a safe airport
- An updated study is needed to:
  1. Document non-standard conditions
  2. Review viability of the existing airport site to meet aviation demand and facility requirements
  3. Allow the airport sponsor to make an informed decision on future investment in the airport

Study Objectives

- Identify aviation demand and facility requirements local to the Portage area
- Document deficiencies to FAA airport design standards
- Review feasibility of achieving compliance with facility requirements, including options and costs
- Develop consensus with local stakeholders on understanding key airport planning challenges
- Develop a decision-making document to allow the city to determine the future of the airport
- Obtain FAA and State agency feedback
- Provide the framework for future studies and actions to meet facility needs

Master Plan Study Process



Master Plan Study Process

4. Identify & Evaluate Alternatives

- Evaluation solutions for to meet compliance
- Identify and evaluate development alternatives based on feasibility, operational, environmental and fiscal impacts
- Select preferred alternative for development plan

5. Implementation Plan & Financial Feasibility

- Identify plan implementation steps for preferred alternative
- Review financial feasibility and funding needs of future actions

6. Study Documentation & Reviews

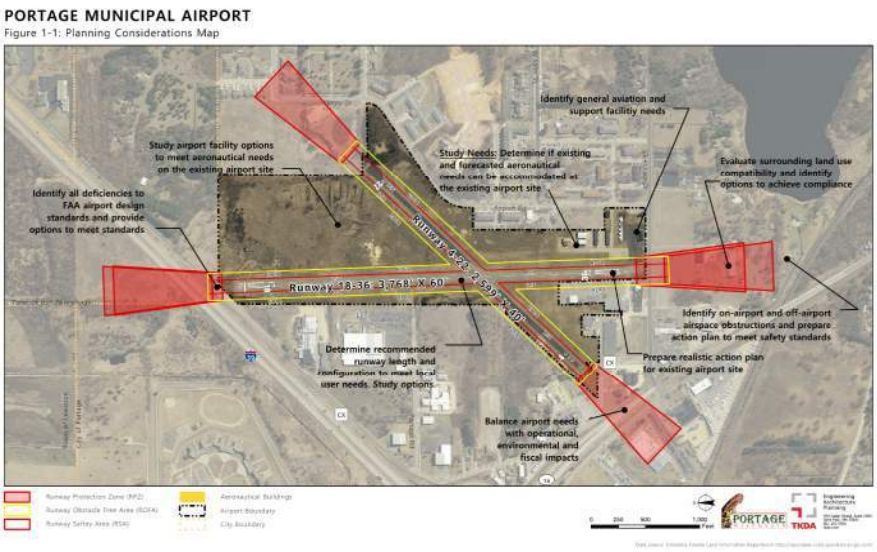
- Prepare final plan documentation to review and approval by the city, WBOA and FAA

Public Involvement Plan

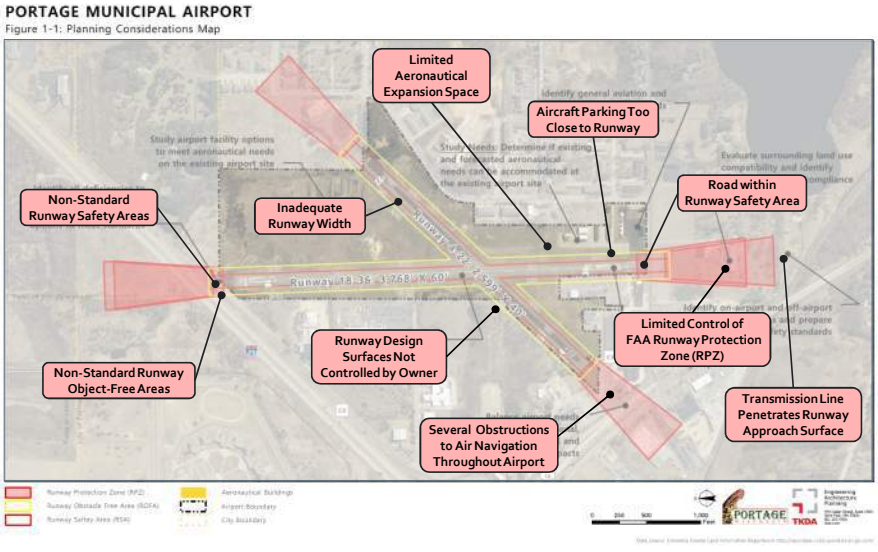
- Provides opportunity to collect feedback to aid in decision-making
- Outreach & Input Opportunities
  - TAC Meetings
  - Public Open House Meetings
  - Business Open House Meeting
  - Agency Coordination Meetings
  - City Council Briefings
  - Project Newsletters
  - Project Website - www.portageairportplan.tkda.com
  - Public Comment Portal



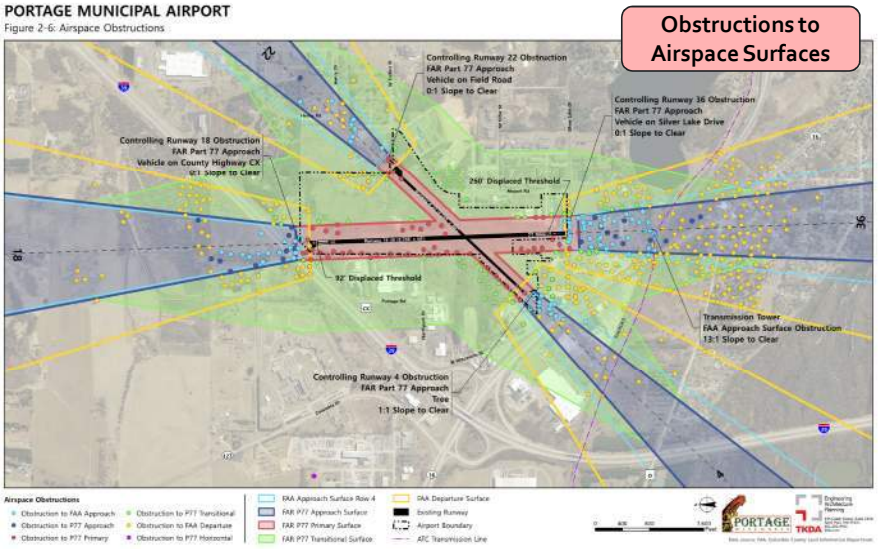
Airport Planning Considerations



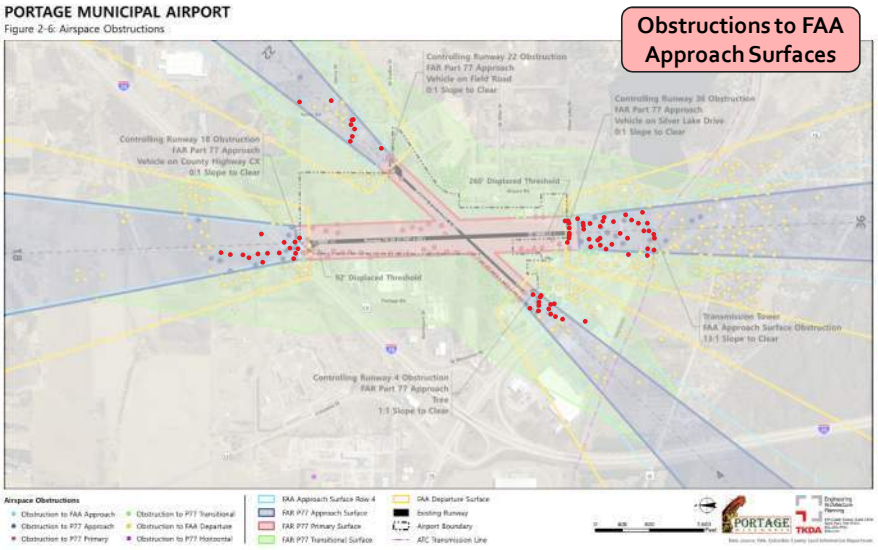
Airport Design Challenges



Airport Design Challenges



Airport Design Challenges



Key Questions to Answer in Study

- What is the community's aeronautical demand at the Portage Airport?
- What facilities are needed for the design aircraft?
- What are the design standard deficiencies and how can the airport achieve compliance?
- What on-airport development options satisfy aeronautical demand considering operational, socioeconomic, environmental and fiscal impacts?
- Can Portage's aeronautical needs be met on the existing airport site?
- What is the short-term and long-term action plan / investment needed in the existing airport site?

Feedback Point

- From your perspective, what are the most important issues you feel should be addressed in the airport study?



Aviation Activity Forecasts

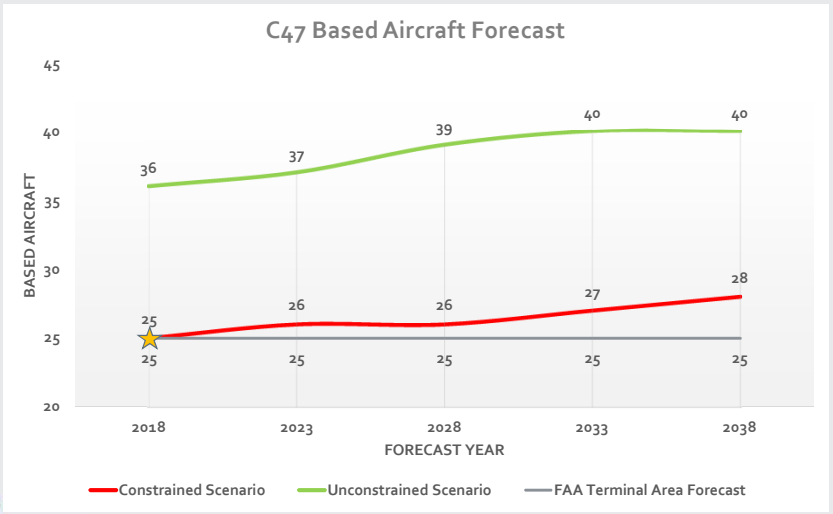
- Airport User Survey
- Develop Activity Estimate
- Review Aviation & Socioeconomic Trends
- Prepare Activity Forecasts (Operations & Based Aircraft)
  - Constrained Facility vs. Unconstrained
- Identify Critical Design Aircraft
- Basis for Airport Facility Needs



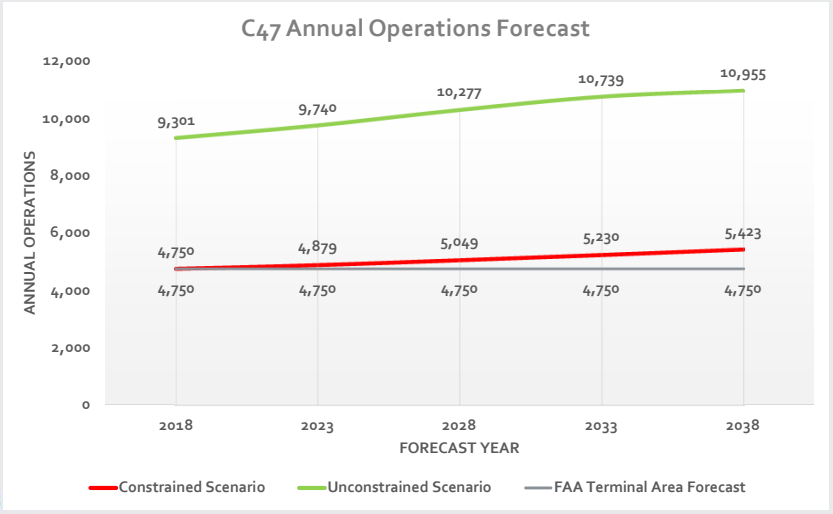
User Survey Results Summary

- Business Survey
  - 45 Portage businesses responded
  - 1/3 of businesses indicated airport location is important to business or customers
  - Three businesses indicated future C47 operations
  - Two other businesses indicated historical C47 operations
- Airport User Survey
  - 64 responses
  - 11 of 25 based aircraft responded
  - 2,190 future airport takeoff/landing operations
  - Strong desire for hangar space, improved facilities
  - Minimum runway length: 2,500' to 3,000'

Based Aircraft Forecast



Aviation Activity Forecasts



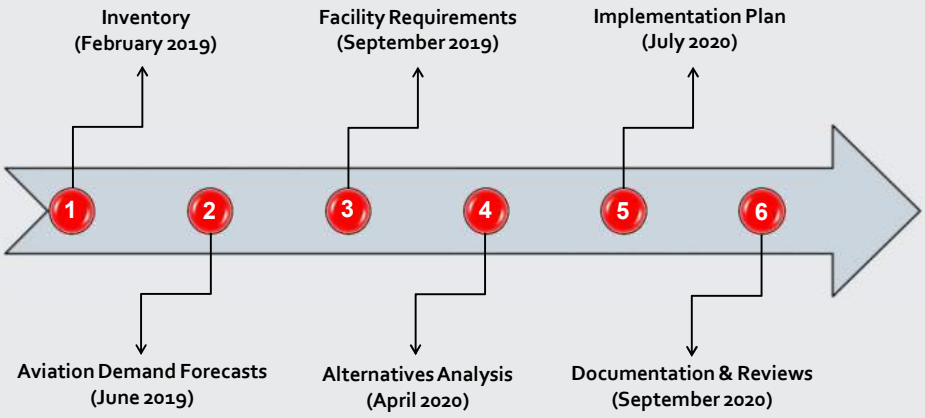
Critical Design Aircraft

- Constrained Forecast
  - "Small" Single/Multi-Engine Aircraft
  - FAA Airport Reference Code: A-I
  - FAA Taxiway Design Group 1A
- Unconstrained Forecast
  - "Large" Turboprop or Business Jet Aircraft
  - FAA Airport Reference Code: B-II
  - FAA Taxiway Design Group 1B
  - Based on Business User Survey Responses
  - Additional Documentation Needed





Proposed Project Schedule



***Schedule subject to change based on review timelines*

Study Next Steps

- Review draft Inventory / Forecasts Narrative Report
- Submit Forecasts to FAA for Approval
- Analyze Facility Requirements
- Next TAC Meeting: Spring 2019
  - Explore Preliminary Facility Needs
  - Explore Facility Deficiencies / Potential Solutions

Questions?

Portage Municipal Airport
Airport Master Plan – Phase 1
Technical Advisory Committee (TAC)
Meeting #1

February 13, 2019

TKDA

Airport Master Plan Update
Portage Municipal Airport (C47)
Portage, Wisconsin
Technical Advisory Committee Meeting #2

Meeting Information

Date/Time: Wednesday, May 15, 2019 / 3:30 p.m. – 5:00 p.m.
Location: Portage City Hall, Council Room

Meeting Agenda

1. Proposed Aviation Activity Forecasts
2. Airport Facility Requirements
3. Deficiencies to FAA Design Standards
4. Runway Option to Meet Design Standards
5. Next Steps

Portage Municipal Airport (C47)

Airport Master Plan – Phase 1
Technical Advisory Committee (TAC)
Meeting #2

TKDA

May 15, 2019

Agenda

- ✈ Aviation Activity Forecasts
- ✈ Airport Facility Requirements
- ✈ Deficiencies to FAA Design Standards
- ✈ Runway Option to Meet Design Standards
- ✈ Next Steps



Meeting Objectives

- Develop concurrence on aviation activity forecasts
- Share findings on design standard deficiencies and facility requirements
- Collect feedback on airport compliance option
- Obtain information that may affect the alternatives to be studied



Master Plan Study Process

1. Inventory

- Collect information on the built and natural environment to develop a baseline profile of the airport

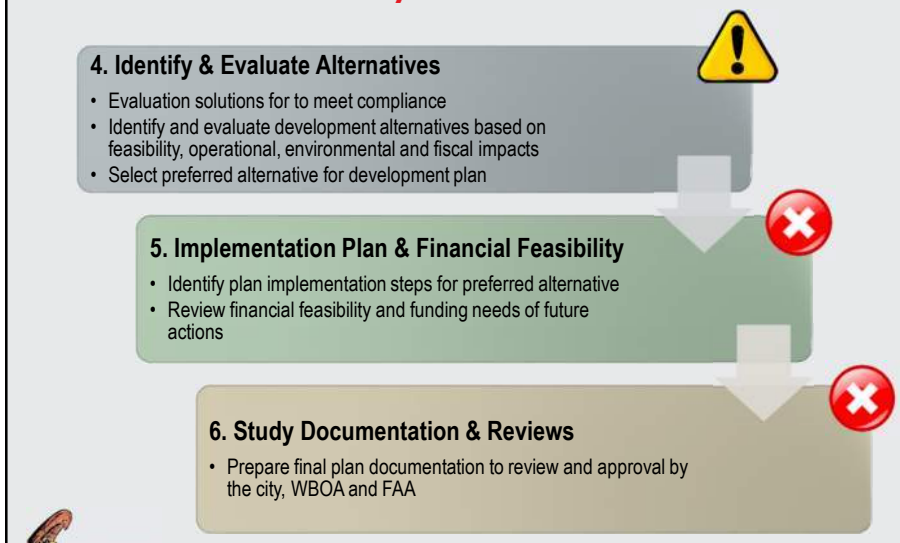
2. Aviation Demand Forecasts

- Estimate baseline airport activity
- Develop reasonable assessment of future aircraft operations, based aircraft, and design aircraft

3. Facility Requirements

- Determine facility needs to meet airport design standards for the aeronautical demand
- Identify design standard deficiencies

Master Plan Study Process



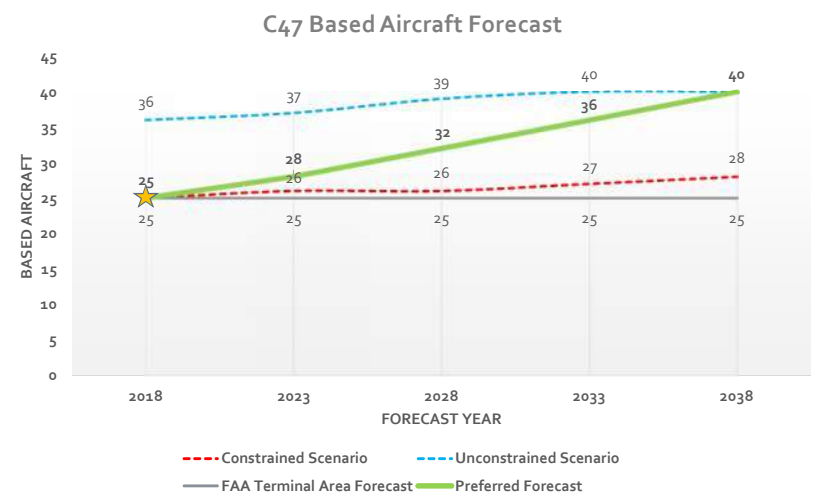
Aviation Activity Forecasts

Aviation Activity Forecasts

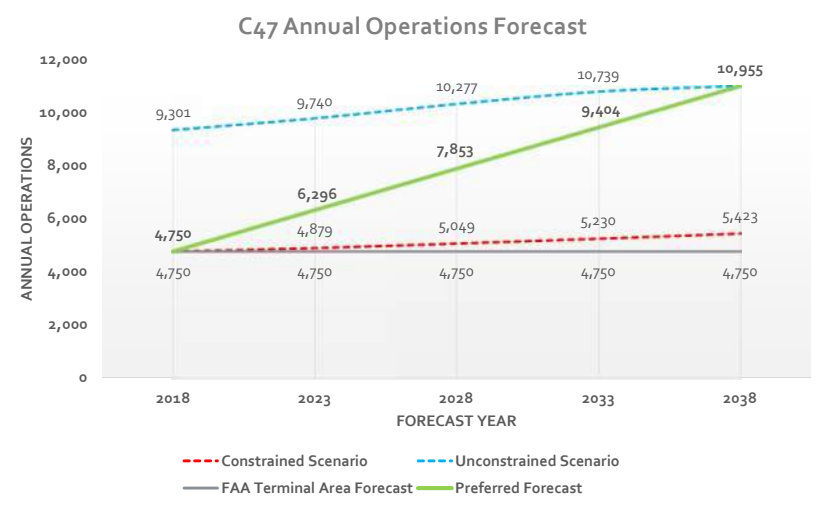
- Forecast of Based Aircraft & Operations
- Airport User Survey
- Draft Forecasts Submitted to FAA in March
  - Constrained -> Unconstrained
  - Seeking FAA Approval
- Importance for Portage
  - Identifies Critical Design Aircraft Type(s)
  - Basis for Airport Facility Needs, Timing



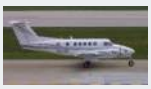
Based Aircraft Forecast



Aviation Activity Forecasts



Critical Design Aircraft

Year	ARC	TDG	Weight Class	Aircraft Type	Example
2018	A-I	1A/1B	Small	Single-Engine Piston	
2023	B-I	1A/1B	Small	Multi-Engine Piston	
2028	B-I	1A/1B	Small	Multi-Engine Piston	
2033	B-II	1A/1B	Small	Turboprop	
2038	B-II	1A/1B	Large	Business Jet	

Feedback Point

- Does the TAC have any questions on the methodology or conclusions of the forecast?



Facility Requirements

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Facility Requirements Summary

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Airside

- Runways
  - 3,200'/3,800' recommended length (0-15 years)
  - 4,800'/5,500' recommended length (20 years)
  - 60' runway width (0-10 years) -> 75 feet (11-20 years)
  - Increased setbacks and overrun areas (11-20 years)
- Wind Coverage
  - Runway 18-36 provides at least 95% wind coverage
- Navigational Aids
  - Precision Approach Path Indicator (PAPI) Lights
  - Runway End Identifier Lights (REIL)

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Facility Requirements Summary

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Airside

- Approaches & Navigational Aids
  - At least one vertically-guided instrument approach
  - Circling minimums to paved runways
  - Visibility minimum ¾ mile with approach lights (SASP)
- Taxiways
  - 25' pavement width, reflectors
  - At least partial parallel taxiway
  - Runway end turnarounds
  - Increased Object Free Area setbacks (11-20 years)

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Facility Requirements Summary

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General Aviation Facilities

- Apron
  - 6 -> 13 total parked aircraft over 20 years (larger aircraft)
  - Safe maneuvering for design aircraft wingspan
- Aircraft Storage Hangars
  - 150% additional space to meet 20 year needs
  - Multiple hangar types (T-hangar, box, corporate)
- Other
  - Expanded GA terminal building
  - Reserve space for FBO/Commercial development
  - Jet-A fuel for turbine engine operations (11-20 years)

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Facility Requirements Summary

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Support / Other Facilities

- Land Use / Height Limitation Zoning Ordinance (HLZO)
- Snow Removal Equipment (SRE) storage building
- Additional automobile parking
- Weather reporting station desired (SASP)

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Feedback Point

- Does the TAC have any feedback on draft facility requirements presented?

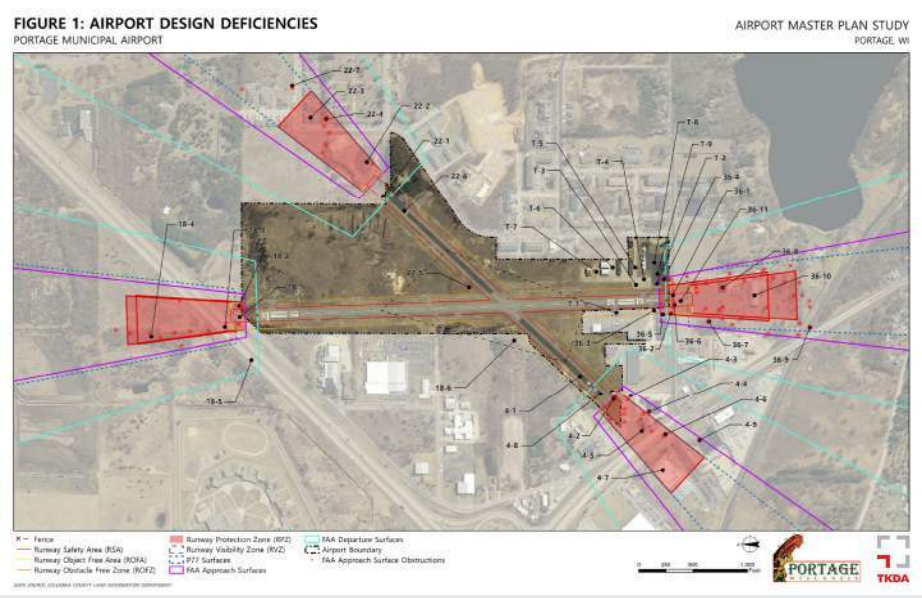


Airport Design Deficiencies

Airport Design Deficiencies

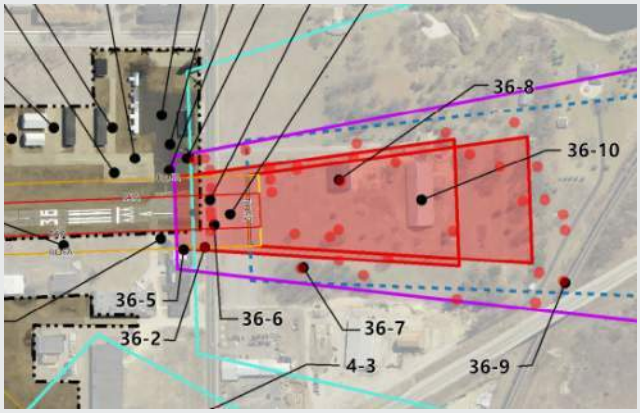
- ✈Work element for your Master Plan
- ✈Review existing airport facility for deficiencies to existing FAA airport design standards
- ✈Identify potential solutions as a "path to compliance"

Airport Design Deficiencies



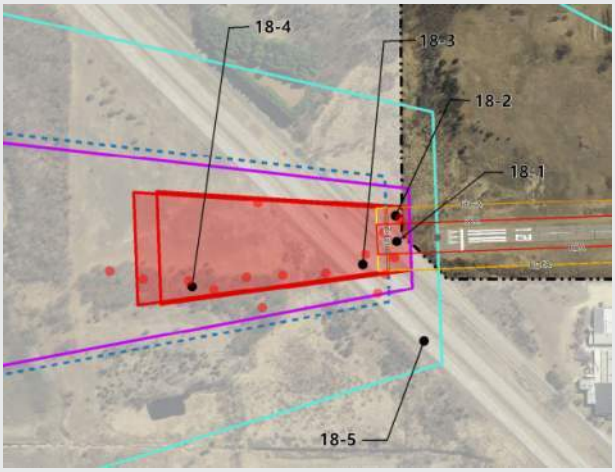
Airport Design Deficiencies

Runway 36 End



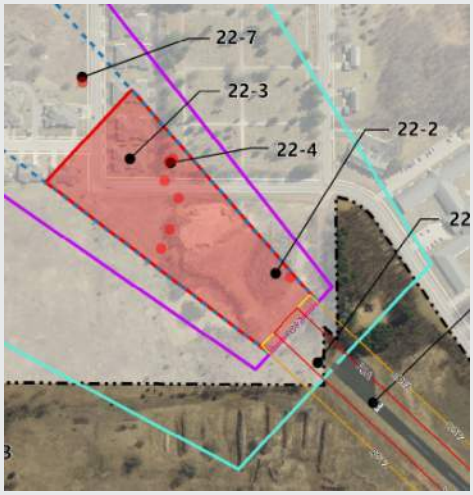
Airport Design Deficiencies

Runway 18 End



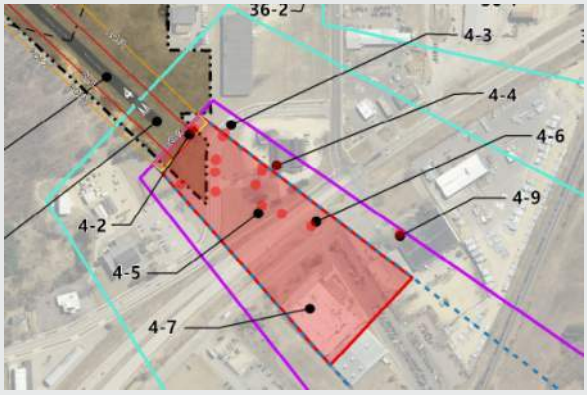
Airport Design Deficiencies

Runway 22 End



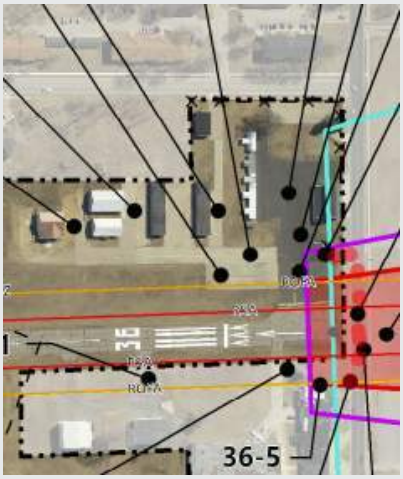
Airport Design Deficiencies

Runway 4 End



Airport Design Deficiencies

Terminal & Hangar Area



Airport Design Deficiencies Summary

Runway 18-36

- Silver Lake Drive within RSA, OFA, OFZ
- County Highway CX within RSA, OFA, OFZ
- Interstate 39 within OFA, OFZ
- Runway 18 RSA does not meet gradient standards
- Trees and roads penetrate RWY 18 FAA approach
- Transmission line, roads, buildings, and trees penetrates RWY 36 FAA approach
- Structures within Runway Protection Zone (RPZ)
- FAA Instrument Departure Surface obstructions

RSA = Runway Safety Area | OFA = Object Free Area | OFZ = Obstacle Free Zone

Airport Design Deficiencies Summary

Runway 4-22

- Field Road within RSA, OFA, OFZ
- Terrain within OFZ near Runway 22 End
- Trees penetrate FAA approach surfaces
- Power poles penetrate RWY 22 FAA approach
- County Highway CX, off-airport building, power pole penetrate RWY 4 FAA approach
- Runway width is inadequate
- In-line taxiway beyond runway end
- FAA Instrument Departure Surface obstructions

RSA = Runway Safety Area | OFA = Object Free Area | OFZ = Obstacle Free Zone

Airport Design Deficiencies Summary

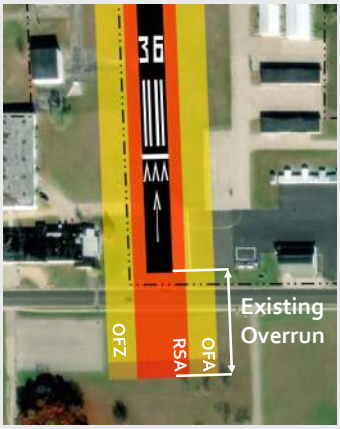
Terminal/Hangar Area

- Several taxilanes do not meet required OFA standards
- Aircraft tie-downs penetrate Runway 18-36 OFZ
- Direct access taxiway from apron to Runway 18-36
- Wide expanse of pavement near Runway 36 end
- Non-standard holding position markings, no signs

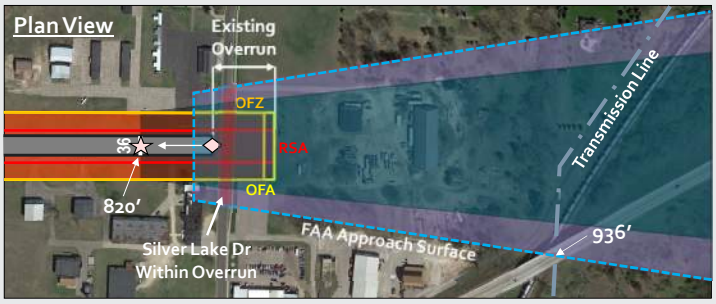
Runway Compliance Option

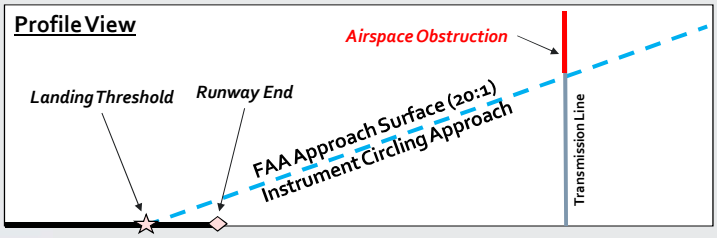
Runway Compliance Option

- Basic Safety Standards
  - Clear Runway Safety Area
  - Clear Runway Obstacle Free Zone
  - Clear FAA Approach Surface
- Typical Options
  - Move Runway End
  - Move Landing Threshold
  - Implement Declared Distances

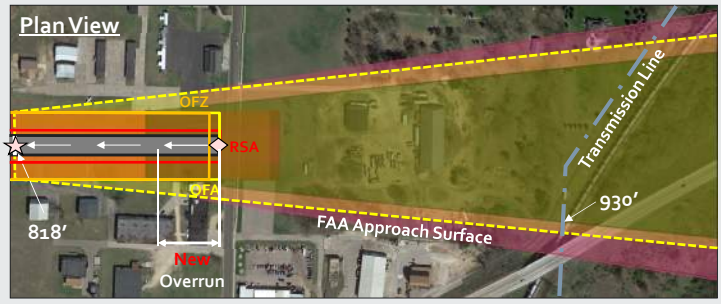


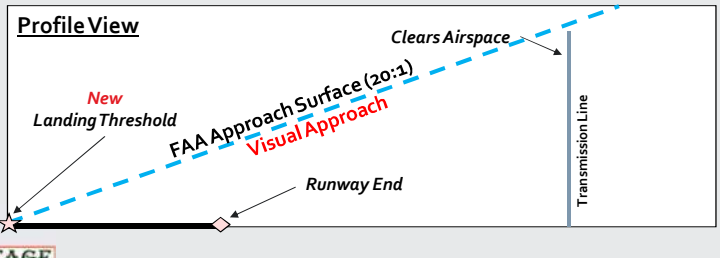
Existing Runway 36 End



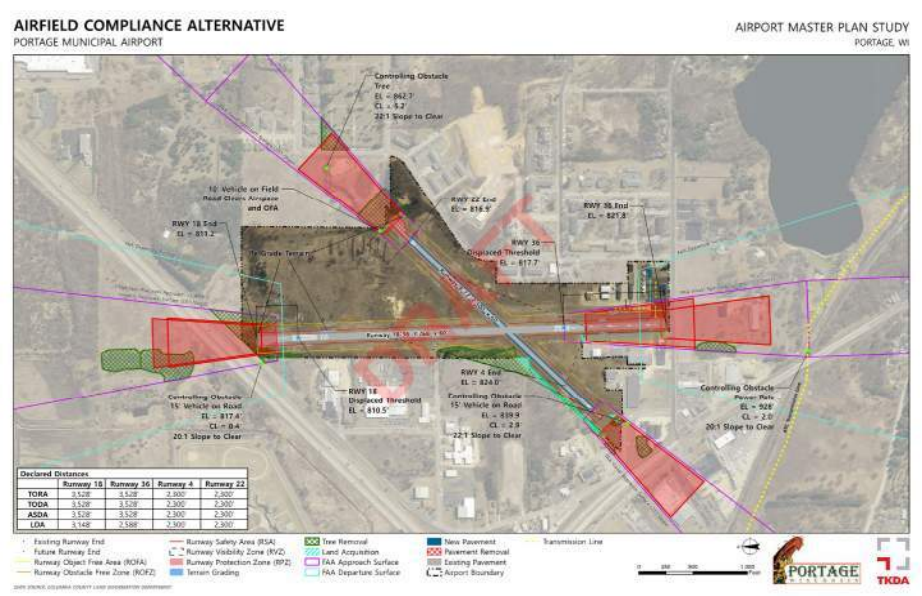


Runway 36 End Option





Runway Compliance Option



Runway Compliance Option

- Runway 18-36: 3,768 feet (same)
- Runway 4-22: 2,300 feet (-259')
- Declared Distances

Runway	Takeoff Run (TODA)	Takeoff Distance (TODA)	Accelerate Stop Distance (ASDA)	Landing Distance (LDA)
18	3,528' *(-240')*	3,528' *(-240')*	3,528' *(-240')*	3,148' *(-528')*
36	3,528' *(-240')*	3,528' *(-240')*	3,528' *(-240')*	2,588' *(-920')*
4	2,300' *(-259')*	2,300' *(-259')*	2,300' *(-259')*	2,300' *(-259')*
22	2,300' *(-259')*	2,300' *(-259')*	2,300' *(-259')*	2,300' *(-259')*

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Runway Compliance Option: Runway 18-36

- Assumptions
  - Maintain existing runway alignment
  - Roadways and transmission line to remain
  - Maximize usable runway length
- Impacts/Actions Summary
  - Implement Declared Distances
  - Change Runway 36 to Visual Approaches Only
  - Remove On- & Off-Airport Trees
  - Install Runway Holdlines on Taxiways
  - Relocate Tie-Downs
  - Re-Grade Terrain near Runway 18 End

Runway Compliance Option: Runway 4-22

- Assumptions
  - Maintain existing runway alignment
  - Roadways (including field road) to remain
  - Avoid declared distances
- Impacts/Actions
  - Shift Runway 22 end by 259 feet – Total Length 2,300 feet
  - Change Runway 4-22 to Visual Approaches Only
  - Remove "In-Line" Taxiway
  - Remove On- & Off-Airport Trees
  - Re-Grade Terrain near Runway 22 End
  - Widen Runway
  - Removes Homes from FAA Runway Protection Zone

Feedback Point

- Does the TAC see the Runway Compliance Option as a potentially acceptable solution in the near-term?

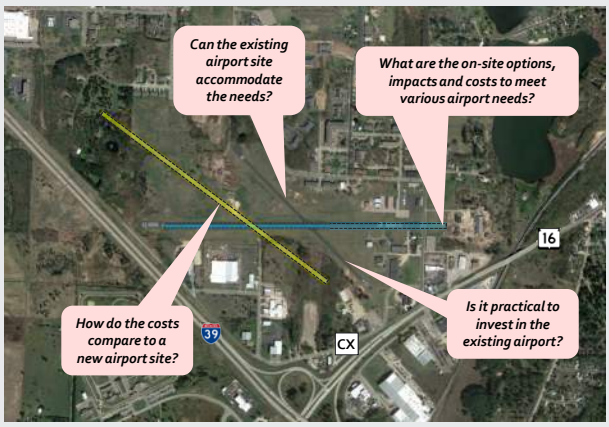


Next Steps

Next Steps: Alternatives Formulation

- On-site solutions to meet facility needs
  - 0-10 Years (small single/multi-engine aircraft)
  - 11-20 years (turboprop -> business jet)
- Airfield
  - Existing runway alignment(s)
  - Alternative runway alignment
- Terminal/Hangar Area
  - Redevelop terminal/hangar area
  - New terminal/hangar area?

Alternatives Framework

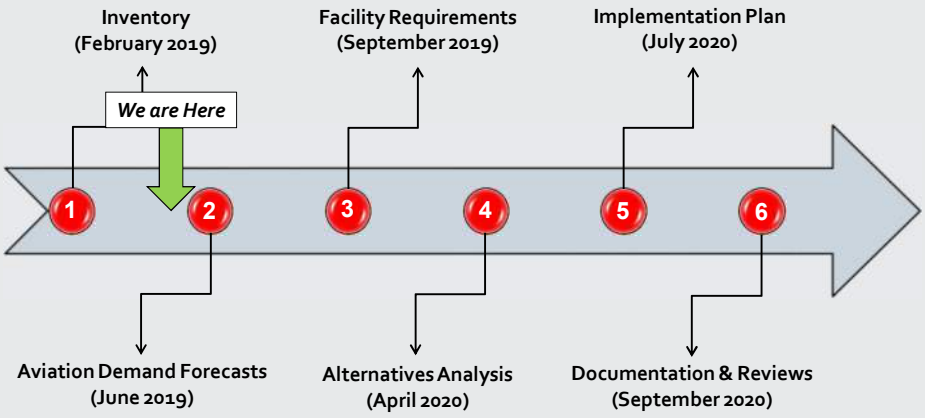


Feedback Point

- Does the information shared today change your perspective on potential on-site solutions to review (or not review)?



Proposed Project Schedule



***Schedule subject to change based on review timelines*

Study Next Steps

- Address FAA forecast comments
- Obtain FAA forecast approval
- Prepare facility requirements narrative report
- Formulate airfield & terminal/hangar area alternatives
- Next TAC Meeting: Fall 2019
  - Review Draft Alternatives

Questions?

Portage Municipal Airport
Airport Master Plan – Phase 1
Technical Advisory Committee (TAC)
Meeting #2

May 15, 2019

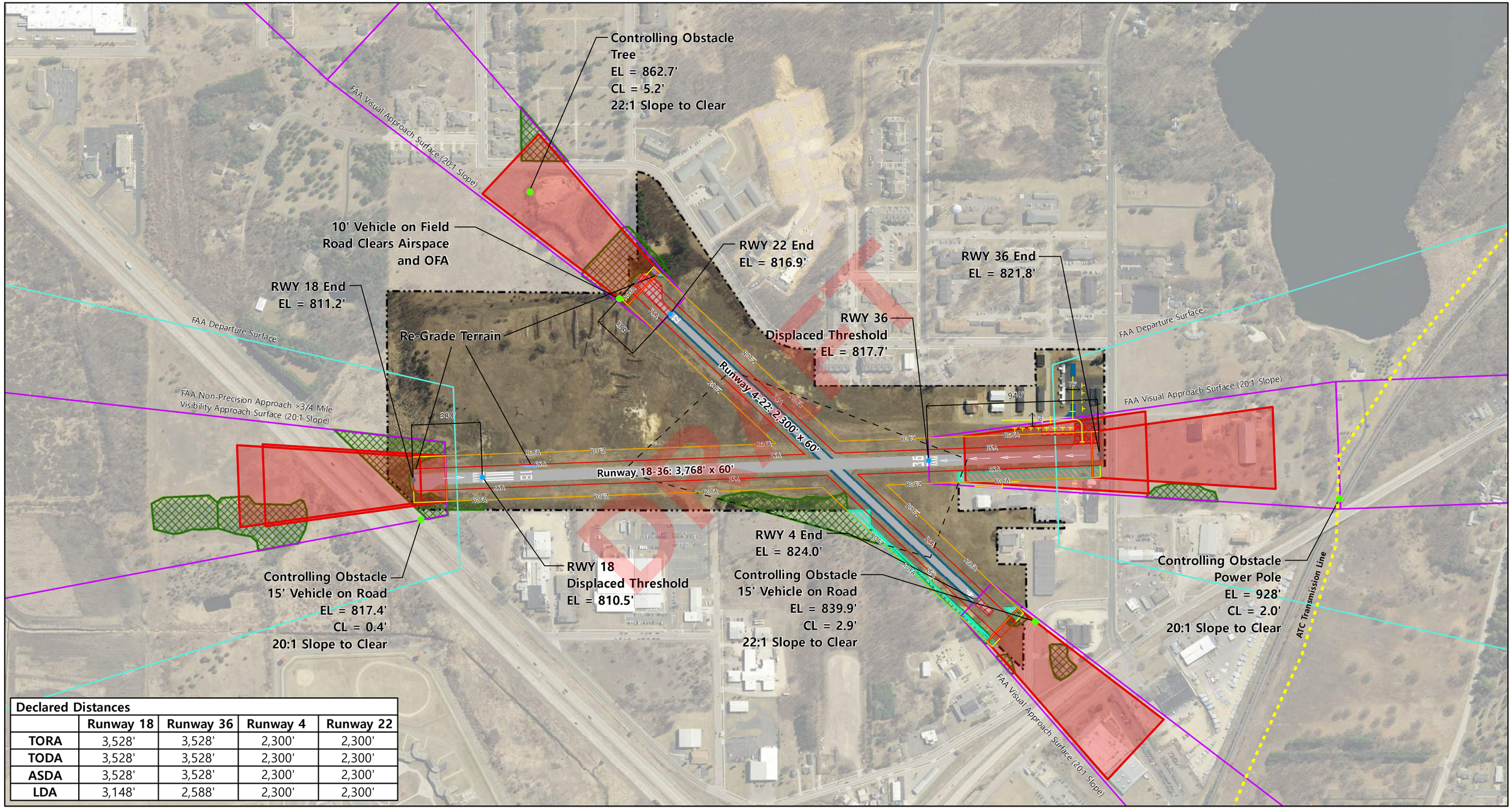
TKDA

AIRFIELD COMPLIANCE ALTERNATIVE

PORTAGE MUNICIPAL AIRPORT

AIRPORT MASTER PLAN STUDY

PORTAGE, WI



Declared Distances				
	Runway 18	Runway 36	Runway 4	Runway 22
TORA	3,528'	3,528'	2,300'	2,300'
TODA	3,528'	3,528'	2,300'	2,300'
ASDA	3,528'	3,528'	2,300'	2,300'
LDA	3,148'	2,588'	2,300'	2,300'

- Existing Runway End
- Future Runway End
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- Runway Safety Area (RSA)
- Runway Visibility Zone (RVZ)
- Runway Protection Zone (RPZ)
- Terrain Grading
- Tree Removal
- Land Acquisition
- FAA Approach Surface
- FAA Departure Surface
- New Pavement
- Pavement Removal
- Existing Pavement
- Airport Boundary
- Transmission Line

0 250 500 1,000 Feet

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT

TKDA
444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

Memorandum

To:	Mark Graczykowski, WBOA	**Reference:**	C47 Airport Master Plan
Copies To:	Aaron Jahncke, City of Portage		Design Standard Deficiencies
	Portage Airport TAC		Technical Memo
		Project No.:	17011
From:	Marcus Watson, TKDA	**Routing:**	MSW:JEL
Date:	April 29, 2019		

Introduction

The Portage Municipal Airport (C47) Airport Master Plan study includes identifying deficiencies to FAA airport design standards. These deficiencies were identified using available FAA obstacle data, visual inspections and aerial photography. This is not a comprehensive design-level assessment. These standards are defined in FAA Advisory Circular (AC) 150/5300-13A, *Airport Design*. Specific design standards reviewed using available information as part of this analysis include:

- Runway Safety Area (RSA)
- Runway Obstacle Free Area (OFA)
- Runway Object Free Zone (OFZ)
- Runway Visibility Zone (RVZ)
- Runway Protection Zone (RPZ)
- FAA Approach/Departure Surfaces
- Taxiway/Taxilane Object Free Area (TOFA)
- Runway/Taxiway Design

The purpose of this review is to develop an action plan to correct design standard deficiencies to meet FAA airport design standards. All standards **must** be met except for the FAA Departure Surface and some taxiway design elements that *should* be met.

Runway and taxiway design standards reference the mid-term (10 years) critical design aircraft derived from the aviation activity forecasts of this master plan study.

Element	Design Standard(s)
Runway 18	FAA Runway Design Code B-I(S)-5000 (1 mile)
Runway 36	FAA Runway Design Code B-I(S)-VIS, Circling Approach
Runway 4	FAA Runway Design Code B-I(S)-VIS, Circling Approach
Runway 22	FAA Runway Design Code B-I(S)-VIS, Circling Approach
Taxiway	Airplane Design Group I, Taxiway Design Group 1A

Results

Table 1 itemizes each design standard deficiency noted during the planning-level review. Elements include location, design standard, deficiency, and mitigation options. The deficiencies are shown graphically in **Figure 1**.

Mitigation options listed are unique to correcting each individual design standard deficiency. The actions taken may trigger additional deficiencies. A comprehensive mitigation plan will be developed to provide a path to compliance.

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Table 1: C47 Design Standard Deficiencies

Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
36-1	Runway 18-36	Runway Safety Area (RSA), Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	Off-Airport, South of Runway 36 End	Silver Lake Drive and sidewalk within RSA/OFA/OFZ	• Shift RWY 36 end north by 215' • Implement 215' reduction in RWY 18 takeoff/landing distance
36-2	Runway 18-36	Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	Off-Airport, South of Runway 36 End	Power Pole along Silver Lake Drive within OFA/OFZ	• Remove/Relocate Pole • Shift RWY 36 end north by 215' • Implement 215' reduction in RWY 18 takeoff/landing distance
36-3	Runway 18-36	Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	West of Runway 36 End	Tree, sign, and parked aircraft are OFA/OFZ penetrations	• Remove tree, remove/relocate sign, relocate aircraft tie-downs
36-4	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	On-Airport, East of Runway 36 End	Aircraft tails and wind cone obstruct surface by up to 20'	• Shift RWY 36 landing threshold north by 400' • Reclassify RWY 36 for VFR landings and displace landing threshold north by 200' • Relocate fuel facility and wind cone
36-5	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, West of Runway 36 End	Building and antenna obstructs surface by up to 33'	• Shift RWY 36 landing threshold north by 660' • Reclassify RWY 36 for VFR landings and displace landing threshold north by 460' • Remove building
36-6	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, South of Runway 36 End	Several roads with mobile objects obstruct surface by up to 9' (Silver Lake Drive, Driveway, Parking Lot)	• Shift RWY 36 landing threshold north by 180' • Reclassify RWY 36 for VFR landings • Remove/Relocate Roads

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Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
36-7	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, South of Runway 36 End	Trees obstruct surface by up to 20'	• Acquire Rights and Trim/Remove Trees • Shift RWY 36 landing threshold north by 400' • Reclassify RWY 36 for VFR landings and shift RWY 36 landing threshold by 200'
36-8	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, South of Runway 36 End	Building vent obstructs surface by 16'	• Acquire Rights and Remove Building • Shift RWY 36 landing threshold north by 320' • Reclassify RWY 36 for VFR landings and shift RWY 36 landing threshold by 120'
36-9	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, South of Runway 36 End	Power Lines/Poles obstruct surface by up to 37'	• Shift RWY 36 landing threshold north by 740' • Reclassify RWY 36 for VFR landings and shift RWY 36 landing threshold by 540' • Bury High-Voltage Power Line Through Approach
36-10	Runway 18-36	Runway 36 FAA Runway Protection Zone (RPZ)	Off-Airport, South of Runway 36 End	Two (2) commercial structures are within RPZ and require further evaluation	• Implement FAA-approved mitigation plan which may include removing structures if opportunity arises • Shift RWY 36 end north by 720' or reduce usable length
36-11	Runway 18-36	Runway 18 FAA Departure Surface (40:1 Slope)	South of Runway 36 Arrival End	Over 240 objects (e.g. buildings, poles, vehicles on roads, trees) penetrating surface by up to 87'	• Remove obstructions as opportunities arise and prevent the establishment of new obstructions • Do not allow instrument departures to RWY 18

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Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
18-1	Runway 18-36	Runway Safety Area (RSA), Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	Off-Airport, North of Runway 18 End	Interstate 39 and County Highway CX within RSA/OFA/OFZ, RSA does not meet gradient standards	• Shift RWY 18 end south by 260' • Implement 240' reduction in RWY 36 takeoff/landing distance, re-grade RSA corners • Implement 260' reduction in RWY 36 takeoff/landing distance
18-2	Runway 18-36	Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	On- and Off-Airport, North of Runway 18 End	Numerous trees within OFA/OFZ beyond runway end and alongside of runway	• Acquire Rights and Trim/Remove Trees • Shift RWY 18 end south by 438'
18-3	Runway 18-36	Runway 18 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, North of Runway 18 End	Interstate 39 and County Highway CX with mobile objects obstruct surface by up to 9' and 7', respectively	• Shift RWY 18 landing threshold south an estimated 280' • Reclassify RWY 18 for VFR landings and displace landing threshold south an estimated 20' • Remove/Relocate Roads
18-4	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, North of Runway 18 End	Trees obstruct surface by up to 34' *(may have been removed since FAA survey)*	• Acquire Rights and Trim/Remove Trees • Shift RWY 18 landing threshold south by 680' • Reclassify RWY 18 for VFR landings and shift RWY 18 landing threshold by 480'
18-5	Runway 18-36	Runway 36 FAA Departure Surface (40:1 Slope)	North of Runway 18 Arrival End	Over 90 objects (e.g. pole, vehicles on roads, trees) penetrating surface by up to 58'	• Remove obstructions as opportunities arise and prevent the establishment of new obstructions • Do not allow instrument departures to RWY 36
18-6	Runway 18-36	Runway Visibility Zone (RVZ)	Off-Airport, 400' West of Runway Intersection	Several trees penetrate intersecting runway RVZ	• Acquire rights and trim/remove trees within RVZ • Close Runway 4-22

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Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
22-1	Runway 4-22	Runway Safety Area (RSA), Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	Off-Airport, Northeast of Runway 22 End	Field Road and Trees within RSA/OFA/OFZ, Terrain in OFA/OFZ	• Shift RWY 22 end south by 240', acquire land, re-grade terrain • Shift RWY 22 end south by 310' • Remove/relocate field road, remove trees, acquire land, re-grade terrain
22-2	Runway 4-22	Runway 22 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Northeast of Runway 22 End	Mulch pile, nearby trees and power poles obstruct surface by up to 15', 22', and 3' respectively. Field road also obstructs airspace by 10'. *(Many trees removed since FAA survey)*	• Acquire rights and remove trees, bury/relocate power pole, remove/relocate field road • Shift RWY 4 end or landing threshold southwest by 60' to clear pole, acquire rights and remove trees, remove/relocate field road • Reclassify RWY 22 for VFR landings, remove trees, remove/relocate field road
22-3	Runway 4-22	Runway 22 FAA Runway Protection Zone (RPZ)	Off-Airport, Northeast of Runway 22 End	Four (4) residential structures within RPZ and require further evaluation	• Implement FAA-approved mitigation plan which may include removing structures if opportunity arises • Shift RWY 22 end southwest by 540' or reduce usable length
22-4	Runway 4-22	Runway 22 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Northeast of Runway 22 End	80' tall trees in residential properties penetrate by up to 57'	• Acquire rights and remove trees • Shift RWY 22 end or landing threshold southwest by 1,140' • Reclassify RWY 22 for VFR landings and shift landing threshold southwest by 940'
22-5	Runway 4-22	Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	On-Airport, 380' Northeast of Runway Intersection	Segmented circle pylons penetrate OFA/OFZ	• Relocate wind cone and segmented circle

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Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
22-6	Runway 4-22	Runway Markings	Runway 4 End	Runway designation markings not at runway end for visual runway	• Remark Runway 4-22
22-7	Runway 4-22	Runway 22 FAA Departure Surface (40:1 Slope)	Northeast of Runway 4 Arrival End	Over 40 objects (e.g. buildings, poles, vehicles on roads, trees) penetrating surface by up to 79’	• Remove obstructions as opportunities arise and prevent the establishment of new obstructions • Do not allow instrument departures to RWY 22
4-1	Runway 4-22	Runway Width	Along Runway 4-22	Runway is 40’ wide and the design standard is 60’	• Widen runway by 20’ to 60’ width
4-2	Runway 4-22	Runway Safety Area (RSA), Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	On and Off-Airport, Near of Runway 4 End	Numerous trees within OFA/OFZ northwest of Runway 4-22, tree within RSA	• Acquire OFA/OFZ land, remove trees
4-3	Runway 4-22	Runway 4 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Southwest of Runway 4 End	County Highway CX and parking lot with mobile objects obstruct surface by up to 10’	• Shift RWY 4 landing threshold northeast by 200’ • Reclassify RWY 4 for VFR landings • Remove/relocate road and parking lot
4-4	Runway 4-22	Runway 4 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Southwest of Runway 4 End	Building obstructs surface by up to 5’	• Shift RWY 4 landing threshold northeast by 100’ • Reclassify RWY 4 for VFR landings • Remove building
4-5	Runway 4-22	Runway 4 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Southwest of Runway 4 End	Trees obstruct surface by up to 51’	• Acquire rights and remove trees • Shift RWY 4 end or landing threshold northeast by 1,020’ • Reclassify RWY 22 for VFR landings and shift landing threshold northeast by 820’

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Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
4-6	Runway 4-22	Runway 4 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Southwest of Runway 4 End	Power poles obstruct surface by up to 3'	• Lower/remove power pole • Shift RWY 4 end or landing threshold southwest by 60' • Reclassify RWY 22 for VFR landings
4-7	Runway 4-22	Runway 4 FAA Runway Protection Zone (RPZ)	Off-Airport, Southwest of Runway 4 End	One (1) industrial structures within RPZ and require further evaluation	• Implement FAA-approved mitigation plan which may include removing structures if opportunity arises • Shift RWY 4 end northeast by 290' or reduce usable length
4-8	Runway 4-22	Runway Design	Runway 4 End	Additional 108' of pavement beyond Runway 4 end results in in-line taxiway	• Remark extra pavement as unusable • Remove extra pavement
4-9	Runway 4-22	Runway 4 FAA Departure Surface (40:1 Slope)	Southwest of Runway 22 Arrival End	Over 80 objects (e.g. buildings, poles, vehicles on roads, trees) penetrating surface by up to 74'	• Remove obstructions as opportunities arise and prevent the establishment of new obstructions • Do not allow instrument departures to RWY 4
T-1	Terminal/Hangar Area	Taxiway Design, Holding Position	West of Runway 18-36	Private taxiways have direct access to Runway 18-36 without holding positions	• Install runway hold position markings and signs • Consider relocating entrance taxiway to Runway 36 end
T-2	Terminal/Hangar Area	Taxiway Design, Holding Position	Taxiway at Runway 36 Entrance	Wide expanse of pavement near Runway 36 end	• Restripe runway holding position markings, install signs, remove excess pavement
T-3	Terminal/Hangar Area	Taxilane Object Free Area (TOFA)	Taxilane East of Paved Tie-Downs	Parked aircraft 30' from taxilane centerline, 39.5' required to meet TOFA standards	• Relocate striped taxiway centerline to the east to provide 25' wide taxilane and 39.5' clearance, remove tie-down position

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Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
T-4	Terminal/Hangar Area	Taxiway Object Free Area (TOFA)	Taxilane between Hangar #7 and Tie-Downs	Total actual TOFA width is 75' between objects, 89' required to meet TOFA standards	• Relocate aircraft tie-downs to meet design standards
T-5	Terminal/Hangar Area	Taxilane Object Free Area (TOFA)	Taxilane south of Hangar #7	Hangar 25' from taxilane centerline, 39.5' required to meet TOFA standards	• Construct additional taxilane pavement to the south, relocate centerline to provide 25' wide taxilane and 39.5' clearance
T-6	Terminal/Hangar Area	Taxilane Object Free Area (TOFA)	Taxilane between of Hangar #7 and #9	Total actual TOFA width is 72' between hangars, 79' required to meet TOFA standards	• Document 43' wingspan restriction to meet acceptable level of safety per FAA Engineering Brief 78
T-7	Terminal/Hangar Area	Taxilane Object Free Area (TOFA)	Taxilane between of Hangar #12 and #10	Hangar 25' from taxilane centerline, 39.5' required to meet TOFA standards. 75' between hangar buildings.	• Relocate taxilane to maximize clearance • Document 45' wingspan restriction to meet acceptable level of safety per FAA Engineering Brief 78
T-8	Terminal/Hangar Area	Taxilane Object Free Area (TOFA)	South of Hangar #5	No taxilane centerlines for maneuvering clearance from fixed objects	• Stripe taxilane centerlines meeting FAA standards for object clearance
T-9	Terminal/Hangar Area	Taxiway Design	North of Hangar #1	Direct access taxiway to Runway 18-36, wide expanse of pavement	• Relocate Runway 36 entrance taxiway • Remove excess pavement or reutilize as aircraft parking (if needed)

Source: TKDA Analysis (2019)

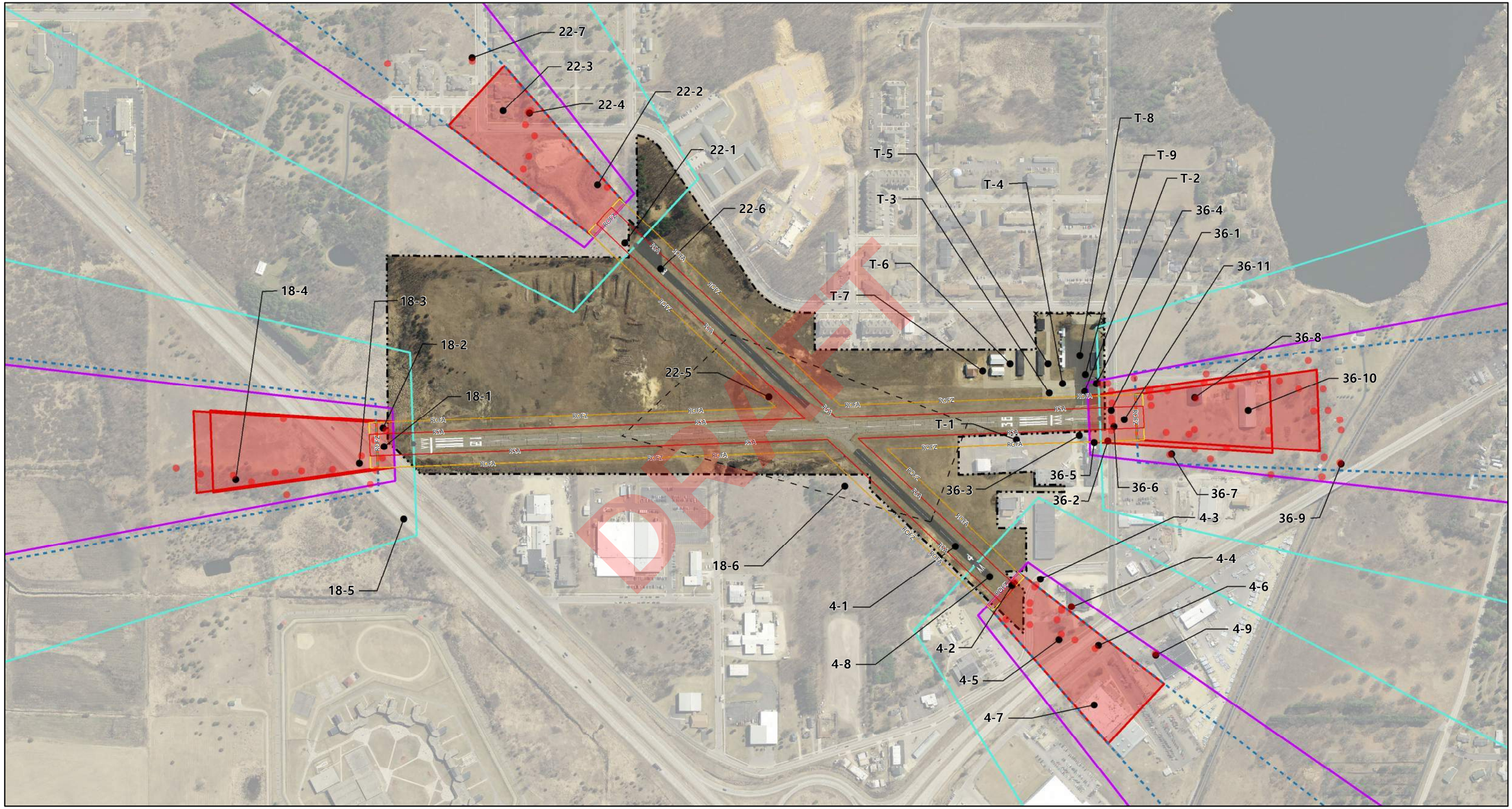
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FIGURE 1: AIRPORT DESIGN DEFICIENCIES

PORTAGE MUNICIPAL AIRPORT

AIRPORT MASTER PLAN STUDY

PORTAGE, WI



- Fence
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- Runway Protection Zone (RPZ)
- Runway Visibility Zone (RVZ)
- P77 Surfaces
- FAA Approach Surfaces
- FAA Departure Surfaces
- Airport Boundary
- FAA Approach Surface Obstructions

N

0 250 500 1,000 Feet

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TKDA

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT

Airport Master Plan Update
Portage Municipal Airport (C47)
Portage, Wisconsin
Technical Advisory Committee Meeting #3

Meeting Information

Date/Time: Wednesday, November 13, 2019 / 3:45 p.m. – 5:15 p.m.
Location: Portage City Hall, Council Room

Meeting Agenda

1. Facility Needs Summary
2. Airfield Alternatives Review
3. Alternatives Analysis & Discussion
4. Terminal/Hangar Area Development
5. Next Steps

Portage Municipal Airport (C47)

Airport Master Plan – Phase 1
Technical Advisory Committee (TAC)
Meeting #3

TKDA

November 13, 2019

Meeting Objectives

- ✈Recap Facility Needs and Activity Levels
- ✈Present Airfield Conceptual Alternatives and Impacts
- ✈Discuss Terminal / Hangar Area Development Concept
- ✈**Receive TAC Feedback on Development Options**
- ✈Next Steps



Master Plan Study Process

1. Inventory
- Collect information on the built and natural environment to develop a baseline profile of the airport

2. Aviation Demand Forecasts
- Estimate baseline airport activity
- Develop reasonable assessment of future aircraft operations, based aircraft, and design aircraft

3. Facility Requirements
- Determine facility needs to meet airport design standards for the aeronautical demand
- Identify design standard deficiencies

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Master Plan Study Process

4. Identify & Evaluate Alternatives
- Evaluation solutions for to meet compliance
- Identify and evaluate development alternatives based on feasibility, operational, environmental and fiscal impacts
- Select preferred alternative for development plan

5. Implementation Plan & Financial Feasibility
- Identify plan implementation steps for preferred alternative
- Review financial feasibility and funding needs of future actions

6. Study Documentation & Reviews
- Prepare final plan documentation to review and approval by the city, WBOA and FAA

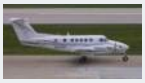
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Study Goals

1. Document non-standard conditions
2. Review viability of the existing airport site to meet aviation demand and facility requirements
3. Allow the airport sponsor to make an informed decision on future investment in the airport

Facility Needs Summary

✈Planning Activity Levels (PAL)

Metric	Existing	PAL 2	PAL 3	PAL 4
Forecast Type	-	Constrained	Unconstrained	Unconstrained
Forecast Year	2018	2038	2023	2038
Annual Operations	3,788	4,255	9,740	10,955
Based Aircraft	25	28	37	40
FAA Design Standards	A-I, Small	B-I, Small	B-II, Small	B-II, Large Business Jet
Critical Design Aircraft				
Primary Runway Dimensions	3,768' x 60'*	3,300' x 60'	3,800' x 75'	5,500' x 75'

Facility Needs Summary

Key Findings (PAL 2):

- Correct existing FAA design standard deficiencies:
  - Meet RSA, OFA, and OFZ standards
  - Mitigate obstructions to clear FAA approach surface
  - Reconfigure apron tie-downs to clear OFZ
  - Acquire land rights to control land use in critical areas
  - Reconfigure Runway 36 entrance taxiway
- Crosswind runway not justified for FAA funding
- Increase aircraft storage space and capability for FBO
- Enhance non-precision approaches and navigational aids
- Increase fuel capacity

RSA = Runway Safety Area | OFA = Object Free Area | OFZ = Obstacle Free Zone

Airfield Alternatives

- Eight (8) on-site airfield "build" development options
- Meet FAA design standards and facility needs for various activity levels:
  - PAL 2: 3,300' x 60'
  - PAL 3: 3,800' x 75'
  - PAL 4: 5,500' x 75'
- "Best fit" options prepared
- Planning-level impacts evaluated for each option for comparative purposes
  - Costs, land, relocations/removals, feasibility, etc.
- **Obtain TAC feedback on alternatives**

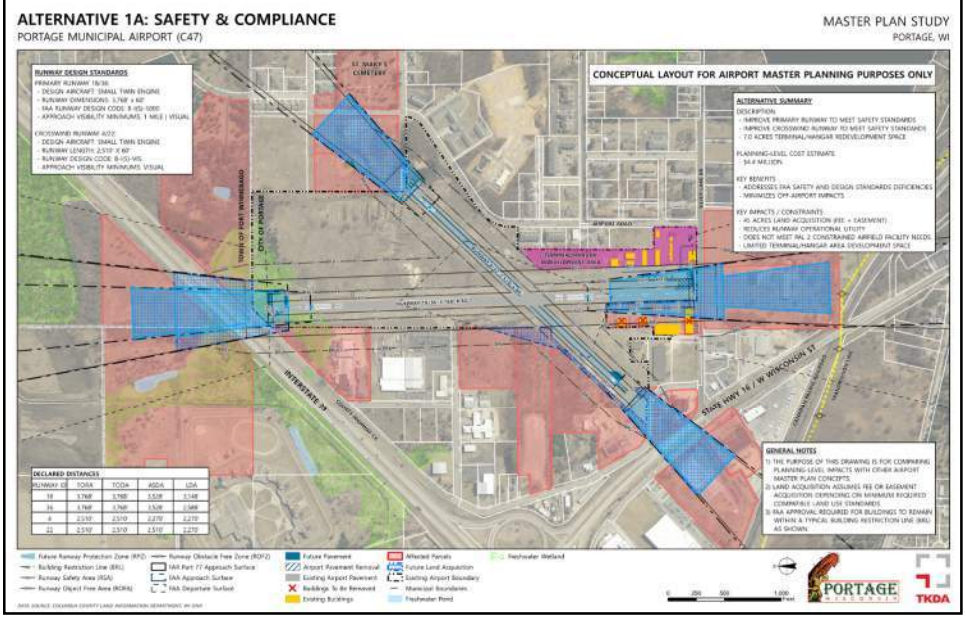
Alternative 1A: Safety & Compliance

- Key Features
  - Improves both runways to meet FAA design standards
    Reduces usable runway length
  - Reduces Runway 36 to visual approach
  - Reconfigures aircraft parking, taxiway; relocate fuel facility
  - Minimize off-airport impacts
  - Minimum build alternative*
- Key Impacts
  - 45 acres land acquisition
  - 3 structures impacted
  - $4.4 million total cost
  - $1.7 million local share

Runway	Takeoff Run (TORA)	Takeoff Distance (TODA)	Accelerate Stop Distance (ASDA)	Landing Distance (LDA)
18	3,768'	3,768'	3,528'	3,148'
36	3,768'	3,768'	3,528'	2,588'
4	2,270'	2,270'	2,270'	2,270'
22	2,510'	2,510'	2,510'	2,270'

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Alternative 1A: Safety & Compliance

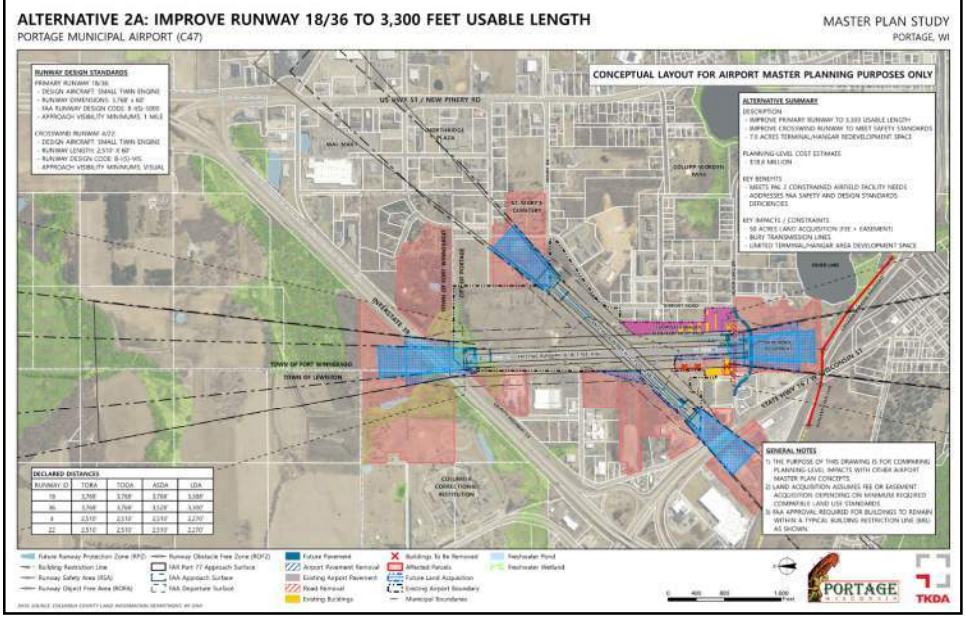


Alternative 2A: Improve RWY 18/36 to 3,300'

- Key Features
  - Improves Runway 18/36 to 3,300' minimum usable length
  - Improves runways to meet FAA standards for PAL 2 needs
  - Reconfigures aircraft parking, taxiway; relocate fuel facility
- Key Impacts
  - 50 acres land acquisition
  - Bury ATC transmission lines
  - Relocate Silver Lake Drive
  - 3 structures impacted
  - $18.8 million total cost
  - $14.0 million local share

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Alternative 2A: Improve RWY 18/36 to 3,300'

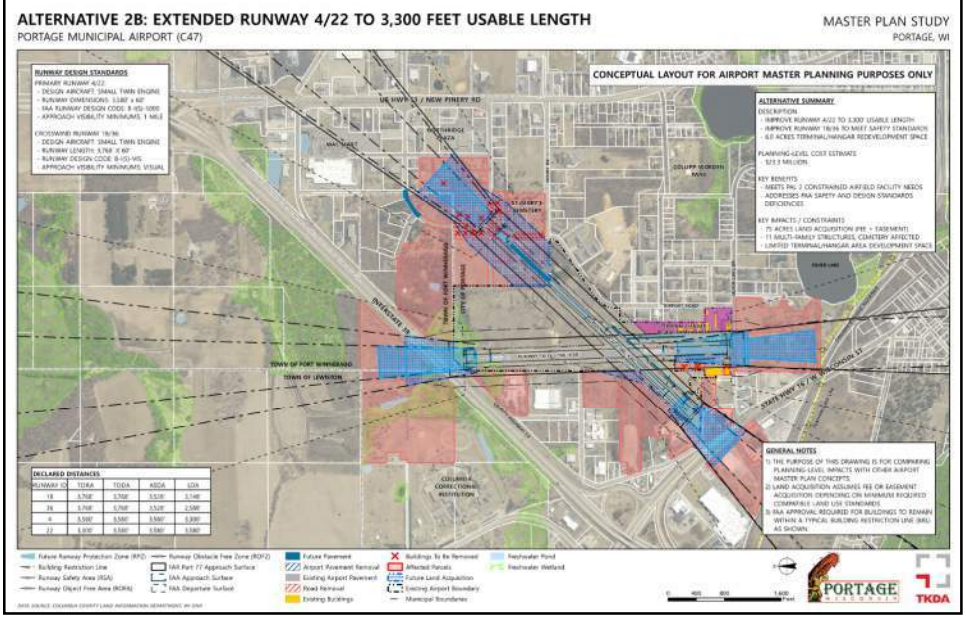


Alternative 2B: Extend RWY 4/22 to 3,300'

- Key Features
  - Extends Runway 4/22 to 3,300' minimum usable length
  - Improves runways to meet FAA standards for PAL 2 needs
  - Reconfigures aircraft parking, taxiway; relocate fuel facility
- Key Impacts
  - 75 acres land acquisition
  - 11 multi-family residential homes impacted
  - 16 structures impacted
  - $23.2 million total cost
  - $4.2 million local share

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Alternative 2B: Extend RWY 4/22 to 3,300'



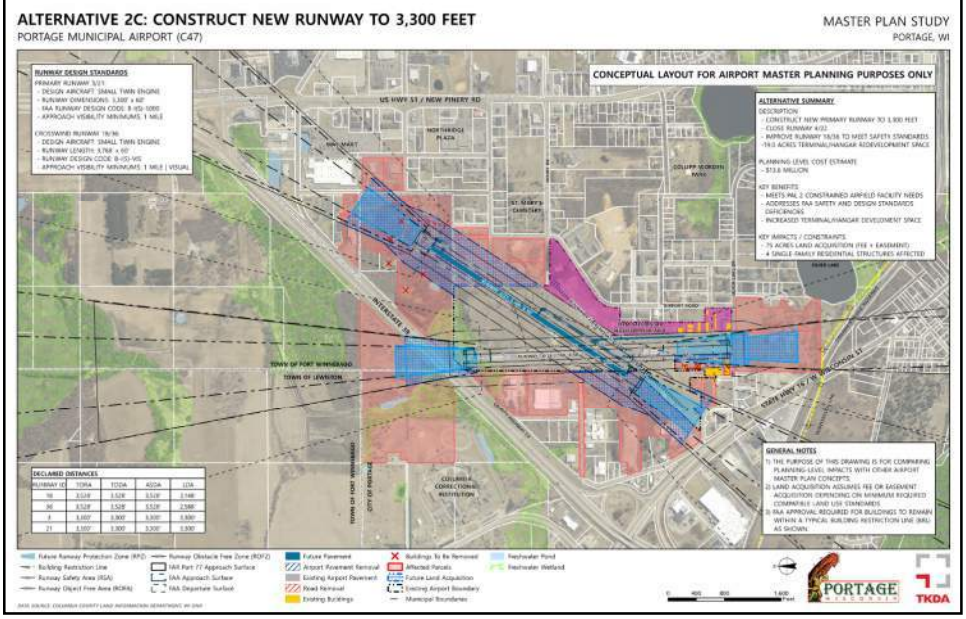
Alternative 2C: Construct New 3,300' RWY

- Key Features
  - Constructs new northeast-southwest 3,300' x 60' runway
  - Improves runways to meet FAA standards for PAL 2 needs
  - Reconfigures aircraft parking, taxiway; relocate fuel facility
- Key Impacts
  - 80 acres land acquisition
  - 4 single-family residential homes impacted
  - 9 structures impacted
  - Constrained environment (armory, hotel)
  - $13.6 million total cost
  - $3.7 million local share

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Alternative 2C: Construct New 3,300' RWY

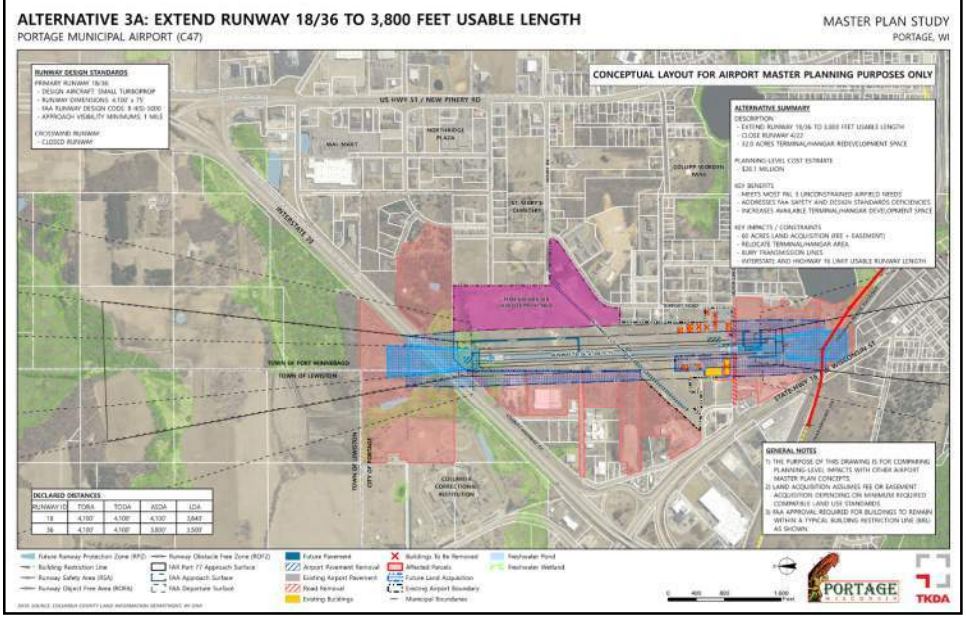


Alternative 3A: Extend RWY 18/36 to 3,800'

- Key Features
  - Extends Runway 18/36 to achieve 3,800' usable length
  - Meets PAL 3 needs
  - Closes crosswind runway and constructs new terminal area
- Key Impacts
  - 60 acres land acquisition
  - Bury ATC transmission lines
  - Close Silver Lake Drive
  - 13 structures impacted
  - Triggers relocation of terminal/hangar area
  - $26.1 million total cost
  - $14.5 million local share

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Alternative 3A: Extend RWY 18/36 to 3,800'

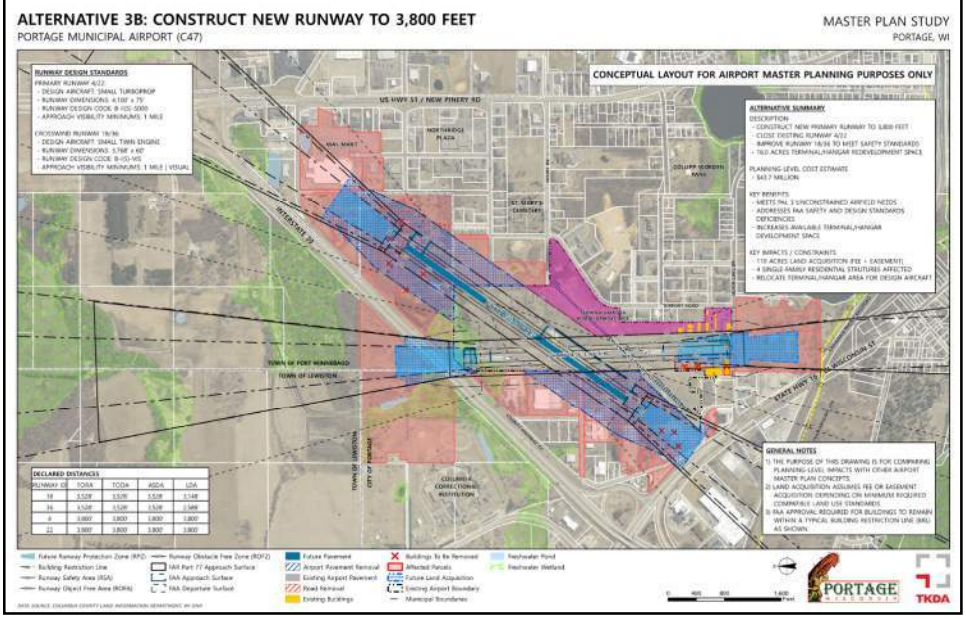


Alternative 3B: Construct New 3,800' RWY

- Key Features
  - Constructs new northeast-southwest 3,800' x 75' runway
  - Meets PAL 3 needs
- Key Impacts
  - 115 acres land acquisition
  - 4 single-family residential homes impacted
  - 12 structures impacted
  - Triggers relocation of terminal/hangar area
  - $43.7 million total cost
  - $3.8 million local share

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Alternative 3B: Construct New 3,800' RWY

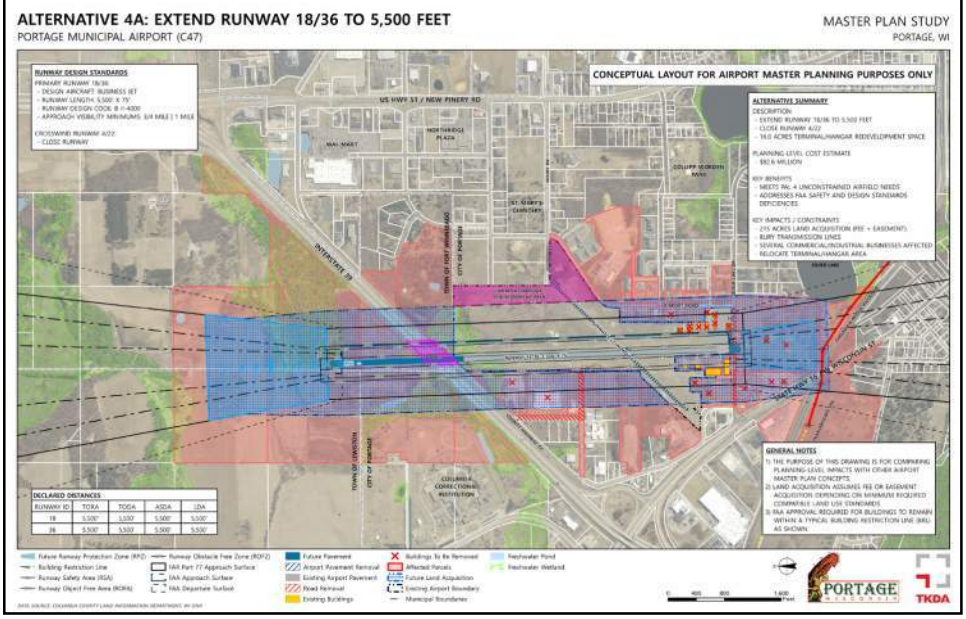


Alternative 4A: Extend RWY 18/36 to 5,500'

- Key Features
  - Extends Runway 18/36 to 5,500' and ¾ mile approach
  - Meets PAL 4 needs
  - Closes crosswind runway and constructs new terminal area
- Key Impacts
  - 215 acres land acquisition
  - Tunnel over or relocate Interstate 39, Close Silver Lake Drive
  - Bury ATC transmission lines
  - 21 structures impacted including industrial areas
  - Triggers relocation of terminal/hangar area
  - $82.6 million total cost
  - $17.8 million local share

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Alternative 4A: Extend RWY 18/36 to 5,500'

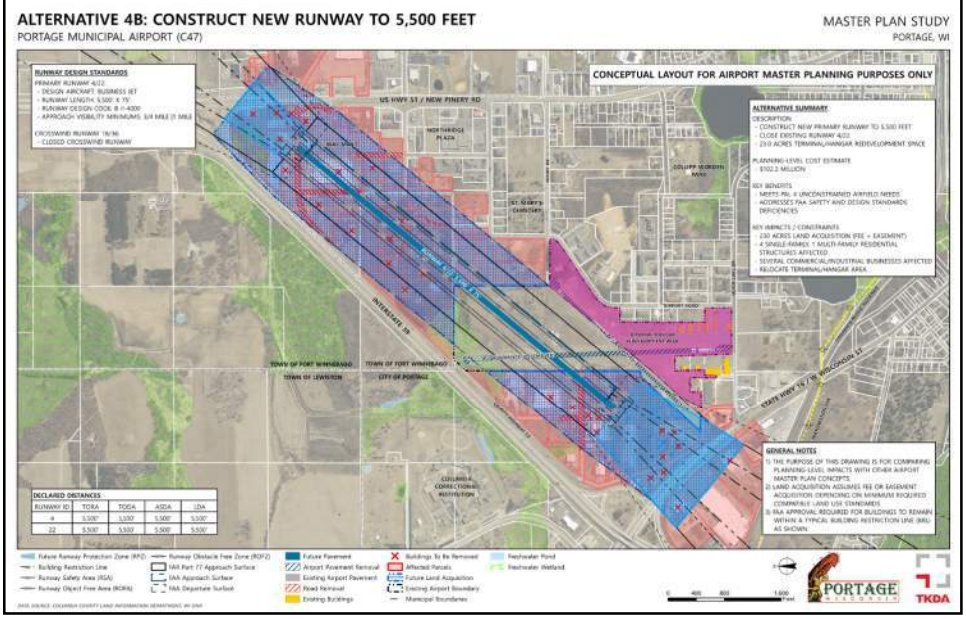


Alternative 4B: Construct New 3,800' RWY

- Key Features
  - Construct new northeast-southwest 5,500' runway
  - Meets PAL 4 needs
  - Closes crosswind runway and constructs new terminal area
- Key Impacts
  - 230 acres land acquisition
  - 5 residential structures impacted
  - 28 structures impacted including commercial areas
  - Setbacks trigger relocation of terminal/hangar area
  - $102.2 million total cost
  - $7.2 million local share

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Alternative 4B: Construct New 5,500' RWY



Alternatives Impact Comparison

Category	1A	2A	2B	2C	3A	3B	4A	4B
Planning Activity Level (PAL)	2	2	2	2	3	3	4	4
Minimum Primary Rwy Distance	2,588'	3,300'	3,300'	3,300'	3,500'*	3,800'	5,500'	5,500'
Minimum Crosswind Rwy Distance	2,270'	2,270'	2,588'	2,588'	N/A	2,588'	N/A	N/A
Bury Transmission Line	No	Yes	No	No	Yes	No	Yes	No
Triggers Relocated Terminal Area	No	No	No	No	Yes	No	Yes	Yes
Roadway Impacts	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Land Acquisition	45 ac	50 ac	75 ac	80 ac	60 ac	115 ac	215 ac	230 ac
Structures Impacted	3	3	16	9*	13	12	21	28
Planning-Level Cost	$4.4m	$18.8m	$23.3m	$13.7m	$26.1m	$43.8m	$82.6m	$102.2m
Local Share	$1.7m	$14.0m	$4.2m	$3.7m	$14.5m	$6.8m	$17.8m	$7.2m
FAA Funding Support	Likely	Unlikely	Unlikely	Possible	Unlikely	Unlikely	Unlikely	Unlikely
Generic New Airport Cost	*$21.3m*	*$21.3m*	*$21.3m*	*$21.3m*	*$26.6m*	*$26.6m*	*$44.9m*	*$44.9m*
*Generic New Airport Local Share**	$3.2m	$3.2m	$3.2m	$3.2m	$4.0m	$4.0m	$6.8m	$6.8m

Conceptual for Master Planning Purposes Only

Initial Conclusions

- Alternative 1A is minimum* needed to meet FAA design standards and keep airport operational
- Burying ATC Transmission lines increase project cost and local share significantly ($11.6 million)
- PAL 2 needs "best" met with Alternative 2C, but very constrained and further feasibility review needed
- Meeting PAL 3 and PAL 4 needs on the existing airport site costs more than a generic new airport site
- Crosswind runway adds a significant amount to local share (not justified for FAA/State funding)
- Alternatives can be refined to include/eliminate certain features

Conceptual for Master Planning Purposes Only

Feedback Point

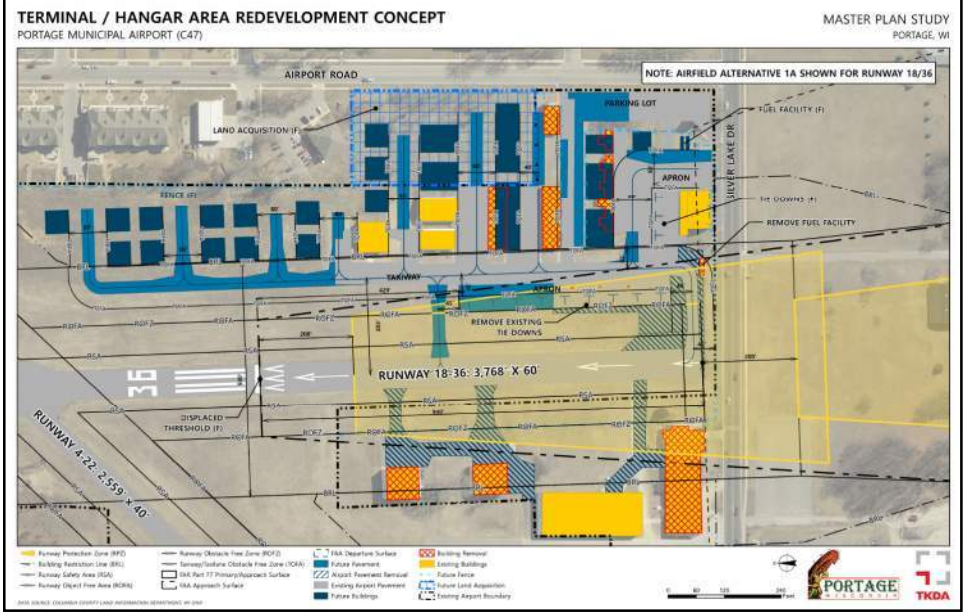
- Feedback on airfield alternatives presented
  - Viability of existing airport site to meet activity levels?
  - Advantages/disadvantages?
  - Right balance between needs and impacts?
  - Long-term vision vs. interim development?
  - Crosswind runway importance vs. impacts/costs?
  - Additional considerations?
  - Consensus on initial preferred alternative(s)?



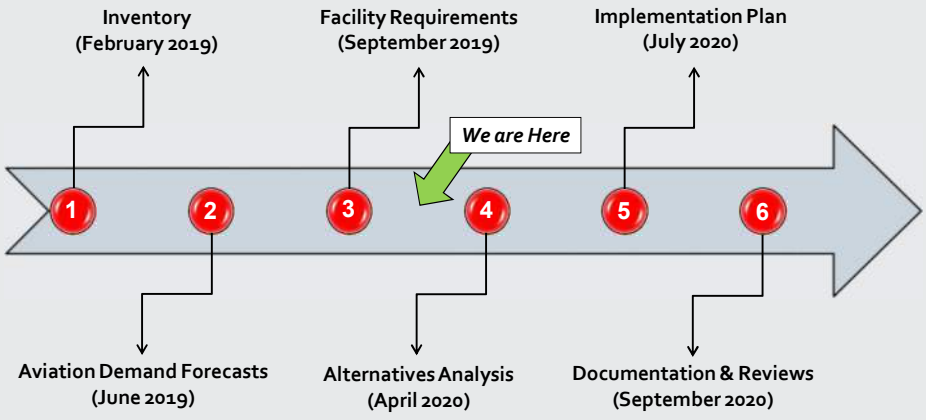
Terminal/Hangar Area Development

- Need to identify location and plan for terminal/hangar development to complement preferred airfield development
- Redevelopment concept presented for consideration
  - Compatible with Alternative 1A for up to PAL 2 design aircraft
  - Long-term configuration vision to maximize available space
  - Provides additional space for hangars, FBO, terminal, fuel, apron
- **Feedback from TAC? Is this an option to consider?**

Terminal/Hangar Area Concept



Project Schedule



***Schedule subject to change based on review timelines*

PORTAGE WISCONSIN

Study Next Steps

- ✈ Refine airfield alternative(s)
- ✈ Refine terminal/hangar area alternative
- ✈ FAA/WBOA coordination
- ✈ Develop initial preferred development plan
- ✈ Public open house
- ✈ Project newsletter
- ✈ Next TAC Meeting: Spring 2020
  - ✈ Select Preferred Alternative

Questions?

Portage Municipal Airport
Airport Master Plan – Phase 1
Technical Advisory Committee (TAC)
Meeting #3

November 13, 2019

TKDA

444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

Memorandum

To:	Aaron Jahncke, City of Portage	**Reference:**	C47 Airport Master Plan
	Mark Graczykowski, WBOA		Airfield Alternatives Analysis
	Airport Master Plan TAC		Technical Memo
		Project No.:	17011
From:	Marcus Watson, TKDA	**Routing:**	MSW:JEL
Date:	November 6, 2019		

Introduction

A primary objective of the Portage Municipal Airport (C47) Airport Master Plan study is to review the feasibility of achieving compliance with facility requirements, including evaluating options and costs. This step in the study will help the airport sponsor identify an action plan for the existing C47 airport site.

Airfield alternatives have been developed to align with the each activity level and critical design aircraft as prepared in this master plan study to date. The Planning Activity Levels (PAL) and associated design standards are summarized in **Table 1** below.

Table 1: C47 Planning Activity Levels

Metric	PAL 2	PAL 3	PAL 4
Forecast Type	Constrained	Unconstrained	Unconstrained
Estimated Year	2038	2023	2038
Annual Operations	4,255	9,740	10,955
Based Aircraft	28	37	40
Critical Design Aircraft	Small 1-2 Engine (+/- 6 passengers)	Small Turboprop (< 10 passengers)	Business Jet
FAA Design Standards	B-I, Small Aircraft (≤ 12,500 lbs.)	B-II, Small Aircraft (≤ 12,500 lbs.)	B-II, Large Aircraft (> 12,500 lbs.)
Runway Dimensions	3,300’ x 60’	3,800’ x 75’	5,500’ x 75’

Source: TKDA Analysis (2019)

This technical memorandum summarizes the options and impacts associated with each of the airfield alternatives to meet the facility requirements associated with each PAL.

Alternatives

Airfield alternatives were developed to meet the facility needs associated with each PAL while considering operational performance, best planning tenets, and environmental factors. Several concepts were considered in the formulation phase. A total of eight (8) airfield alternatives were developed for local consideration.

Due to the wide range of options, the analysis was completed at a high-level to compare key impacts of each alternative. This method was selected to help the airport sponsor identify an overall development direction to explore for the existing airport site. Feedback will be used to refine the impacts and develop the preferred airport development plan.

Table 2 itemizes the features, as well as the operational, environmental and financial impacts of each alternative. Each alternative is shown graphically in the attached figures. A planning-level cost estimate for each on-airport and off-airport option is also attached. Below is a summary of the features and impacts of each alternative.

Alternative 1A: Safety & Compliance

Alternative 1A improves Runway 18/36 and Runway 4/22 to ensure that it addresses all FAA airport safety and design standards deficiencies previously identified. This option "fits" the airport within the existing surrounding built environment to minimize impacts outside of airport property. Additionally, this alternative does not satisfy the airfield facility requirements of PAL 2 needs and affects the utility of the airport by reducing the usable runway length, most notably the Runway 36 landing distance to 2,588 feet to clear the transmission line. It also requires the Runway 36 to be limited to visual approaches only. The existing fuel facility and aircraft tie-downs are relocated in the terminal/hangar area to meet standards. For evaluation purposes crosswind Runway 4/22 is proposed to remain in this Alternative.

Alternative 2A: Improve Runway 18/36 to 3,300 feet Usable Length

Alternative 2A meets PAL 2 needs for small single/twin-engine aircraft. It proposes to improve Runway 18/36 to achieve at least 3,300 feet of usable runway length for takeoff and landing, with non-precision instrument approaches to each runway end. This runway configuration requires the ATC transmission lines to be buried and Silver Lake Drive to be realigned to clear the FAA approach surface to Runway 36. Crosswind Runway 4/22 is proposed to be improved to meet basic FAA airport design standards.

Alternative 2B: Extend Runway 4/22 to 3,300 feet Usable Length

Alternative 2B meets PAL 2 needs for small single/twin-engine aircraft. It proposes to improve and extend Runway 4/22 to the northeast to achieve at least 3,300 feet of usable runway length for takeoff and landing, with non-precision instrument approaches to each runway end. This runway configuration impacts several multi-family homes and St. Mary's Cemetery. Runway 18/36 becomes a crosswind runway in this alternative and is improved to meet basic FAA airport design standards.

Alternative 2C: Construct New Runway to 3,300 feet

Alternative 2C meets PAL 2 needs for small single/twin-engine aircraft. It proposes to construct a new northeast-southwest runway alignment at 3,300 feet with non-precision instrument approaches to each runway end. The alignment results in clear Runway Protection Zones (RPZ) on both ends. This runway configuration impacts four (4) single-family residential homes to the northeast of the existing airport. Runway 18/36 becomes a crosswind runway in this alternative and is improved to meet basic FAA airport design standards.

Alternative 3A: Extend Runway 18/36 to 3,800 feet Usable Length

Alternative 3A best meets PAL 3 needs for a turboprop aircraft utilizing Runway 18/36. It proposes to extend Runway 18/36 to the south to achieve at least 3,800 feet of usable runway length for takeoff and landing, with non-precision instrument approaches to each runway end. This configuration requires the ATC transmission lines to be buried, Silver Lake Drive closed, and a structures to the south of the airport removed. Runway 36 landing distance is limited to 3,500 feet to clear the State Trunk Highway 16 bridge. Required setbacks trigger the existing terminal/hangar area to be relocated to another portion of the airport. Crosswind Runway 4/22 is closed to provide a new terminal/hangar development location. This is the least costly on-site alternative to meet PAL 3 needs.

Alternative 3B: Construct New Runway to 3,800 feet

Alternative 3B meets PAL 3 needs for a turboprop aircraft. It proposes to construct a new northeast-southwest runway alignment at 3,800 feet with non-precision instrument approaches to each runway end. This runway configuration impacts four (4) single-family residential homes and the Wisconsin Army National Guard Armory. Required setbacks trigger the existing terminal/hangar area to be relocated to another portion of the airport. Runway 18/36 becomes a crosswind runway in this alternative and is improved to meet basic FAA airport design standards. This is the most costly on-site alternative to meet PAL 3 needs.

Alternative 4A: Extend Runway 18/36 to 5,500 feet

Alternative 4A meets PAL 4 needs for a business jet utilizing Runway 18/36. It proposes to extend Runway 18/36 to the north to achieve 5,500 feet of usable runway length for takeoff and landing, with a ¾-mile approach to the Runway 18 end. This configuration requires the burial of the ATC transmission lines, the closure of Silver Lake Drive and ensures that the Runway 36 approach clears the State Trunk Highway 16 bridge. Interstate 39 and County Highway CX would need to be relocated or tunneled under the runway. Five (5) businesses would need to be relocated. Required setbacks trigger the existing terminal/hangar area to be relocated to another portion of the airport. Crosswind Runway 4/22 is closed to provide a new terminal/hangar development location. A runway extension to the south to avoid Interstate 39 impacts was dismissed because it would result in impacts to a residential neighborhood south of the railroad line.

Alternative 4B: Construct New Runway to 5,500 feet

Alternative 4B meets PAL 4 needs for a business jet. It proposes to construct a new northeast-southwest runway at 5,500 feet, with a ¾-mile approach to one runway end. This configuration requires the ATC transmission lines to be buried and Silver Lake Drive closed. This alternative triggers relocation of six (6) residents, and 20 businesses or other types of organizations. This configuration requires portions of several local roads to be closed including a portion of County Highway CX near U.S. Highway 51. Required setbacks trigger the existing terminal/hangar area to be relocated to another portion of the airport. Crosswind Runway 4/22 is closed to provide a new terminal/hangar development location.

Table 2: Airfield Alternatives Analysis

Category	*Existing Configuration*	Compliance	PAL 2 Needs			PAL 3 Needs		PAL 4 Needs	
		1A	2A	2B	2C	3A	3B	4A	4B
PRIMARY RUNWAY									
Features & Standards									
New Airfield Runway Alignment	*No*	No	No	No	Yes	No	Yes	No	Yes
Runway Orientation	*18 | 36*	18 | 36	18 | 36	4 | 22	3 | 21	18 | 36	4 | 22	18 | 36	4 | 22
Runway Dimensions (Length x Width)	*3,768' x 60'*	3,768' x 60'	3,768' x 60'	3,580' x 60'	3,300' x 60'	4,100' x 75'	3,800' x 75'	5,500' x 75'	5,500' x 75'
Declared Distances	*No*	Yes	Yes	Yes	No	Yes	No	No	No
Takeoff Distances	*3,768' | 3,768'*	3,768' | 3,768'	3,768' | 3,768'	3,580' | 3,300'	3,300' | 3,300'	4,100' | 4,100'	3,800' | 3,800'	5,500' | 5,500'	5,500' | 5,500'
Landing Distances	*3,676' | 3,508'*	3,148' | 2,588'	3,388' | 3,300'	3,300' | 3,580'	3,300' | 3,300'	3,840' | 3,500'	3,800' | 3,800'	5,500' | 5,500'	5,500' | 5,500'
Instrument Approach Minimums	*1 mile | Circling*	1 mile | Visual	1 mile | 1 mile	1 mile | 1 mile	1 mile | 1 mile	1 mile | 1 mile	1 mile | 1 mile	¾ mile | 1 mile	¾ mile | 1 mile
Critical Design Aircraft Type	*Small Twin-Engine*	Small Twin-Engine	Small Twin-Engine	Small Twin-Engine	Small Twin-Engine	Small Turboprop	Small Turboprop	Business Jet	Business Jet
Runway Design Code (RDC)	*B-I(S)-5000*	B-I(S)-5000	B-I(S)-5000	B-I(S)-5000	B-I(S)-5000	B-II(S)-5000	B-II(S)-5000	B-II-4000	B-II-4000
Planning Activity Level (PAL) Forecast Activity Limit	*N/A*	PAL 2	PAL 2	PAL 2	PAL 2	PAL 3	PAL 3	PAL 4	PAL 4
Operational Performance									
Meets 20-Year Constrained Needs (PAL 2)	*Yes*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Meets 10-Year Unconstrained Needs (PAL 3)	*No*	No	No	No	No	Yes	Yes	Yes	Yes
Meets 20-Year Unconstrained Needs (PAL 4)	*No*	No	No	No	No	No	No	Yes	Yes
Meets FAA Recommended Length, Distance & Width	*No*	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Achieves FAA Standard RSA, OFA, OFZ	*No*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Primary Runway Wind Coverage (10.5 knots)	*93.44%*	93.44%	93.44%	94.45%	94.25%	93.44%	94.29%	93.44%	93.38%
Clear FAA Approach over ATC Transmission Lines	*No*	Yes	Yes (Buried)	Yes	Yes	Yes (Buried)	Yes	Yes (Buried)	Yes
Clear FAA Approach over Silver Lake Drive	*No*	Yes	Yes (Realigned)	N/A	N/A	N/A (Closed)	N/A	N/A (Closed)	N/A
Clear FAA Approach over County Highway CX	*No*	Yes	Yes	Yes	N/A	Yes	N/A	N/A (Closed)	Yes
Clear FAA Approach over Interstate 39	*No*	Yes	Yes	N/A	N/A	Yes	N/A	Yes (Tunnel)	Yes
Clear FAA Approach over State Highway 16	*Yes*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clear FAA Approach over Canadian Pacific Railroad	*Yes*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clear Primary Surface	*No*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Significant FAA Approach Obstructions	*Yes*	No	No	No	No***	No	No	No	No
Roads or Railroads to Remain in RPZ	*Yes*	Yes*	Yes*	Yes*	No	Yes**	Yes**	Yes**	Yes**
Structures to Remain In RPZ	*Yes (2)*	Yes (2)*	Yes (2)*	No	No	No	No	No	No
Accommodates Recommended Instrument Approaches	*No*	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Provides Recommended Taxiway	*No*	Yes (Partial)	Yes (Partial)	Yes (Partial)	Yes (Partial)	Yes (Partial)	Yes (Partial)	Yes (Full Parallel)	Yes (Full Parallel)
Best Planning Tenets & Other Factors									
Activity Triggers Terminal/Hangar Area Relocation	*N/A*	No	No	No	No	Yes	Yes	Yes	Yes
Triggers Burial of ATC Transmission Lines	*N/A*	No	Yes	No	No	Yes	No	Yes	No
Triggers Resident, Business or Other Relocation(s)	*N/A*	No	No	Yes (36)	Yes (4)	Yes (1)	Yes (5)	Yes (5)	Yes (25)
Results in Public Roadway Closure(s)	*N/A*	No	No	Yes (2)	Yes (1)	Yes (1)	Yes (1)	Yes (1)	Yes (7)
Triggers Interstate 39 Relocation or Tunnel	*N/A*	No	No	No	No	No	No	Yes	No
Practicality of Runway Development	*N/A*	High	Medium	Low	Medium***	Medium	Medium	Low	Low

Source: TKDA Analysis (2019)
**It is presumed FAA and WBOA would allow roads and structures that are within an RPZ to remain if runway end location does not change*
***Requires FAA approval of RPZ Alternatives Analysis*
****Assumes Armory is not impacted by runway development*

Category	*Existing Configuration*	Compliance	PAL 2 Needs			PAL 3 Needs		PAL 4 Needs	
		1A	2A	2B	2C	3A	3B	4A	4B
CROSSWIND RUNWAY									
Features & Standards*									
New Airfield Runway Alignment	*No*	No	No	No	No	Close Runway 4/22	No	Close Runway 4/22, Runway 18/36	Close Runway 4/22
Runway Orientation	*4 | 22*	4 | 22	4 | 22	18 | 36	18 | 36		18 | 36		
Declared Distances	*No*	Yes	Yes	Yes	Yes		Yes		
Runway Dimensions (Length x Width)	*2,559' x 40'*	2,510' x 60'	2,510' x 60'	3,768' x 60'	3,768' x 60'		3,768' x 60'		
Takeoff Distances	*2,559' | 2,559'*	2,510' | 2,510'	2,510' | 2,510'	3,768' | 3,768'	3,768' | 3,768'		3,768' | 3,768'		
Landing Distances	*2,559' | 2,559'*	2,270' | 2,270'	2,270' | 2,270'	3,148' | 2,588'	3,148' | 2,588'		3,148' | 2,588'		
Instrument Approach Minimums	*Circling | Circling*	Visual | Visual	Visual | Visual	1 mile | Visual	1 mile | Visual		1 mile | Visual		
Critical Design Aircraft	*Small Twin-Engine*	Small Twin-Engine	Small Twin-Engine	Small Twin-Engine	Small Twin-Engine		Small Twin-Engine		
Runway Design Code (RDC) / Classification	*B-I(S)-VIS*	B-I(S)-VIS	B-I(S)-VIS	B-I(S)-5000	B-I(S)-5000		B-I(S)-5000		
Planning Activity Level (PAL) Forecast Activity Limit	*N/A*	PAL 2	PAL 2	PAL 2	PAL 2	PAL 3	PAL 3	PAL 4	PAL 4
Operational Performance									
Projected Activity Meets FAA Regular Use Threshold	*No*	No	No	No	No	No	No	No	No
Meets Recommended Length, Distance & Width	*No*	No	No	No	No	Crosswind Runway Closed to Provide Additional Terminal/Hangar Development Area	No	Crosswind Runway Closed to Provide Additional Terminal/Hangar Development Area	Crosswind Runway Closed to Provide Additional Terminal/Hangar Development Area
Achieves FAA Standard RSA, OFA, OFZ, RVZ	*No*	Yes	Yes	Yes	Yes		Yes		
Clear FAA Approach over ATC Transmission Lines	*Yes*	Yes	Yes	Yes	Yes		Yes		
Clear FAA Approach over Silver Lake Drive	*N/A*	N/A	N/A	Yes	Yes		Yes		
Clear FAA Approach over Henry Drive	*Yes*	Yes	Yes	N/A	N/A		N/A		
Clear FAA Approach over County Highway CX	*Yes*	Yes	Yes	N/A	N/A		N/A		
Clear FAA Approach over Interstate 39	*N/A*	N/A	N/A	Yes	Yes		Yes		
Clear FAA Approach over State Highway 16	*Yes*	Yes	Yes	Yes	Yes		Yes		
Clear FAA Approach over Canadian Pacific Railroad	*Yes*	Yes	Yes	Yes	Yes		Yes		
Clear Primary Surface	*Yes*	Yes	Yes	Yes	Yes		Yes		
Other Significant FAA Approach Obstructions	*Yes*	No	Yes	No	No		No		
Other FAA Approach Obstructions	*Yes*	No	Yes	No	No		No		
Roads or Railroads to Remain in RPZ	*Yes*	Yes**	Yes**	Yes**	Yes**		Yes**		
Structures to Remain In RPZ	*Yes (5)*	Yes (1)**	Yes (1)**	Yes (2)**	Yes (2)**		Yes (2)**		
Accommodates Recommended Instrument Approaches	*Yes*	No	No	Rwy 18 End Only	Rwy 18 End Only		Rwy 18 End Only		
Provides Recommended Taxiway	*No*	Yes (Turnaround)	Yes (Turnaround)	Yes (Turnaround)	Yes (Turnaround)		Yes (Turnaround)		
Best Planning Tenets & Other Factors									
Triggers Burial of ATC Transmission Lines	*N/A*	No	No	No	No	N/A	No	N/A	N/A
Triggers Resident, Business or Other Relocation(s)	*N/A*	No	No	No	No		No		
Results in Public Roadway Closure(s)	*N/A*	No	No	No	No		No		
FAA Funding Justification	*None*	No	No	No	No		No		
Practicality of Runway Development	*N/A*	High	High	High	High		High		

Source: TKDA Analysis (2019)
**Significant crosswind runway upgrades not planned in this study due to runway not meeting FAA regular use thresholds based on activity and wind coverage through the planning period*
***It is presumed FAA and WBOA would allow roads and structures that are within an RPZ to remain if runway end location does not change*

Category	*Existing Configuration*	Compliance	PAL 2 Needs			PAL 3 Needs		PAL 4 Needs	
		1A	2A	2B	2C	3A	3B	4A	4B
Combined Operational Performance									
Meets FAA Recommended Wind Coverage (10.5 knots)	*Yes (97.21%)*	Yes (97.21%)	Yes (97.21%)	Yes (97.21%)	Yes (96.39%)	No (93.46%)	Yes (96.53%)	No (93.46%)	No (94.37%)
Terminal/Hangar Area Development Space	*7 acres*	7 acres	7 acres	6 acres	19 acres	32 acres	16 acres	16 acres	23 acres
Expandability to Meet Terminal/Hangar Space Meets	*Limited*	Limited	Limited	Limited	Likely	Likely	Likely	Likely	Limited
Combined Best Planning Tenets & Other Factors									
Relocate Fuel Facility & Tie-Downs for Design Aircraft	*N/A*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Relocate Terminal/FBO Facility for Design Aircraft	*N/A*	No	No	No	No	Yes	Yes	Yes	Yes
Relocate Terminal/Hangar Area for Design Aircraft	*N/A*	No	No	No	No	Yes	Yes	Yes	Yes
Combined Environmental Impacts									
Land Acquisition (Fee + Easement)	*N/A*	45 acres	50 acres	75 acres	80 acres	60 acres	115 acres	215 acres	230 acres
Single-Family Residential Structures Affected	*N/A*	0 structures	0 structures	0 structures	4 structures	0 structures	4 structures	0 structures	4 structures
Multi-Family Residential Structures Affected	*N/A*	0 structures	0 structures	11 structures	0 structures	0 structures	0 structures	0 structures	1 structures
Commercial/Industrial Structures Affected	*N/A*	1 structure	1 structure	1 structure	1 structure	2 structures	1 structure	7 structures	16 structures
Aeronautical Hangars Affected	*N/A*	2 structures	2 structures	2 structures	2 structures	11 structures	2 structures	11 structures	0 structures
Other Structures Affected	*N/A*	0 structures	0 structures	2 structures	2 structures*	0 structures	5 structures	3 structures	7 structures
Wetland Disturbance	*N/A*	+/- 1 acre	+/- 1 acre	+/- 2 acres	+/- 3 acres	+/- 3 acres	+/- 2 acres	+/- 10 acres	+/- 5 acres
Community Socioeconomic Impacts	*N/A*	Low	Medium	High	Medium	Medium	Medium	High	High
Combined Fiscal Impacts									
Planning-Level Project Cost: On-Site Alternatives	*N/A*	**$4.4 million**	**$18.8 million**	**$23.3 million**	**$13.7 million***	**$26.1 million**	**$43.8 million**	**$82.6 million**	**$102.2 million**
Primary Runway Improvements	*N/A*	$3.0 million	$17.4 million	$20.2 million	$10.6 million*	$19.8 million	$34.4 million	$74.4 million	$94.0 million
Crosswind Runway Improvements	*N/A*	$1.4 million	$1.4 million	$3.1 million	$3.1 million	$0.0 million	$3.1 million	$0.0 million	$0.0 million
Terminal/Hangar Area Improvements	*N/A*	$0.0 million	$0.0 million	$0.0 million	$0.0 million	$6.3 million	$6.3 million	$8.2 million	$8.2 million
FAA Funding Support for On-Site Alternative	*N/A*	Likely	Unlikely	Unlikely	Possible*	Unlikely	Unlikely	Unlikely	Unlikely
Planning-Level Project Cost: Generic New Airport	*N/A*	**$21.3 million**	**$21.3 million**	**$21.3 million**	**$21.3 million**	**$26.6 million**	**$26.6 million**	**$44.9 million**	**$44.9 million**
Primary Runway Improvements	*N/A*	$14.7 million	$14.7 million	$14.7 million	$14.7 million	$18.5 million	$18.5 million	$34.3 million	$34.3 million
Crosswind Runway Improvements	*N/A*	$0.0 million	$0.0 million	$0.0 million	$0.0 million	$0.0 million	$0.0 million	$0.0 million	$0.0 million
Terminal/Hangar Area Improvements	*N/A*	$6.6 million	$6.6 million	$6.6 million	$6.6 million	$8.1 million	$8.1 million	$10.6 million	$10.6 million
Estimated Local Share: On-Site Alternatives	*N/A*	**$1.7 million**	**$14.0 million**	**$4.2 million**	**$3.7 million**	**$14.5 million**	**$6.8 million**	**$17.8 million**	**$7.2 million**
Estimated Local Share: Generic New Airport	*N/A*	**$3.2 million**	**$3.2 million**	**$3.2 million**	**$3.2 million**	**$4.0 million**	**$4.0 million**	**$6.8 million**	**$6.8 million**

Source: TKDA Analysis (2019)
Note: Cost estimates are conceptual for master planning purposes only. Local share is estimated.
**Assumes Armory is not impacted by runway development*

ALTERNATIVE 1A: SAFETY & COMPLIANCE

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 18/36:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY DIMENSIONS: 3,768' x 60'
- FAA RUNWAY DESIGN CODE: B-I(S)-5000
- APPROACH VISIBILITY MINIMUMS: 1 MILE | VISUAL

CROSSWIND RUNWAY 4/22:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY LENGTH: 2,510' X 60'
- RUNWAY DESIGN CODE: B-I(S)-VIS
- APPROACH VISIBILITY MINIMUMS: VISUAL

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- IMPROVE PRIMARY RUNWAY TO MEET SAFETY STANDARDS
- IMPROVE CROSSWIND RUNWAY TO MEET SAFETY STANDARDS
- 7.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $4.4 MILLION

KEY BENEFITS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES
- MINIMIZES OFF-AIRPORT IMPACTS

KEY IMPACTS / CONSTRAINTS
- 45 ACRES LAND ACQUISITION (FEE + EASEMENT)
- REDUCES RUNWAY OPERATIONAL UTILITY
- DOES NOT MEET PAL 2 CONSTRAINED AIRFIELD FACILITY NEEDS
- LIMITED TERMINAL/HANGAR AREA DEVELOPMENT SPACE

ST. MARY'S CEMETERY

TOWN OF FORT WINNEBAGO

CITY OF PORTAGE

SILVER LAKE DR

AIRPORT ROAD

TERMINAL/HANGAR REDEVELOPMENT AREA

RUNWAY 4/22: 2,510' x 60'

RUNWAY 18/36: 3,768' X 60'

INTERSTATE 39

COUNTY HIGHWAY CX

STATE HWY 16 / W WISCONSIN ST

CANADIAN PACIFIC RAILROAD

TRANSMISSION LINE

DECLARED DISTANCES

RUNWAY ID	TORA	TODA	ASDA	LDA
18	3,768'	3,768'	3,528'	3,148'
36	3,768'	3,768'	3,528'	2,588'
4	2,510'	2,510'	2,270'	2,270'
22	2,510'	2,510'	2,510'	2,270'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

Future Runway Protection Zone (RPZ)
Building Restriction Line (BRL)
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
FAR Part 77 Approach Surface
FAA Approach Surface
FAA Departure Surface
Future Pavement
Airport Pavement Removal
Existing Airport Pavement
Buildings To Be Removed
Existing Buildings
Affected Parcels
Future Land Acquisition
Existing Airport Boundary
Municipal Boundaries
Freshwater Pond
Freshwater Wetland

0 250 500 1,000 Feet

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

PORTAGE WISCONSIN

TKDA

ALTERNATIVE 2A: IMPROVE RUNWAY 18/36 TO 3,300 FEET USABLE LENGTH

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 18/36:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY DIMENSIONS: 3,768' x 60'
- FAA RUNWAY DESIGN CODE: B-I(S)-5000
- APPROACH VISIBILITY MINIMUMS: 1 MILE

CROSSWIND RUNWAY 4/22:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY LENGTH: 2,510' X 60'
- RUNWAY DESIGN CODE: B-I(S)-VIS
- APPROACH VISIBILITY MINIMUMS: VISUAL

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- IMPROVE PRIMARY RUNWAY TO 3,300 USABLE LENGTH
- IMPROVE CROSSWIND RUNWAY TO MEET SAFETY STANDARDS
- 7.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $18.8 MILLION

KEY BENEFITS
- MEETS PAL 2 CONSTRAINED AIRFIELD FACILITY NEEDS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES

KEY IMPACTS / CONSTRAINTS
- 50 ACRES LAND ACQUISITION (FEE + EASEMENT)
- BURY TRANSMISSION LINES
- LIMITED TERMINAL/HANGAR AREA DEVELOPMENT SPACE

US HWY 51 / NEW PINERY RD
NORTHRIDGE PLAZA
WAL-MART
HENRY DR
COLLIPP-WORDEN PARK
ST. MARY'S CEMETERY
SILVER LAKE
SILVER LAKE DR
AIRPORT ROAD
TERMINAL/HANGAR REDEVELOPMENT AREA
NEW ROAD ALIGNMENT
CANADIAN PACIFIC RAILROAD
STATE HWY 16 / W WISCONSIN ST
TRANSMISSION LINE
INTERSTATE 39
TOWN OF FORT WINNEBAGO
CITY OF PORTAGE
TOWN OF LEWISTON
COUNTY HIGHWAY CX
COLUMBIA CORRECTIONAL INSTITUTION
EXISTING RUNWAY 18/36 3,768' X 60'
EXISTING RUNWAY 4/22 2,510' X 60'
BRL
ROFA
ROFZ
RSA

DECLARED DISTANCES				
RUNWAY ID	TORA	TODA	ASDA	LDA
18	3,768'	3,768'	3,768'	3,388'
36	3,768'	3,768'	3,528'	3,300'
4	2,510'	2,510'	2,510'	2,270'
22	2,510'	2,510'	2,510'	2,270'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

- Future Runway Protection Zone (RPZ)
- Building Restriction Line
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- FAR Part 77 Approach Surface
- FAA Approach Surface
- FAA Departure Surface
- Future Pavement
- Airport Pavement Removal
- Existing Airport Pavement
- Road Removal
- Existing Buildings
- Buildings To Be Removed
- Affected Parcels
- Future Land Acquisition
- Existing Airport Boundary
- Municipal Boundaries
- Freshwater Pond
- Freshwater Wetland

N

0 400 800 1,600 Feet

PORTAGE WISCONSIN

TKDA

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

ALTERNATIVE 2B: EXTENDED RUNWAY 4/22 TO 3,300 FEET USABLE LENGTH

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 4/22:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY DIMENSIONS: 3,580' x 60'
- FAA RUNWAY DESIGN CODE: B-I(S)-5000
- APPROACH VISIBILITY MINIMUMS: 1 MILE

CROSSWIND RUNWAY 18/36:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY LENGTH: 3,768' X 60'
- RUNWAY DESIGN CODE: B-I(S)-VIS
- APPROACH VISIBILITY MINIMUMS: VISUAL

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- IMPROVE RUNWAY 4/22 TO 3,300' USABLE LENGTH
- IMPROVE RUNWAY 18/36 TO MEET SAFETY STANDARDS
- 6.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $23.3 MILLION

KEY BENEFITS
- MEETS PAL 2 CONSTRAINED AIRFIELD FACILITY NEEDS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES

KEY IMPACTS / CONSTRAINTS
- 75 ACRES LAND ACQUISITION (FEE + EASEMENT)
- 11 MULTI-FAMILY STRUCTURES, CEMETERY AFFECTED
- LIMITED TERMINAL/HANGAR AREA DEVELOPMENT SPACE

US HWY 51 / NEW PINERY RD
NORTHRIDGE PLAZA
WAL-MART
HENRY DR
COLLIPP-WORDEN PARK
ST. MARY'S CEMETERY
SILVER LAKE
SILVER LAKE DR
AIRPORT ROAD
TERMINAL/HANGAR REDEVELOPMENT AREA
RUNWAY 4/22 3,580' X 60'
RUNWAY 18/36 3,768' X 60'
CANADIAN PACIFIC RAILROAD
STATE HWY 16 / W WISCONSIN ST
TRANSMISSION LINE
INTERSTATE 39
TOWN OF FORT WINNEBAGO
CITY OF PORTAGE
TOWN OF FORT WINNEBAGO
TOWN OF LEWISTON
COUNTY HIGHWAY CX
COLUMBIA CORRECTIONAL INSTITUTION

DECLARED DISTANCES

RUNWAY ID	TORA	TODA	ASDA	LDA
18	3,768'	3,768'	3,528'	3,148'
36	3,768'	3,768'	3,528'	2,588'
4	3,580'	3,580'	3,580'	3,300'
22	3,300'	3,580'	3,580'	3,580'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

Future Runway Protection Zone (RPZ)
Building Restriction Line
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
FAR Part 77 Approach Surface
FAA Approach Surface
FAA Departure Surface
Future Pavement
Airport Pavement Removal
Existing Airport Pavement
Road Removal
Existing Buildings
Buildings To Be Removed
Affected Parcels
Future Land Acquisition
Existing Airport Boundary
Municipal Boundaries
Freshwater Pond
Freshwater Wetland

N

0 400 800 1,600 Feet

PORTAGE WISCONSIN

TKDA

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

ALTERNATIVE 2C: CONSTRUCT NEW RUNWAY TO 3,300 FEET

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 3/21:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY DIMENSIONS: 3,300' x 60'
- FAA RUNWAY DESIGN CODE: B-I(S)-5000
- APPROACH VISIBILITY MINIMUMS: 1 MILE

CROSSWIND RUNWAY 18/36:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY LENGTH: 3,768' x 60'
- RUNWAY DESIGN CODE: B-I(S)-VIS
- APPROACH VISIBILITY MINIMUMS: 1 MILE | VISUAL

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- CONSTRUCT NEW PRIMARY RUNWAY TO 3,300 FEET
- CLOSE RUNWAY 4/22
- IMPROVE RUNWAY 18/36 TO MEET SAFETY STANDARDS
-19.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $13.7 MILLION

KEY BENEFITS
- MEETS PAL 2 CONSTRAINED AIRFIELD FACILITY NEEDS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES
- INCREASED TERMINAL/HANGAR DEVELOMENT SPACE

KEY IMPACTS / CONSTRAINTS
- 80 ACRES LAND ACQUISITION (FEE + EASEMENT)
- 4 SINGLE-FAMILY RESIDENTIAL STRUCTURES AFFECTED

US HWY 51 / NEW PINERY RD
NORTHRIDGE PLAZA
WAL-MART
HENRY DR
ST. MARY'S CEMETERY
COLLIPP-WORDEN PARK
SILVER LAKE
SILVER LAKE DR
AIRPORT ROAD
TERMINAL/HANGAR REDEVELOPMENT AREA
RUNWAY 3/21 3,300' X 60'
RUNWAY 4/22 (REMOVAL)
RUNWAY 18/36 3,768' X 60'
INTERSTATE 39
TOWN OF FORT WINNEBAGO
TOWN OF LEWISTON
CITY OF PORTAGE
COUNTY HIGHWAY CX
COLUMBIA CORRECTIONAL INSTITUTION
CANADIAN PACIFIC RAILROAD
STATE HWY 16 / W WISCONSIN ST
TRANSMISSION LINE

DECLARED DISTANCES				
RUNWAY ID	TORA	TODA	ASDA	LDA
18	3,768'	3,768'	3,528'	3,148'
36	3,768'	3,768'	3,528'	2,588'
3	3,300'	3,300'	3,300'	3,300'
21	3,300'	3,300'	3,300'	3,300'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

Future Runway Protection Zone (RPZ)
Building Restriction Line
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
FAR Part 77 Approach Surface
FAA Approach Surface
FAA Departure Surface
Future Pavement
Airport Pavement Removal
Existing Airport Pavement
Road Removal
Existing Buildings
Buildings To Be Removed
Affected Parcels
Future Land Acquisition
Existing Airport Boundary
Municipal Boundaries
Freshwater Pond
Freshwater Wetland

0 400 800 1,600 Feet

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

PORTAGE WISCONSIN

TKDA

ALTERNATIVE 3A: EXTEND RUNWAY 18/36 TO 3,800 FEET USABLE LENGTH

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 18/36:
- DESIGN AIRCRAFT: SMALL TURBOPROP
- RUNWAY DIMENSIONS: 4,100' x 75'
- FAA RUNWAY DESIGN CODE: B-II(S)-5000
- APPROACH VISIBILITY MINIMUMS: 1 MILE

CROSSWIND RUNWAY:
- CLOSED RUNWAY

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- EXTEND RUNWAY 18/36 TO 3,800 FEET USABLE LENGTH
- CLOSE RUNWAY 4/22
- 32.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $26.1 MILLION

KEY BENEFITS
- MEETS MOST PAL 3 UNCONSTRAINED AIRFIELD NEEDS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES
- INCREASES AVAILABLE TERMINAL/HANGAR DEVELOPMENT SPACE

KEY IMPACTS / CONSTRAINTS
- 60 ACRES LAND ACQUISITION (FEE + EASEMENT)
- RELOCATE TERMINAL/HANGAR AREA
- BURY TRANSMISSION LINES
- INTERSTATE AND HIGHWAY 16 LIMIT USABLE RUNWAY LENGTH

US HWY 51 / NEW PINERY RD
NORTHRIDGE PLAZA
WAL-MART
HENRY DR
COLLIPP-WORDEN PARK
ST. MARY'S CEMETERY
INTERSTATE 39
TERMINAL/HANGAR REDEVELOPMENT AREA
AIRPORT ROAD
SILVER LAKE
CANADIAN PACIFIC RAILROAD
RUNWAY 4/22 (REMOVED)
RUNWAY 18/36: 4,100' X 75'
STATE HWY 16 / W WISCONSIN ST
TRANSMISSION LINE
TOWN OF FORT WINNEBAGO
TOWN OF LEWISTON
TOWN OF LEWISTON
CITY OF PORTAGE
COUNTY HIGHWAY CX
COLUMBIA CORRECTIONAL INSTITUTION

DECLARED DISTANCES

RUNWAY ID	TORA	TODA	ASDA	LDA
18	4,100'	4,100'	4,100'	3,840'
36	4,100'	4,100'	3,800'	3,500'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

Future Runway Protection Zone (RPZ)
Building Restriction Line
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
FAR Part 77 Approach Surface
FAA Approach Surface
FAA Departure Surface
Future Pavement
Airport Pavement Removal
Existing Airport Pavement
Road Removal
Existing Buildings
Buildings To Be Removed
Affected Parcels
Future Land Acquisition
Existing Airport Boundary
Municipal Boundaries
Freshwater Pond
Freshwater Wetland

N

0 400 800 1,600 Feet

PORTAGE WISCONSIN

TKDA

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

ALTERNATIVE 3B: CONSTRUCT NEW RUNWAY TO 3,800 FEET

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 4/22:
- DESIGN AIRCRAFT: SMALL TURBOPROP
- RUNWAY DIMENSIONS: 4,100' x 75'
- RUNWAY DESIGN CODE: B-II(S)-5000
- APPROACH VISIBILITY MINIMUMS: 1 MILE

CROSSWIND RUNWAY 18/36:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY DIMENSIONS: 3,768' x 60'
- RUNWAY DESIGN CODE: B-I(S)-VIS
- APPROACH VISIBILITY MINIMUMS: 1 MILE | VISUAL

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- CONSTRUCT NEW PRIMARY RUNWAY TO 3,800 FEET
- CLOSE EXISTING RUNWAY 4/22
- IMPROVE RUNWAY 18/36 TO MEET SAFETY STANDARDS
- 16.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $43.8 MILLION

KEY BENEFITS
- MEETS PAL 3 UNCONSTRAINED AIRFIELD NEEDS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES
- INCREASES AVAILABLE TERMINAL/HANGAR DEVELOPMENT SPACE

KEY IMPACTS / CONSTRAINTS
- 115 ACRES LAND ACQUISITION (FEE + EASEMENT)
- 4 SINGLE-FAMILY RESIDENTIAL STRUTURES AFFECTED
- RELOCATE TERMINAL/HANGAR AREA FOR DESIGN AIRCRAFT

US HWY 51 / NEW PINERY RD
WAL-MART
NORTHRIDGE PLAZA
HENRY DR
ST. MARY'S CEMETERY
COLLIPP-WORDEN PARK
SILVER LAKE DR
AIRPORT ROAD
TERMINAL/HANGAR REDEVELOPMENT AREA
INTERSTATE 39
RUNWAY 4/22: 3,800' X 75'
RUNWAY 18/36: 3,768' X 60'
RUNWAY 4/22 (REMOVED)
CANADIAN PACIFIC RAILROAD
STATE HWY 16 / W WISCONSIN ST
TRANSMISSION LINE
COUNTY HIGHWAY CX
TOWN OF FORT WINNEBAGO
TOWN OF LEWISTON
TOWN OF LEWISTON
CITY OF PORTAGE
COLUMBIA CORRECTIONAL INSTITUTION

DECLARED DISTANCES				
RUNWAY ID	TORA	TODA	ASDA	LDA
18	3,768'	3,768'	3,528'	3,148'
36	3,768'	3,768'	3,528'	2,588'
4	3,800'	3,800'	3,800'	3,800'
22	3,800'	3,800'	3,800'	3,800'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

Future Runway Protection Zone (RPZ)
Building Restriction Line
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
FAR Part 77 Approach Surface
FAA Approach Surface
FAA Departure Surface
Future Pavement
Airport Pavement Removal
Existing Airport Pavement
Road Removal
Existing Buildings
Buildings To Be Removed
Affected Parcels
Future Land Acquisition
Existing Airport Boundary
Municipal Boundaries
Freshwater Pond
Freshwater Wetland

N

0 400 800 1,600 Feet

PORTAGE WISCONSIN

TKDA

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

ALTERNATIVE 4A: EXTEND RUNWAY 18/36 TO 5,500 FEET

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 18/36:
- DESIGN AIRCRAFT: BUSINESS JET
- RUNWAY LENGTH: 5,500' X 75'
- RUNWAY DESIGN CODE: B-II-4000
- APPROACH VISIBILITY MINIMUMS: 3/4 MILE | 1 MILE

CROSSWIND RUNWAY 4/22:
- CLOSE RUNWAY

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- EXTEND RUNWAY 18/36 TO 5,500 FEET
- CLOSE RUNWAY 4/22
- 16.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $82.6 MILLION

KEY BENEFITS
- MEETS PAL 4 UNCONSTRAINED AIRFIELD NEEDS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES

KEY IMPACTS / CONSTRAINTS
- 215 ACRES LAND ACQUISITION (FEE + EASEMENT)
- BURY TRANSMISSION LINES
- SEVERAL COMMERCIAL/INDUSTRIAL BUSINESSES AFFECTED
- RELOCATE TERMINAL/HANGAR AREA

US HWY 51 / NEW PINERY RD
NORTHRIDGE PLAZA
WAL-MART
HENRY DR
COLLIPP-WORDEN PARK
ST. MARY'S CEMETERY
INTERSTATE 39
TOWN OF FORT WINNEBAGO
CITY OF PORTAGE
TERMINAL/HANGAR REDEVELOPMENT AREA
SILVER LAKE
SILVER LAKE DR
AIRPORT ROAD
CANADIAN PACIFIC RAILROAD
RUNWAY 4/22 (REMOVED)
RUNWAY 18/36: 5,500' X 75'
TUNNEL
STATE HWY 16 / W WISCONSIN ST
COUNTY HIGHWAY CX
TRANSMISSION LINE
TOWN OF LEWISTON
CITY OF PORTAGE
COLUMBIA CORRECTIONAL INSTITUTION

DECLARED DISTANCES

RUNWAY ID	TORA	TODA	ASDA	LDA
18	5,500'	5,500'	5,500'	5,500'
36	5,500'	5,500'	5,500'	5,500'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

Future Runway Protection Zone (RPZ)
Building Restriction Line
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
FAR Part 77 Approach Surface
FAA Approach Surface
FAA Departure Surface
Future Pavement
Airport Pavement Removal
Existing Airport Pavement
Road Removal
Existing Buildings
Buildings To Be Removed
Affected Parcels
Future Land Acquisition
Existing Airport Boundary
Municipal Boundaries
Freshwater Pond
Freshwater Wetland

N

0 400 800 1,600 Feet

PORTAGE WISCONSIN

TKDA

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

ALTERNATIVE 4B: CONSTRUCT NEW RUNWAY TO 5,500 FEET

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 4/22:
- DESIGN AIRCRAFT: BUSINESS JET
- RUNWAY LENGTH: 5,500' X 75'
- RUNWAY DESIGN CODE: B-II-4000
- APPROACH VISIBILITY MINIMUMS: 3/4 MILE |1 MILE

CROSSWIND RUNWAY 18/36:
- CLOSED CROSSWIND RUNWAY

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- CONSTRUCT NEW PRIMARY RUNWAY TO 5,500 FEET
- CLOSE EXISTING RUNWAY 4/22
- 23.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $102.2 MILLION

KEY BENEFITS
- MEETS PAL 4 UNCONSTRAINED AIRFIELD NEEDS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES

KEY IMPACTS / CONSTRAINTS
- 230 ACRES LAND ACQUISITION (FEE + EASEMENT)
- 4 SINGLE-FAMILY, 1 MULTI-FAMILY RESIDENTIAL STRUCTURES AFFECTED
- SEVERAL COMMERCIAL/INDUSTRIAL BUSINESSES AFFECTED
- RELOCATE TERMINAL/HANGAR AREA

US HWY 51 / NEW PINERY RD
NORTHRIDGE PLAZA
WAL-MART
HENRY DR
ST. MARY'S CEMETERY
COLLIPP-WORDEN PARK
SILVER LAKE DR
AIRPORT ROAD
TERMINAL/HANGAR REDEVELOPMENT AREA
RUNWAY 4/22: 5,500' X 75'
RUNWAY 4/22 (REMOVED)
RUNWAY 18/36 (REMOVED)
INTERSTATE 39
TOWN OF FORT WINNEBAGO
TOWN OF LEWISTON
TOWN OF FORT WINNEBAGO
CITY OF PORTAGE
COUNTY HIGHWAY CX
COLUMBIA CORRECTIONAL INSTITUTION
CANADIAN PACIFIC RAILROAD
STATE HWY 16 / W WISCONSIN ST
TRANSMISSION LINE

DECLARED DISTANCES

RUNWAY ID	TORA	TODA	ASDA	LDA
4	5,500'	5,500'	5,500'	5,500'
22	5,500'	5,500'	5,500'	5,500'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

- Future Runway Protection Zone (RPZ)
- Building Restriction Line
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- FAR Part 77 Approach Surface
- FAA Approach Surface
- FAA Departure Surface
- Future Pavement
- Airport Pavement Removal
- Existing Airport Pavement
- Road Removal
- Existing Buildings
- Buildings To Be Removed
- Affected Parcels
- Future Land Acquisition
- Existing Airport Boundary
- Municipal Boundaries
- Freshwater Pond
- Freshwater Wetland

0 400 800 1,600 Feet

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

PORTAGE WISCONSIN

TKDA

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 1A

IMPROVE RUNWAY 18/36 TO MEET DESIGN STANDARDS,
IMPROVE RUNWAY 4/22 TO MEET DESIGN STANDARDS

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	500,000.00
REMOVALS	$	420,000.00
EARTHWORK	$	90,000.00
PAVEMENT SUBBASE & BASE	$	195,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	281,000.00
ELECTRICAL	$	400,000.00
DRAINAGE	$	-
FUEL FACILITY	$	400,000.00
FENCING	$	-
SEEDING	$	10,000.00
CONSTRUCTION CONTINGENCY	$	350,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	1,280,000.00
ROADWAY MODIFICATIONS	$	-
WETLAND MITIGATION	$	50,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	-
ENGINEERING / PROFESSIONAL SERVICES	$	420,000.00
PLANNING-LEVEL COST	**$**	**4,400,000.00**
PRIMARY RUNWAY 18/36 BREAKDOWN	*$*	*3,000,000.00*
CROSSWIND RUNWAY 4/22 BREAKDOWN	*$*	*1,400,000.00*

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY
(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 2A

IMPROVE RUNWAY 18/36 TO 3,300' USABLE LENGTH,
IMPROVE RUNWAY 4/22 TO MEET DESIGN STANDARDS

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	500,000.00
REMOVALS	$	470,000.00
EARTHWORK	$	90,000.00
PAVEMENT SUBBASE & BASE	$	195,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	281,000.00
ELECTRICAL	$	400,000.00
DRAINAGE	$	-
FUEL FACILITY	$	400,000.00
FENCING	$	-
SEEDING	$	10,000.00
CONSTRUCTION CONTINGENCY	$	360,000.00
OTHER ITEMS		
BURY POWER LINES	$	11,600,000.00
LAND ACQUISITION & RELOCATION	$	2,580,000.00
ROADWAY MODIFICATIONS	$	1,160,000.00
WETLAND MITIGATION	$	50,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	-
ENGINEERING / PROFESSIONAL SERVICES	$	610,000.00
PLANNING-LEVEL COST	**$**	**18,800,000.00**
PRIMARY RUNWAY 18/36 BREAKDOWN	*$*	*17,400,000.00*
CROSSWIND RUNWAY 4/22 BREAKDOWN	*$*	*1,400,000.00*

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY
(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 2B

IMPROVE RUNWAY 18/36 TO MEET DESIGN STANDARDS,
IMPROVE RUNWAY 4/22 TO 3,300' USABLE LENGTH

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	1,100,000.00
REMOVALS	$	1,200,000.00
EARTHWORK	$	780,000.00
PAVEMENT SUBBASE & BASE	$	510,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	616,000.00
ELECTRICAL	$	500,000.00
DRAINAGE	$	50,000.00
FUEL FACILITY	$	400,000.00
FENCING	$	-
SEEDING	$	50,000.00
CONSTRUCTION CONTINGENCY	$	800,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	15,800,000.00
ROADWAY MODIFICATIONS	$	400,000.00
WETLAND MITIGATION	$	100,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	-
ENGINEERING / PROFESSIONAL SERVICES	$	990,000.00
PLANNING-LEVEL COST	**$**	**23,300,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*20,200,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*3,100,000.00*

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY
(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 2C

IMPROVE RUNWAY 18/36 TO MEET DESIGN STANDARDS,
CONSTRUCT NEW RUNWAY 3/21 (3,300' x 60')

DESCRIPTION		AMOUNT
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	1,500,000.00
REMOVALS	$	790,000.00
EARTHWORK	$	1,965,000.00
PAVEMENT SUBBASE & BASE	$	810,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	1,091,000.00
ELECTRICAL	$	500,000.00
DRAINAGE	$	80,000.00
FUEL FACILITY	$	400,000.00
FENCING	$	-
SEEDING	$	130,000.00
CONSTRUCTION CONTINGENCY	$	1,090,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	3,800,000.00
ROADWAY MODIFICATIONS	$	30,000.00
WETLAND MITIGATION	$	150,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	-
ENGINEERING / PROFESSIONAL SERVICES	$	1,290,000.00
PLANNING-LEVEL COST	**$**	**13,700,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*10,600,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*3,100,000.00*

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY
(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 3A

IMPROVE RUNWAY 18/36 TO 3,800' USABLE LENGTH AND 75' WIDE
CLOSE RUNWAY 4/22 AND CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	600,000.00
REMOVALS	$	700,000.00
EARTHWORK	$	75,000.00
PAVEMENT SUBBASE & BASE	$	390,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	564,000.00
ELECTRICAL	$	400,000.00
DRAINAGE	$	80,000.00
FUEL FACILITY	$	-
FENCING	$	-
SEEDING	$	130,000.00
CONSTRUCTION CONTINGENCY	$	450,000.00
OTHER ITEMS		
BURY POWER LINES	$	11,600,000.00
LAND ACQUISITION & RELOCATION	$	3,100,000.00
ROADWAY MODIFICATIONS	$	40,000.00
WETLAND MITIGATION	$	150,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	6,280,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	1,490,000.00
PLANNING-LEVEL COST	**$**	**26,100,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*26,100,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*-*

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY
(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 3B

IMPROVE RUNWAY 18/36 TO MEET DESIGN STANDARDS,
CONSTRUCT NEW RUNWAY 4/22 (3,800' x 75')

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	1,500,000.00
REMOVALS	$	640,000.00
EARTHWORK	$	1,800,000.00
PAVEMENT SUBBASE & BASE	$	1,125,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	1,516,000.00
ELECTRICAL	$	500,000.00
DRAINAGE	$	100,000.00
FUEL FACILITY	$	-
FENCING	$	-
SEEDING	$	150,000.00
CONSTRUCTION CONTINGENCY	$	1,100,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	26,700,000.00
ROADWAY MODIFICATIONS	$	40,000.00
WETLAND MITIGATION	$	100,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	6,280,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	2,240,000.00
PLANNING-LEVEL COST	**$**	**43,800,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*40,700,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*3,100,000.00*

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY
(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 4A

IMPROVE RUNWAY 18/36 TO 5,500' LENGTH AND 75' WIDE,
CLOSE RUNWAY 4/22 AND CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		AMOUNT
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	2,500,000.00
REMOVALS	$	1,220,000.00
EARTHWORK	$	1,905,000.00
PAVEMENT SUBBASE & BASE	$	1,470,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	1,906,000.00
ELECTRICAL	$	1,200,000.00
DRAINAGE	$	150,000.00
FUEL FACILITY	$	-
FENCING	$	1,650,000.00
SEEDING	$	220,000.00
CONSTRUCTION CONTINGENCY	$	1,840,000.00
OTHER ITEMS		
BURY POWER LINES	$	11,600,000.00
LAND ACQUISITION & RELOCATION	$	16,000,000.00
ROADWAY MODIFICATIONS	$	25,040,000.00
WETLAND MITIGATION	$	500,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	8,150,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	7,170,000.00
PLANNING-LEVEL COST	**$**	**82,600,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*82,600,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*-*

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY
(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 4B

CONSTRUCT NEW RUNWAY 4/22 (5,500' x 75')
CLOSE RUNWAY 18/36 AND CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	2,800,000.00
REMOVALS	$	1,760,000.00
EARTHWORK	$	2,430,000.00
PAVEMENT SUBBASE & BASE	$	1,470,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	1,826,000.00
ELECTRICAL	$	1,200,000.00
DRAINAGE	$	150,000.00
FUEL FACILITY	$	-
FENCING	$	1,650,000.00
SEEDING	$	250,000.00
CONSTRUCTION CONTINGENCY	$	2,050,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	74,300,000.00
ROADWAY MODIFICATIONS	$	170,000.00
WETLAND MITIGATION	$	250,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	8,150,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	3,650,000.00
PLANNING-LEVEL COST	**$**	**102,200,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*102,200,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*-*

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
GENERIC NEW AIRPORT SITE (PAL 2)

CONSTRUCT NEW AIRPORT WITH 3,300' x 60' PRIMARY RUNWAY,
CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		AMOUNT
AIRFIELD & TERMINAL/HANGAR AREA CONSTRUCTION		
MOBILIZATION	$	2,400,000.00
REMOVALS	$	200,000.00
EARTHWORK	$	2,400,000.00
PAVEMENT SUBBASE & BASE	$	1,080,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	1,452,000.00
ELECTRICAL	$	600,000.00
DRAINAGE	$	200,000.00
UTILITY EXTENSIONS	$	120,000.00
SEEDING	$	250,000.00
FENCING	$	300,000.00
PUBLIC BUILDINGS & HANGARS	$	2,800,000.00
FUEL FACILITY	$	400,000.00
CONSTRUCTION CONTINGENCY	$	1,840,000.00
OTHER ITEMS		
LAND ACQUISITION & RELOCATION	$	2,800,000.00
ROADWAY MODIFICATIONS	$	1,500,000.00
WETLAND MITIGATION	$	500,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	2,420,000.00
PLANNING-LEVEL COST	**$**	**21,300,000.00**

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
GENERIC NEW AIRPORT SITE (PAL 3)

CONSTRUCT NEW AIRPORT WITH 3,800' x 75' PRIMARY RUNWAY,
CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		AMOUNT
AIRFIELD & TERMINAL/HANGAR AREA CONSTRUCTION		
MOBILIZATION	$	3,200,000.00
REMOVALS	$	200,000.00
EARTHWORK	$	3,735,000.00
PAVEMENT SUBBASE & BASE	$	1,470,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	2,197,000.00
ELECTRICAL	$	600,000.00
DRAINAGE	$	300,000.00
UTILITY EXTENSIONS	$	120,000.00
SEEDING	$	280,000.00
FENCING	$	320,000.00
PUBLIC BUILDINGS & HANGARS	$	3,000,000.00
FUEL FACILITY	$	500,000.00
CONSTRUCTION CONTINGENCY	$	2,390,000.00
OTHER ITEMS		
LAND ACQUISITION & RELOCATION	$	3,100,000.00
ROADWAY MODIFICATIONS	$	1,500,000.00
WETLAND MITIGATION	$	600,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	3,080,000.00
PLANNING-LEVEL COST	**$**	**26,600,000.00**

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
GENERIC NEW AIRPORT SITE (PAL 4)

CONSTRUCT NEW AIRPORT WITH 5,500' x 75' PRIMARY RUNWAY,
CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		AMOUNT
AIRFIELD & TERMINAL/HANGAR AREA CONSTRUCTION		
MOBILIZATION	$	5,400,000.00
REMOVALS	$	300,000.00
EARTHWORK	$	8,715,000.00
PAVEMENT SUBBASE & BASE	$	2,415,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	3,183,000.00
ELECTRICAL	$	1,500,000.00
DRAINAGE	$	400,000.00
UTILITY EXTENSIONS	$	120,000.00
SEEDING	$	470,000.00
FENCING	$	1,650,000.00
PUBLIC BUILDINGS & HANGARS	$	3,500,000.00
FUEL FACILITY	$	600,000.00
CONSTRUCTION CONTINGENCY	$	4,240,000.00
OTHER ITEMS		
LAND ACQUISITION & RELOCATION	$	4,900,000.00
ROADWAY MODIFICATIONS	$	1,500,000.00
WETLAND MITIGATION	$	750,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	5,220,000.00
PLANNING-LEVEL COST	**$**	**44,900,000.00**

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

Airport Master Plan Update
Portage Municipal Airport (C47)
Portage, Wisconsin
Technical Advisory Committee Meeting #4

Meeting Information

Date/Time: Wednesday, October 28, 2020 / 5:30 p.m. – 7:00 p.m.
Location: Virtual Meeting - Zoom

Meeting Agenda

1. Study Findings to Date
2. Airport Development Alternatives
3. Project Implementation Plans
4. TAC Recommendation to Airport Commission
5. Study Next Steps

Portage Municipal Airport (C47)

Airport Master Plan – Phase 1
Technical Advisory Committee (TAC)
Meeting #4

TKDA

October 28, 2020

Introductions

- Marcus Watson, TKDA (Consultant)
- City of Portage (Airport Owner)
- Wisconsin DOT Bureau of Aeronautics
- Technical Advisory Committee (TAC)



Meeting Objectives

- ✈Review Study Findings to Date
- ✈Review "Short-List" Airfield Alternatives
- ✈Review Terminal/Hangar Area Development
- ✈Overview of FAA Grant Assurances
- ✈Discuss Project Implementation Scenario
- ✈**Recommend Master Plan Findings to City**



Master Plan Study Process

1. Inventory

- Collect information on the built and natural environment to develop a baseline profile of the airport

2. Aviation Demand Forecasts

- Estimate baseline airport activity
- Develop reasonable assessment of future aircraft operations, based aircraft, and design aircraft

3. Facility Requirements

- Determine facility needs to meet airport design standards for the aeronautical demand
- Identify design standard deficiencies

Master Plan Study Process

4. Identify & Evaluate Alternatives

- Evaluation solutions for to meet compliance
- Identify and evaluate development alternatives based on feasibility, operational, environmental and fiscal impacts
- Select preferred alternative for development plan

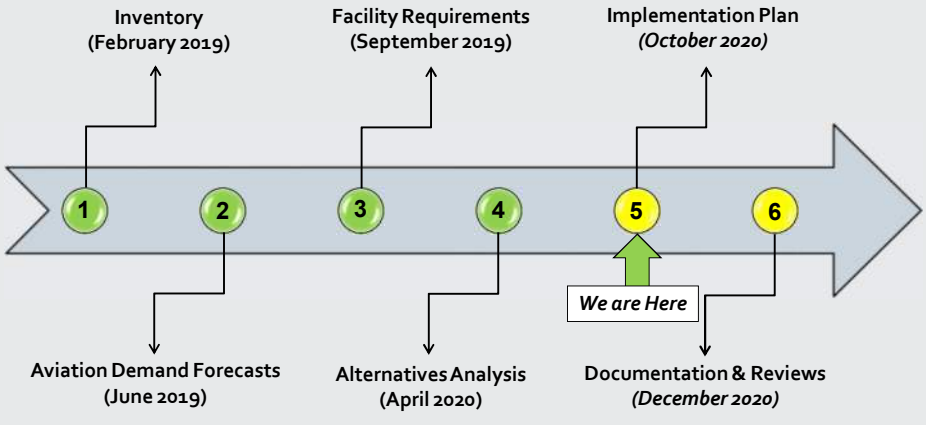
5. Implementation Plan & Financial Feasibility

- Identify plan implementation steps for preferred alternative
- Review financial feasibility and funding needs of future actions

6. Study Documentation & Reviews

- Prepare final plan documentation to review and approval by the city, WBOA and FAA

Current Project Schedule



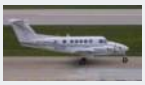
***Schedule subject to change based on review timelines*

Key Study Findings to Date

- Several deficiencies to FAA airport design standards
- Airport activity constrained at existing airport today
  - 3,300' recommended runway length for airplanes today
  - Unmet demand for larger aircraft type
- 3,800' and 5,500' runways options not feasible at existing airport site
- **TAC Meeting #3 (Nov. 2019): Consensus around safety & compliance alternative in the interim, explore new airport site**

Facility Needs Summary

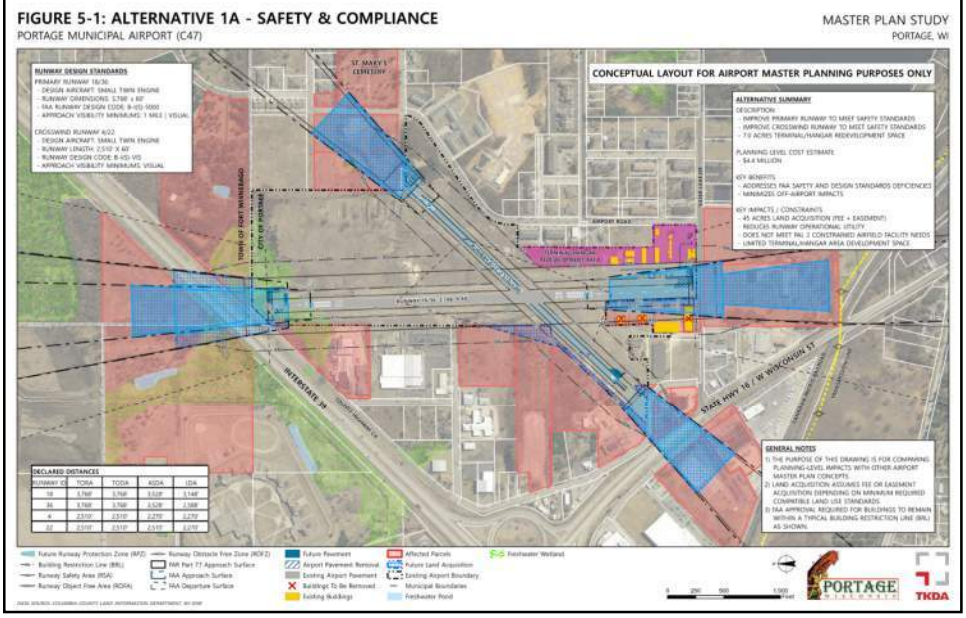
- Planning Activity Levels (PAL)

Metric	Existing	PAL 2	PAL 3	PAL 4
Forecast Type	-	**Constrained**	Unconstrained	Unconstrained
Forecast Year	2018	**2038**	2023	2038
Annual Operations	3,788	**4,255**	9,740	10,955
Based Aircraft	25	**28**	37	40
FAA Design Standards	A-I, Small	**B-I, Small**	B-II, Small	B-II, Large Business Jet
Critical Aircraft				
Primary Runway Dimensions	3,768' x 60'*	**3,300' x 60'**	3,800' x 75'	5,500' x 75'

Airfield Alternatives - Overview

- Eight (8) on-site airfield "build" development options were developed
- Criteria was to meet FAA design standards and facility needs for various activity scenarios:
  - 3,300' Runway (PAL 2)
  - 3,800' Runway (PAL 3)
  - 5,500' Runway (PAL 4)
- A planning-level impacts evaluation was completed for each option for comparative purposes
- The most feasible alternatives meet up to PAL 2 / 3,300' runway requirements with three (3) short-list options
- **An initial preferred alternative was refined**

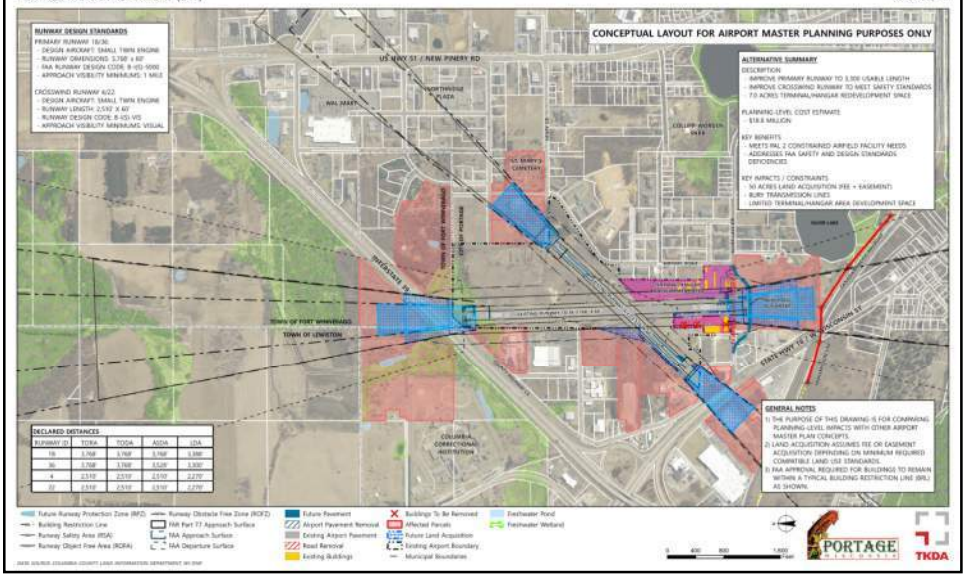
Alternative 1A: Safety & Compliance (Preferred)



Alternative 2A: Improve Runway 18/36 to 3,300'

FIGURE 5-2: ALTERNATIVE 2A - IMPROVE RUNWAY 18/36 TO 3,300 FEET USABLE LENGTH
PORTAGE MUNICIPAL AIRPORT (C47)

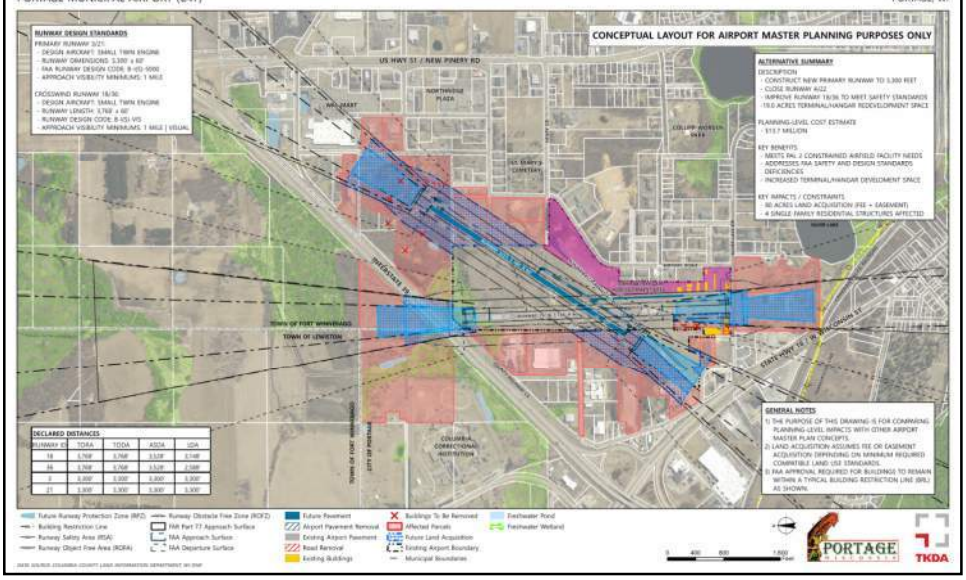
MASTER PLAN STUDY
PORTAGE, WI



Alternative 2C: Construct New 3,300' Runway

FIGURE 5-4: ALTERNATIVE 2C - CONSTRUCT NEW RUNWAY TO 3,300 FEET
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI



Airfield Alternatives Impact Summary

Category	1A	2A	2B	2C	3A	3B	4A	4B
Minimum Primary Runway Distance	2,588'	3,300'	3,300'	3,300'	3,500'*	3,800'	5,500'	5,500'
Crosswind Runway	Yes	Yes	Yes	Yes	No	Yes	No	No
Meets Rec'd Runway Distances	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Meets Basic FAA Design Standards	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Transmission Line Impacts	No	Yes	No	No	Yes	No	Yes	No
Triggers Terminal Area Relocation	No	No	No	No	Yes	No	Yes	Yes
Roadway Impacts	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Land Acquisition (acres)	45 ac	50 ac	75 ac	80 ac	60 ac	115 ac	215 ac	230 ac
Residential Structures Impacted	0	0	11	4	0	4	0	5
Other Structures Impacted	3	3	5	5	13	8	21	23
Planning-Level Cost	$4.4m	$18.8m	$23.3m	$13.7m	$26.1m	$43.8m	$82.6m	$102.2m
Local Share*	$0.3m	$12.6m	$1.3m	$0.8m	$14.5m	$3.8m	$17.8m	$7.2m
Development Practicality	High	Medium	Low	Medium	Medium	Medium	Low	Low
Generic New Airport Cost	*$21.3m*	*$21.3m*	*$21.3m*	*$21.3m*	*$26.6m*	*$26.6m*	*$44.9m*	*$44.9m*
Generic New Airport Local Share	$3.2m	$3.2m	$3.2m	$3.2m	$4.0m	$4.0m	$6.8m	$6.8m

**Assumes FAA/WBOA funding participation, crosswind runway eligible for FAA/WBOA funding, and no FAA/WBOA funding for transmission line actions*

PORTAGE WISCONSIN

Conceptual Evaluation for Master Planning Purposes Only

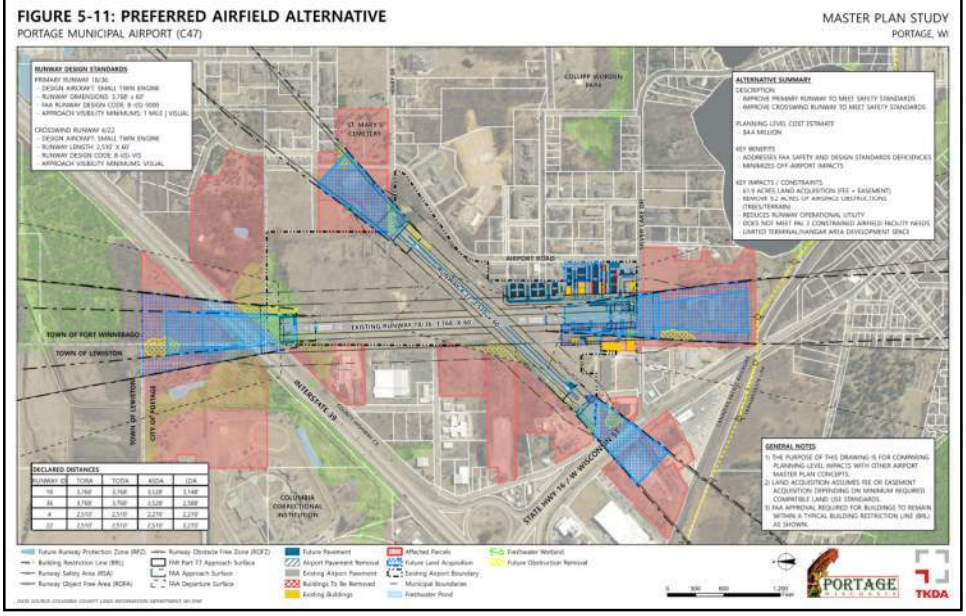
Initial Preferred Airfield Alternative 1A

- Key Features
  - Improves both runways to meet FAA design standards
  - Reduces usable runway length
  - Reduces Runway 36 to visual approach
  - Reconfigures aircraft parking, taxiway; relocates fuel facility
  - Minimizes off-airport impacts
  - **Minimum build alternative to achieve compliance**
  - **Alternative does not fully meet facility needs**
- Key Impacts
  - 45 acres land acquisition
  - Up to 3 structures impacted*
  - $4.4 million estimated total cost *(re-development portions only)*

PORTAGE WISCONSIN

**Subject to FAA determination and funding participation*

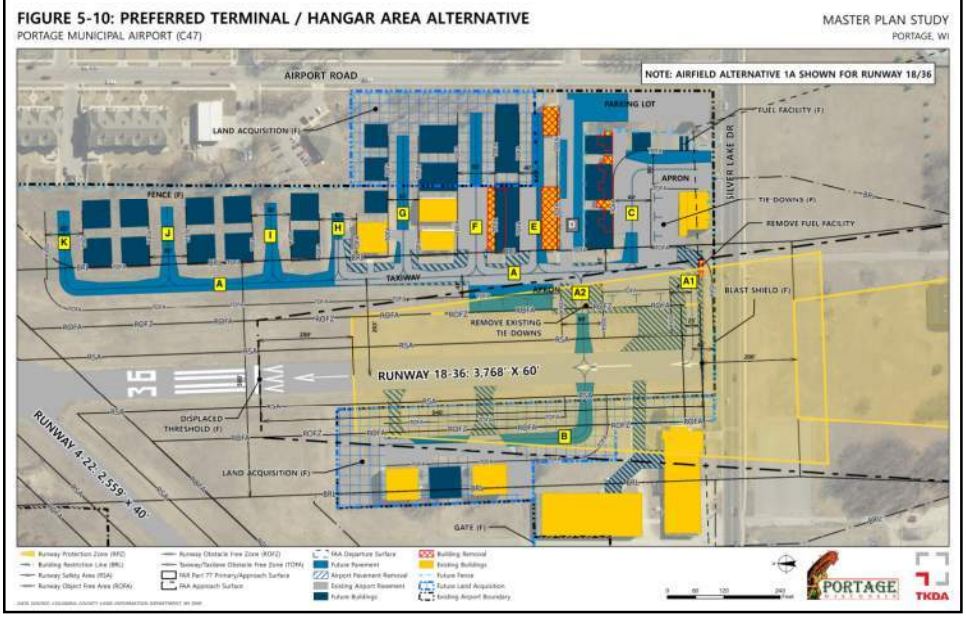
Initial Preferred Airfield Alternative 1A



Proposed Terminal/Hangar Area Development

- A Terminal/Hangar area layout concept was designed to complement airfield Alternative 1A
- Meets FAA design standards in short-term
  - Relocate fuel facility
  - Relocate aircraft parking apron
  - Taxiway geometry reconfigurations
- Preserves long-term development for additional hangars in idea configuration
- Alternative refined based on Agency feedback

Initial Preferred Terminal/Hangar Area Alternative



Public Open House #2



- Held September 29th at Airport
- Total 26 attendees
  - Airport Users
  - Local Officials, WBOA Reps
  - Local Media
- Reviewed key project findings to date
- Presented Top 3 Airfield Alternatives to Public
  - Alternative 1A – Safety & Compliance
  - Alternative 2A – Improve Runway 18/36
  - Alternative 2C – Construct New Runway
- One formal written comment received

Feedback Point

- Does the TAC still concur with the initial proposed airfield and terminal area alternative?



Implementation Plan

- Goal: Provide guidance to the airport owner with a step-by-step plan on how to carry out and fund the preferred development recommendations
- Implementation plan becomes basis for Capital Improvement Plan (CIP) updates
- Plan Considerations
  - FAA Grant Assurances (land acquisition)
  - Prioritize Runway 18-36 and safety needs
  - Reconstruct pavements in poor condition
  - Available funding and rules
  - Runway 4-22 improvements thereafter

FAA Grant Assurances (Obligations)

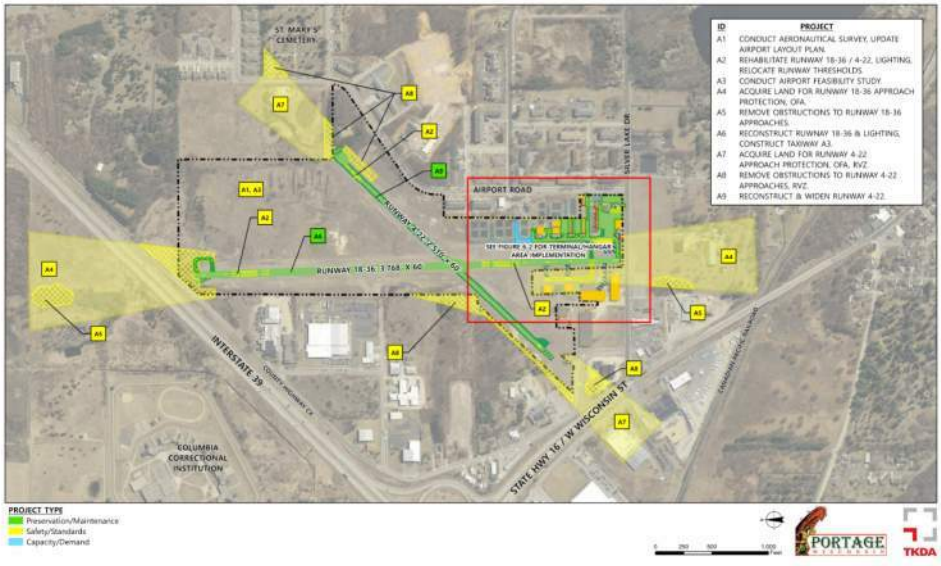
- City received letter from WBOA in August 2020
- The airport is obligated from the City accepting federal funds to complete the Exhibit A/Property Map in 2016
- Airport is obligated to certain FAA grant assurances so long as the land is used as an airport (not permanent)
- Useful life of FAA-funded improvements has been met
- **Land acquisition useful life is indefinite**
- New FAA funding would trigger additional grant assurances for the useful life of the improvement
- Land sale proceeds would be used to construct new airport
- FAA approval required to close airport. Closed airport land would not be obligated

Airfield Implementation Plan

DRAFT

FIGURE 6-1: AIRFIELD IMPLEMENTATION PLAN (SHORT/MID-TERM)
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI

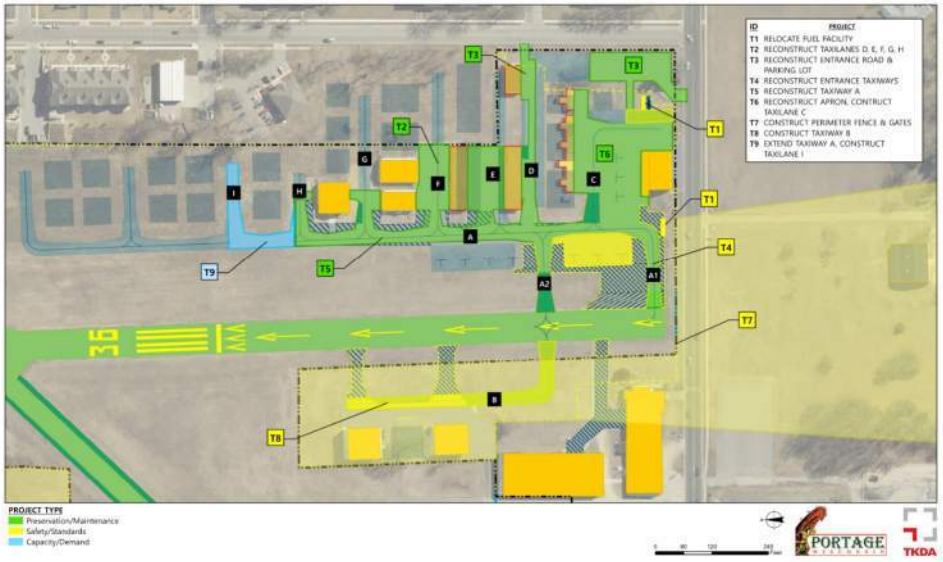


Terminal/Hangar Area Implementation Plan

DRAFT

FIGURE 6-2: TERMINAL/HANGAR AREA IMPLEMENTATION(SHORT/MID-TERM)
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI



Key Project Sequence (2020-2029)

DRAFT

2020

- ✈Update Airport Layout Plan *(under contract)*

2021

- ✈Relocate Runway Thresholds
- ✈Relocate Fuel Facility
- ✈Conduct Airport Feasibility Study

2023

- ✈Acquire Land for Runway 18-36 Approaches
- ✈Remove Runway 18-36 Obstructions
- ✈Reconstruct Taxilanes D, E, F, G, H
- ✈Rehabilitate Entrance Road & Parking Lot

PORTAGE WISCONSIN

Projects must meet FAA standards for planning, environmental, design and construction to be eligible to receive Federal funding participation.

Key Project Sequence (2020-2029)

DRAFT

2024

- ✈ Reconstruct Runway 18-36, Lighting
- ✈ Construct Taxiway A3 (RWY 18 End)
- ✈ Reconstruct Runway 36 Entrance Taxiways (A, A1, A2)
- ✈ Reconstruct Taxiway A
- ✈ Reconstruct Apron, Construct Apron Taxilane

2026

- ✈ Acquire Land for Runway 4-22 Approaches
- ✈ Remove Runway 4-22 Obstructions
- ✈ Reconstruct & Widen Runway 4-22

PORTAGE WISCONSIN

Projects must meet FAA standards for planning, environmental, design and construction to be eligible to receive Federal funding participation.

Key Projects (2020-2029)

DRAFT

2029

- ✈ Construct Terminal Area Perimeter Fence & Gates
- ✈ Construct West Hangar Taxiway

Potential Improvements Beyond 2029

- ✈ Extend Hangar Site Taxilane
- ✈ Construct Terminal Building
- ✈ Replace T-Hangar Buildings

PORTAGE WISCONSIN

Projects must meet FAA standards for planning, environmental, design and construction to be eligible to receive Federal funding participation.

Financial Feasibility Plan

DRAFT

- Summary of all major projects over next 10 years
- Presumes most projects eligible for FAA funding
  - Land acquisition with State funds

Development Phase	Total Cost	FAA Funding	State Funding	Local Funding
Near-Term (2020-2024)	$ 6,031,668	$ 4,524,001	$ 1,052,708	$ 454,958
Mid-Term (2025-2029)	$ 2,590,000	$ 1,881,000	$ 504,500	$ 204,500
Total (2020-2029)	**$ 8,621,668**	**$ 6,405,001**	**$ 1,557,208**	**$ 659,458**
Preservation Projects	$ 5,880,000	$ 5,179,500	$ 385,125	$ 315,375
Safety/Standards Projects	$ 2,741,668	$ 1,225,501	$ 1,172,083	$ 344,083
Demand/Capacity Projects	$ -	$ -	$ -	$ -

**Projects subject to FAA/State/Local approvals, available funding*

Note: Numbers revised after TAC meeting to correct math

Feedback Point

- Questions or comments on the implementation plan?



TAC Recommendations to City

- Provide formal recommendation to City of Portage on the study conclusions for the existing airport site:
  - Close Airport
  - Improve Existing Airport Site
    - *Select the master plan preferred "build" alternative*
- Other Considerations
  - Explore Feasibility of New Airport Site

Study Next Steps

- Local approval of Master Plan considering TAC recommendation
  - Airport Commission
  - Common Council
- Complete implementation plans
- Prepare final study documentation and reviews

Thank You!

Questions?

Portage Municipal Airport
Airport Master Plan – Phase 1
Technical Advisory Committee (TAC)
Meeting #4

October 28, 2020

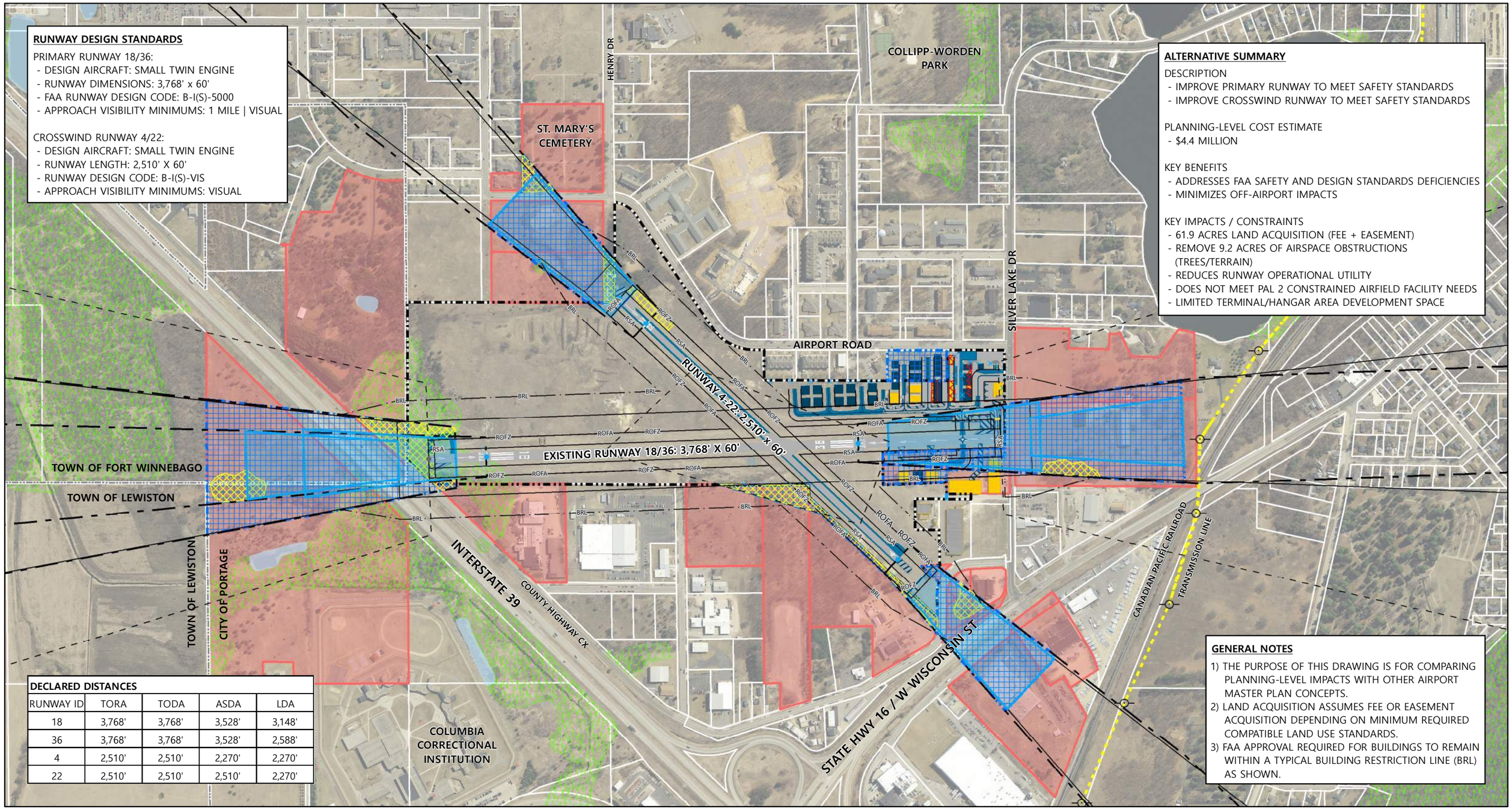
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FIGURE 5-11: PREFERRED AIRFIELD ALTERNATIVE

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI



DECLARED DISTANCES				
RUNWAY ID	TORA	TODA	ASDA	LDA
18	3,768'	3,768'	3,528'	3,148'
36	3,768'	3,768'	3,528'	2,588'
4	2,510'	2,510'	2,270'	2,270'
22	2,510'	2,510'	2,510'	2,270'

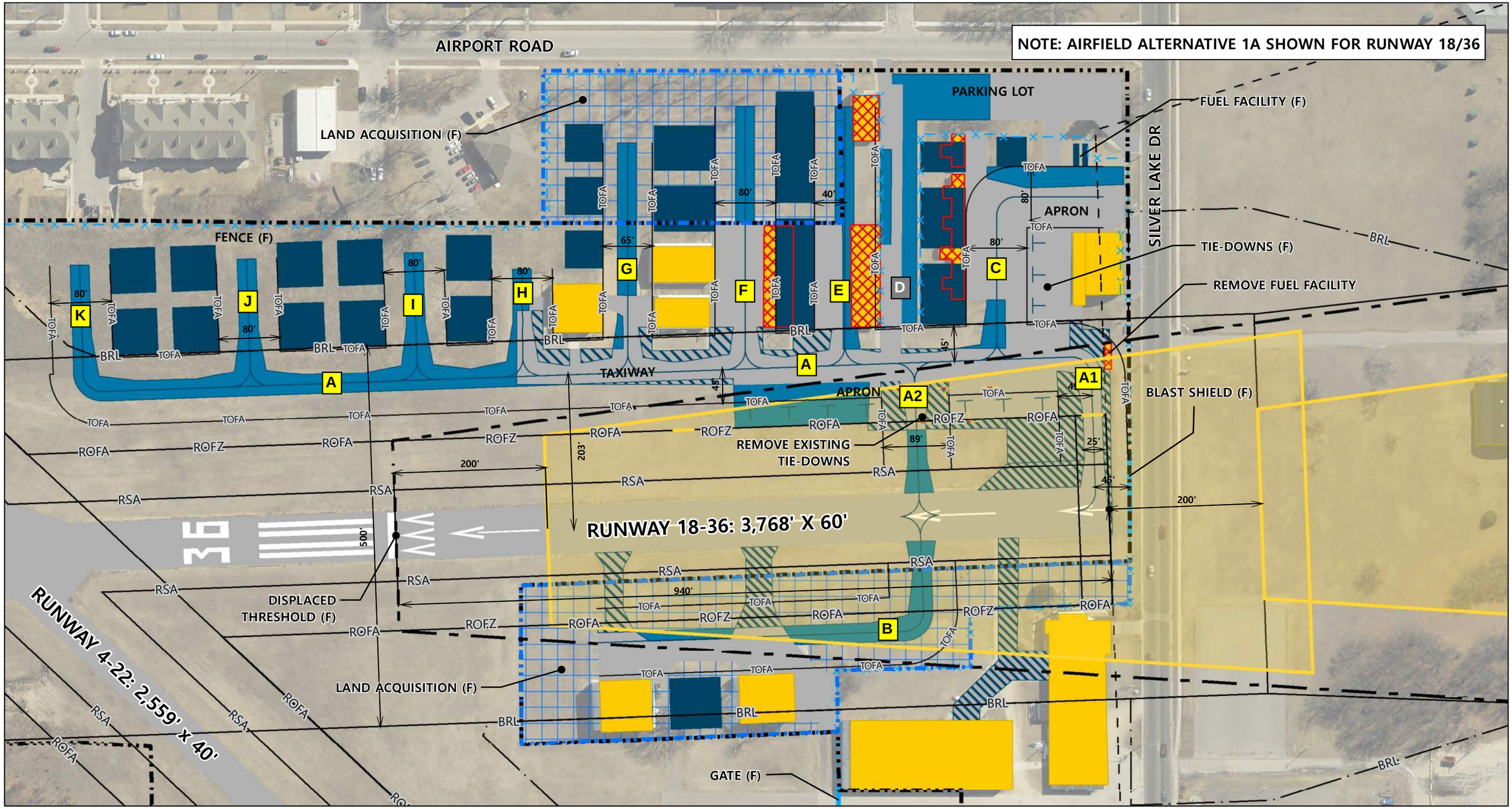
DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

PORTAGE WISCONSIN

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FIGURE 5-10: PREFERRED TERMINAL / HANGAR AREA ALTERNATIVE

PORTAGE MUNICIPAL AIRPORT (C47)



Runway Protection Zone (RPZ)
Building Restriction Line (BRL)
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
Taxiway/Taxilane Obstacle Free Zone (TOFA)
FAR Part 77 Primary/Approach Surface
FAA Approach Surface
FAA Departure Surface
Future Pavement
Airport Pavement Removal
Existing Airport Pavement
Future Buildings
Building Removal
Existing Buildings
Future Fence
Future Land Acquisition
Existing Airport Boundary

0 60 120 240 Feet

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

FIGURE 5-1: ALTERNATIVE 1A - SAFETY & COMPLIANCE

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 18/36:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY DIMENSIONS: 3,768' x 60'
- FAA RUNWAY DESIGN CODE: B-I(S)-5000
- APPROACH VISIBILITY MINIMUMS: 1 MILE | VISUAL

CROSSWIND RUNWAY 4/22:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY LENGTH: 2,510' X 60'
- RUNWAY DESIGN CODE: B-I(S)-VIS
- APPROACH VISIBILITY MINIMUMS: VISUAL

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- IMPROVE PRIMARY RUNWAY TO MEET SAFETY STANDARDS
- IMPROVE CROSSWIND RUNWAY TO MEET SAFETY STANDARDS
- 7.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $4.4 MILLION

KEY BENEFITS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES
- MINIMIZES OFF-AIRPORT IMPACTS

KEY IMPACTS / CONSTRAINTS
- 45 ACRES LAND ACQUISITION (FEE + EASEMENT)
- REDUCES RUNWAY OPERATIONAL UTILITY
- DOES NOT MEET PAL 2 CONSTRAINED AIRFIELD FACILITY NEEDS
- LIMITED TERMINAL/HANGAR AREA DEVELOPMENT SPACE

ST. MARY'S CEMETERY

TOWN OF FORT WINNEBAGO

CITY OF PORTAGE

AIRPORT ROAD

SILVER LAKE DR

TERMINAL/HANGAR REDEVELOPMENT AREA

RUNWAY 4/22: 2,510' x 60'

RUNWAY 18/36: 3,768' X 60'

INTERSTATE 39

COUNTY HIGHWAY CX

STATE HWY 16 / W WISCONSIN ST

CANADIAN PACIFIC RAILROAD

TRANSMISSION LINE

BRL · ROFA · ROFZ · RSA

DECLARED DISTANCES				
RUNWAY ID	TORA	TODA	ASDA	LDA
18	3,768'	3,768'	3,528'	3,148'
36	3,768'	3,768'	3,528'	2,588'
4	2,510'	2,510'	2,270'	2,270'
22	2,510'	2,510'	2,510'	2,270'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

- Future Runway Protection Zone (RPZ)
- Building Restriction Line (BRL)
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- FAR Part 77 Approach Surface
- FAA Approach Surface
- FAA Departure Surface
- Future Pavement
- Airport Pavement Removal
- Existing Airport Pavement
- Buildings To Be Removed
- Existing Buildings
- Affected Parcels
- Future Land Acquisition
- Existing Airport Boundary
- Municipal Boundaries
- Freshwater Pond
- Freshwater Wetland

0 250 500 1,000 Feet

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

PORTAGE WISCONSIN

TKDA

FIGURE 5-2: ALTERNATIVE 2A - IMPROVE RUNWAY 18/36 TO 3,300 FEET USABLE LENGTH

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 18/36:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY DIMENSIONS: 3,768' x 60'
- FAA RUNWAY DESIGN CODE: B-I(S)-5000
- APPROACH VISIBILITY MINIMUMS: 1 MILE

CROSSWIND RUNWAY 4/22:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY LENGTH: 2,510' X 60'
- RUNWAY DESIGN CODE: B-I(S)-VIS
- APPROACH VISIBILITY MINIMUMS: VISUAL

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- IMPROVE PRIMARY RUNWAY TO 3,300 USABLE LENGTH
- IMPROVE CROSSWIND RUNWAY TO MEET SAFETY STANDARDS
- 7.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $18.8 MILLION

KEY BENEFITS
- MEETS PAL 2 CONSTRAINED AIRFIELD FACILITY NEEDS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES

KEY IMPACTS / CONSTRAINTS
- 50 ACRES LAND ACQUISITION (FEE + EASEMENT)
- BURY TRANSMISSION LINES
- LIMITED TERMINAL/HANGAR AREA DEVELOPMENT SPACE

US HWY 51 / NEW PINERY RD
NORTHRIDGE PLAZA
WAL-MART
HENRY DR
COLLIPP-WORDEN PARK
ST. MARY'S CEMETERY
SILVER LAKE
SILVER LAKE DR
AIRPORT ROAD
TOWN OF FORT WINNEBAGO
CITY OF PORTAGE
INTERSTATE 39
TERMINAL/HANGAR REDEVELOPMENT AREA
NEW ROAD ALIGNMENT
EXISTING RUNWAY 18/36 3,768' X 60'
EXISTING RUNWAY 4/22 2,510' X 60'
CANADIAN PACIFIC RAILROAD
STATE HWY 16 / W WISCONSIN ST
TRANSMISSION LINE
TOWN OF FORT WINNEBAGO
TOWN OF LEWISTON
COUNTY HIGHWAY CX
COLUMBIA CORRECTIONAL INSTITUTION

DECLARED DISTANCES				
RUNWAY ID	TORA	TODA	ASDA	LDA
18	3,768'	3,768'	3,768'	3,388'
36	3,768'	3,768'	3,528'	3,300'
4	2,510'	2,510'	2,510'	2,270'
22	2,510'	2,510'	2,510'	2,270'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

Future Runway Protection Zone (RPZ)
Building Restriction Line
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
FAR Part 77 Approach Surface
FAA Approach Surface
FAA Departure Surface
Future Pavement
Airport Pavement Removal
Existing Airport Pavement
Road Removal
Existing Buildings
Buildings To Be Removed
Affected Parcels
Future Land Acquisition
Existing Airport Boundary
Municipal Boundaries
Freshwater Pond
Freshwater Wetland

N

0 400 800 1,600 Feet

PORTAGE WISCONSIN

TKDA

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

FIGURE 5-4: ALTERNATIVE 2C - CONSTRUCT NEW RUNWAY TO 3,300 FEET

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI

RUNWAY DESIGN STANDARDS

PRIMARY RUNWAY 3/21:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY DIMENSIONS: 3,300' x 60'
- FAA RUNWAY DESIGN CODE: B-I(S)-5000
- APPROACH VISIBILITY MINIMUMS: 1 MILE

CROSSWIND RUNWAY 18/36:
- DESIGN AIRCRAFT: SMALL TWIN ENGINE
- RUNWAY LENGTH: 3,768' x 60'
- RUNWAY DESIGN CODE: B-I(S)-VIS
- APPROACH VISIBILITY MINIMUMS: 1 MILE | VISUAL

CONCEPTUAL LAYOUT FOR AIRPORT MASTER PLANNING PURPOSES ONLY

ALTERNATIVE SUMMARY

DESCRIPTION
- CONSTRUCT NEW PRIMARY RUNWAY TO 3,300 FEET
- CLOSE RUNWAY 4/22
- IMPROVE RUNWAY 18/36 TO MEET SAFETY STANDARDS
-19.0 ACRES TERMINAL/HANGAR REDEVELOPMENT SPACE

PLANNING-LEVEL COST ESTIMATE
- $13.7 MILLION

KEY BENEFITS
- MEETS PAL 2 CONSTRAINED AIRFIELD FACILITY NEEDS
- ADDRESSES FAA SAFETY AND DESIGN STANDARDS DEFICIENCIES
- INCREASED TERMINAL/HANGAR DEVELOMENT SPACE

KEY IMPACTS / CONSTRAINTS
- 80 ACRES LAND ACQUISITION (FEE + EASEMENT)
- 4 SINGLE-FAMILY RESIDENTIAL STRUCTURES AFFECTED

US HWY 51 / NEW PINERY RD
NORTHRIDGE PLAZA
WAL-MART
HENRY DR
ST. MARY'S CEMETERY
COLLIPP-WORDEN PARK
SILVER LAKE
SILVER LAKE DR
AIRPORT ROAD
TERMINAL/HANGAR REDEVELOPMENT AREA
RUNWAY 3/21: 3,300' X 60'
RUNWAY 4/22 (REMOVAL)
RUNWAY 18/36 3,768' X 60'
INTERSTATE 39
TOWN OF FORT WINNEBAGO
TOWN OF LEWISTON
CITY OF PORTAGE
COUNTY HIGHWAY CX
COLUMBIA CORRECTIONAL INSTITUTION
CANADIAN PACIFIC RAILROAD
STATE HWY 16 / W WISCONSIN ST
TRANSMISSION LINE

DECLARED DISTANCES

RUNWAY ID	TORA	TODA	ASDA	LDA
18	3,768'	3,768'	3,528'	3,148'
36	3,768'	3,768'	3,528'	2,588'
3	3,300'	3,300'	3,300'	3,300'
21	3,300'	3,300'	3,300'	3,300'

GENERAL NOTES

1) THE PURPOSE OF THIS DRAWING IS FOR COMPARING PLANNING-LEVEL IMPACTS WITH OTHER AIRPORT MASTER PLAN CONCEPTS.
2) LAND ACQUISITION ASSUMES FEE OR EASEMENT ACQUISITION DEPENDING ON MINIMUM REQUIRED COMPATIBLE LAND USE STANDARDS.
3) FAA APPROVAL REQUIRED FOR BUILDINGS TO REMAIN WITHIN A TYPICAL BUILDING RESTRICTION LINE (BRL) AS SHOWN.

- Future Runway Protection Zone (RPZ)
- Building Restriction Line
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- FAR Part 77 Approach Surface
- FAA Approach Surface
- FAA Departure Surface
- Future Pavement
- Airport Pavement Removal
- Existing Airport Pavement
- Road Removal
- Existing Buildings
- Buildings To Be Removed
- Affected Parcels
- Future Land Acquisition
- Existing Airport Boundary
- Municipal Boundaries
- Freshwater Pond
- Freshwater Wetland

0 400 800 1,600 Feet

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

PORTAGE WISCONSIN

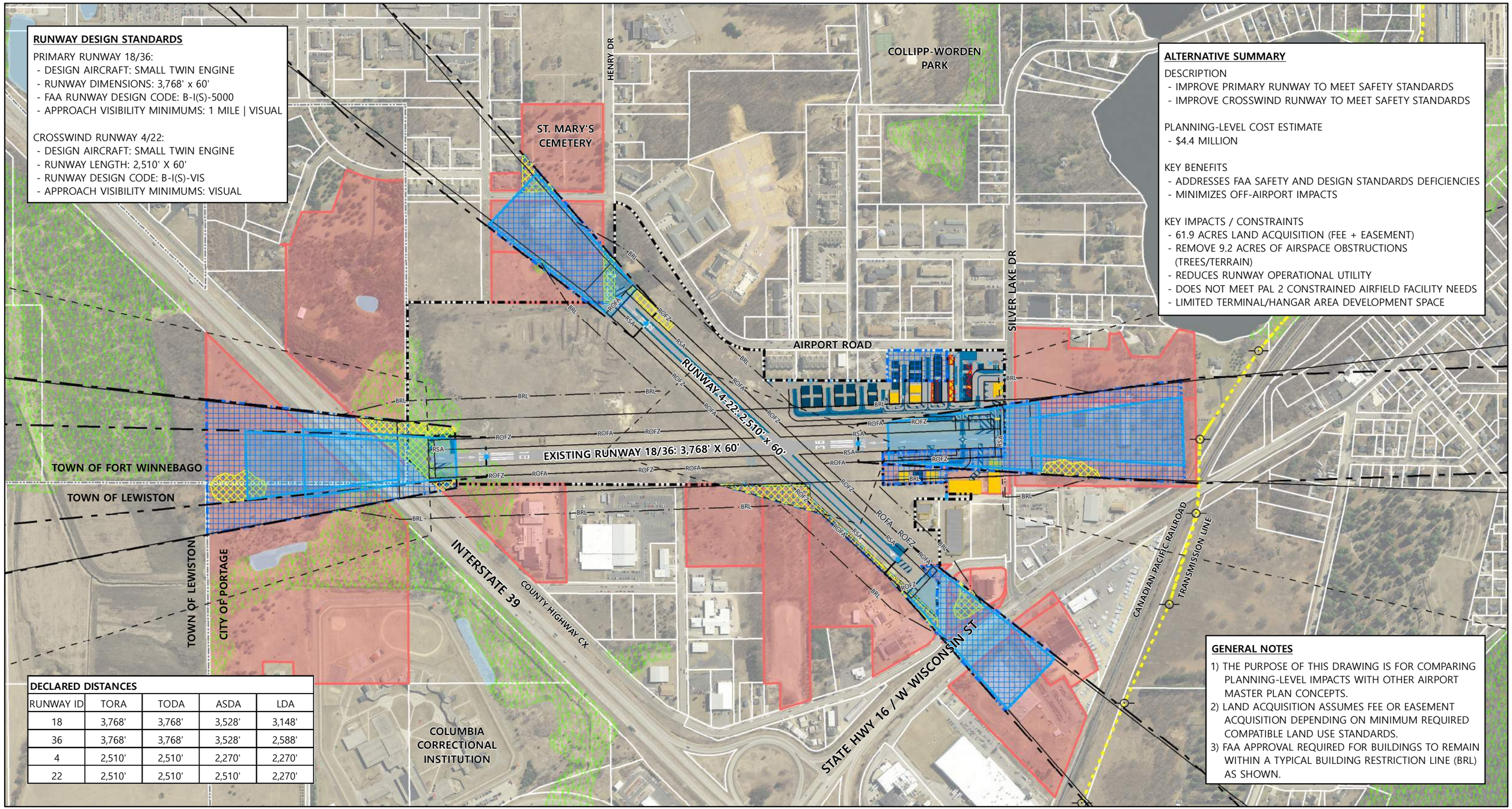
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FIGURE 5-11: PREFERRED AIRFIELD ALTERNATIVE

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI



DECLARED DISTANCES				
RUNWAY ID	TORA	TODA	ASDA	LDA
18	3,768'	3,768'	3,528'	3,148'
36	3,768'	3,768'	3,528'	2,588'
4	2,510'	2,510'	2,270'	2,270'
22	2,510'	2,510'	2,510'	2,270'

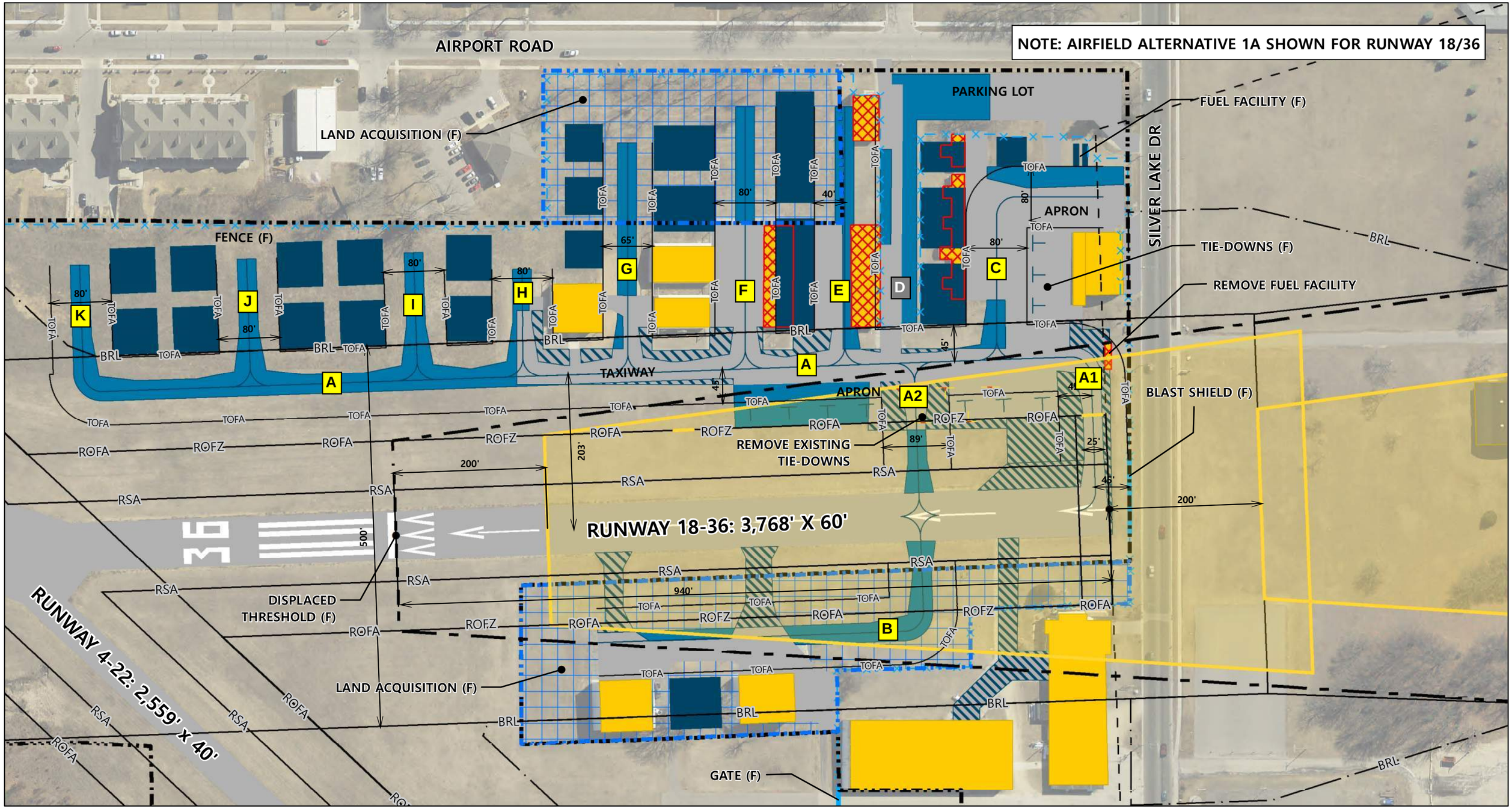
DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

PORTAGE WISCONSIN

TKDA

FIGURE 5-10: PREFERRED TERMINAL / HANGAR AREA ALTERNATIVE

PORTAGE MUNICIPAL AIRPORT (C47)



Runway Protection Zone (RPZ)
Building Restriction Line (BRL)
Runway Safety Area (RSA)
Runway Object Free Area (ROFA)
Runway Obstacle Free Zone (ROFZ)
Taxiway/Taxilane Obstacle Free Zone (TOFA)
FAR Part 77 Primary/Approach Surface
FAA Approach Surface
FAA Departure Surface
Future Pavement
Airport Pavement Removal
Existing Airport Pavement
Future Buildings
Building Removal
Existing Buildings
Future Fence
Future Land Acquisition
Existing Airport Boundary

0 60 120 240 Feet

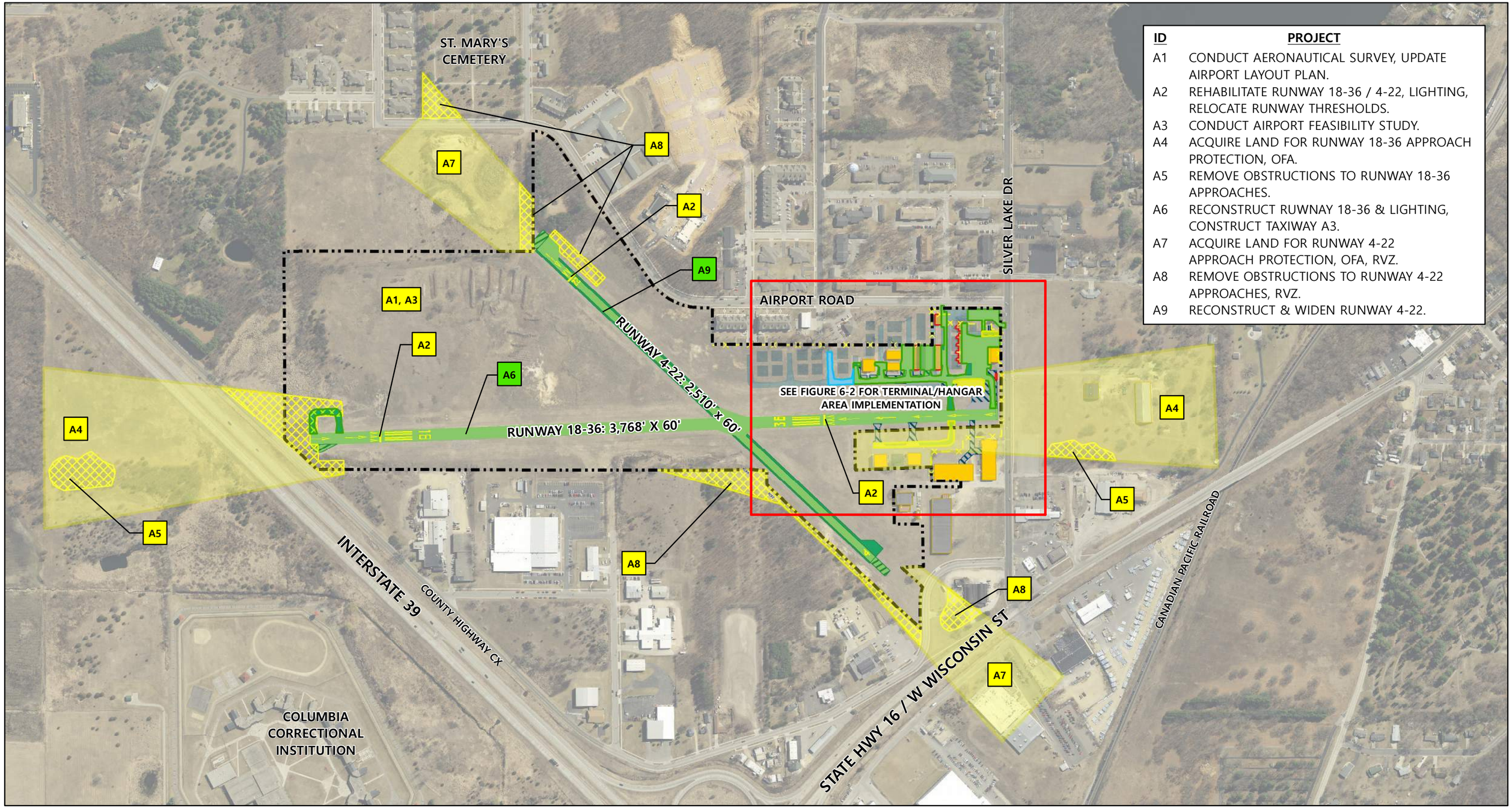
DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT, WI DNR

FIGURE 6-1: AIRFIELD IMPLEMENTATION PLAN (SHORT/MID-TERM)

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI



ID	PROJECT
A1	CONDUCT AERONAUTICAL SURVEY, UPDATE AIRPORT LAYOUT PLAN.
A2	REHABILITATE RUNWAY 18-36 / 4-22, LIGHTING, RELOCATE RUNWAY THRESHOLDS.
A3	CONDUCT AIRPORT FEASIBILITY STUDY.
A4	ACQUIRE LAND FOR RUNWAY 18-36 APPROACH PROTECTION, OFA.
A5	REMOVE OBSTRUCTIONS TO RUNWAY 18-36 APPROACHES.
A6	RECONSTRUCT RUWNAY 18-36 & LIGHTING, CONSTRUCT TAXIWAY A3.
A7	ACQUIRE LAND FOR RUNWAY 4-22 APPROACH PROTECTION, OFA, RVZ.
A8	REMOVE OBSTRUCTIONS TO RUNWAY 4-22 APPROACHES, RVZ.
A9	RECONSTRUCT & WIDEN RUNWAY 4-22.

PROJECT TYPE

- Preservation/Maintenance
- Safety/Standards
- Capacity/Demand

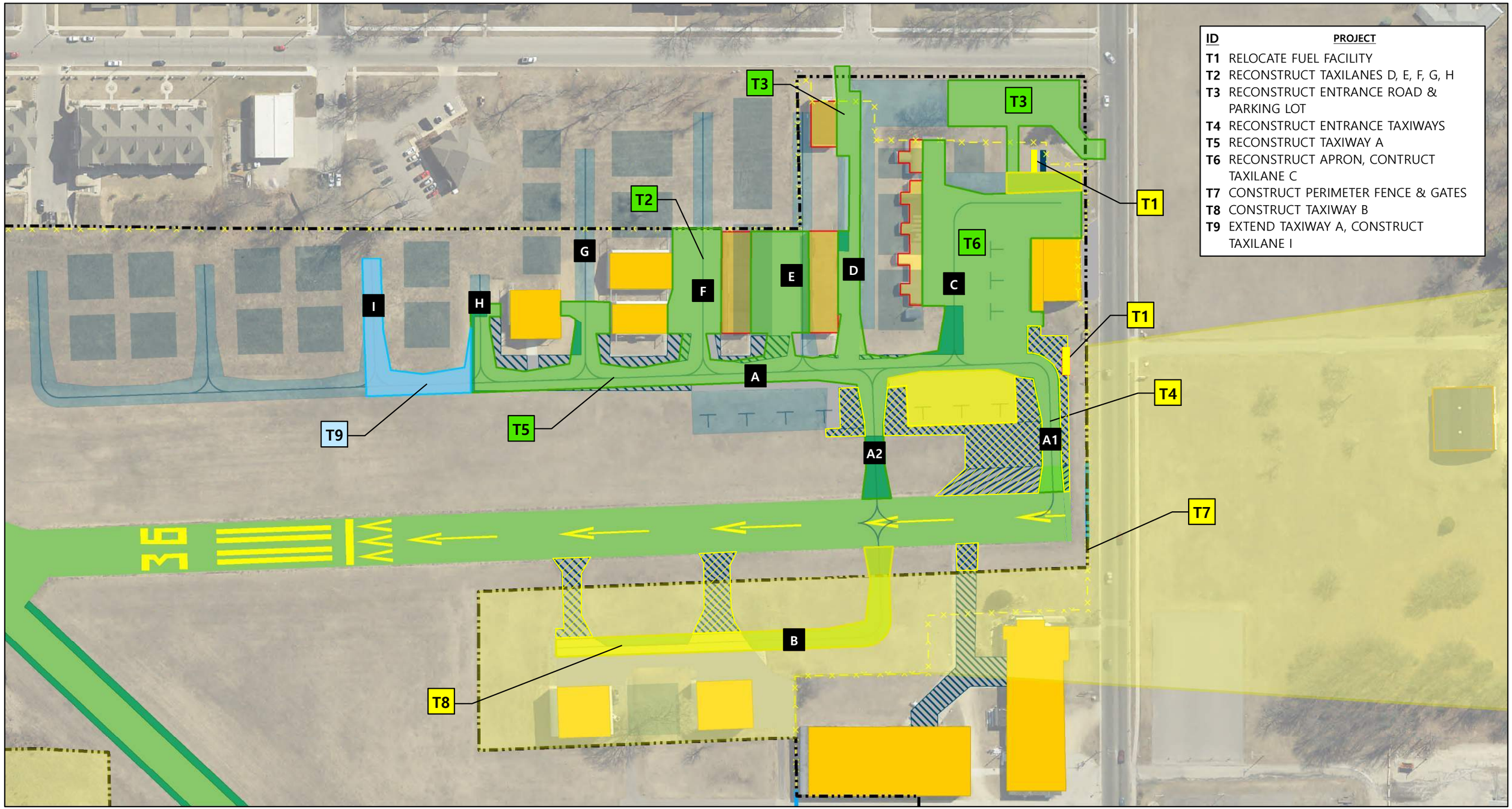
0 250 500 1,000 Feet

PORTAGE WISCONSIN

TKDA

FIGURE 6-2: TERMINAL/HANGAR AREA IMPLEMENTATION PLAN (SHORT/MID-TERM)

PORTAGE MUNICIPAL AIRPORT (C47)



ID	PROJECT
T1	RELOCATE FUEL FACILITY
T2	RECONSTRUCT TAXILANES D, E, F, G, H
T3	RECONSTRUCT ENTRANCE ROAD & PARKING LOT
T4	RECONSTRUCT ENTRANCE TAXIWAYS
T5	RECONSTRUCT TAXIWAY A
T6	RECONSTRUCT APRON, CONTRUCT TAXILANE C
T7	CONSTRUCT PERIMETER FENCE & GATES
T8	CONSTRUCT TAXIWAY B
T9	EXTEND TAXIWAY A, CONSTRUCT TAXILANE I

PROJECT TYPE

- Preservation/Maintenance
- Safety/Standards
- Capacity/Demand

N

0 60 120 240 Feet

PORTAGE WISCONSIN

TKDA

Airport Master Plan – Phase 1
Portage Municipal Airport (C47)
Portage, Wisconsin
Agency Meeting

Meeting Information

Date/Time: Wednesday, January 15, 2020 / 9:00 a.m.
Location: Wisconsin Bureau of Aeronautics, Madison

Meeting Agenda

1. Introductions
2. Background & Study Overview
3. Airfield Alternatives Analysis
4. Alternative 1A Compliance
5. Terminal/Hangar Area Concept
6. Short-Term Implementation
7. Long-Term Vision

Attachments

- C47 Airfield Alternatives Memo
- C47 Alternative 1A
- C47 Terminal/Hangar Alternative T1

Airport Master Plan – Phase 1
Portage Municipal Airport (C47)
Portage, Wisconsin
Agency Meeting

Questions

1. Overall: Are there any reservations about the TAC's initial preferred alternative of airfield Alternative 1A to move forward in the master plan?
2. Overall: What are the consequences of no action by the airport sponsor moving forward? FAA/State funding implications?
3. Overall: What minimum safety/compliance elements are ***required (need to have)*** versus ***recommended (nice to have)*** for the airport to maintain the existing airport to acceptable standards? (see below)
4. Airport Design: Use of Declared Distances acceptable in this proposed configuration to mitigate non-standard RSA/OFA/OFZ?
5. Airspace: What is the minimum standard expected for obstruction removal? Remove objects from FAA Approach Surface (Table 3-2, EB 99) at a minimum? Conduct FAA Aeronautical Study for other obstructions through ALP?
6. Airspace: Requirement to remove off-airport buildings to the west of 18-36 from Primary Surface? FAA Aeronautical Study acceptable?
7. Airport Design/Funding: Would maintaining the existing C47 crosswind runway be eligible/justified for funding with State or FAA funds?
8. Airport Design: Is there a minimum distance from Silver Lake Drive to the Runway 36 end (currently 40 feet)?
9. Airport Design: Need to have entrance taxiway lead to runway end? Pavement removal required to eliminate direct access from apron to runway? What is the acceptable design?
10. Airport Design: Can private taxiways with direct access can remain as-is? Require airport to own OFZ/OFA to meet FAA standards? Holdlines?
11. Airport Design: Runway end turnaround requirement? Reconstruction?
12. Land Use: Are aircraft tie-downs acceptable within RPZ? Above-ground fuel facility?
13. Land Use: Can the existing structures and roads within the RPZ remain (RWY 36, 4, 22) or is action needed (e.g. residential homes in 22 RPZ)?
14. Land Use: What land use control (acquisition) is required at a minimum within RPZ? RVZ? OFA/OFZ?
15. Land Use: What RPZ Alternative Analysis documentation needed for ALP approval to reflect modified RPZ locations?
16. Land Use: Is a HLZO required for the existing airport to receive future FAA or WBOA funding?
17. Short-Term Implementation: Does FAA/WBOA support funding projects identified in Alternative 1A for the safety/compliance of the existing airport site (at least for an interim period)?

18. Short-Term Implementation: C47 is not currently an FAA obligated airport. What are the new consequences (obligations) of accepting FAA funding for the existing airport? Difference in accepting FAA funds for development vs. land? Any new compliance issues that would need to be resolved?
19. Short-Term Implementation: Does accepting FAA funds for the airport prevent the possibility closing airport within 20 years and developing new airport site?
20. Short-Term Implementation: Does WBOA/FAA have any feedback to offer to the airport sponsor on priority short-term projects? (e.g. displaced threshold/clear approaches first priority, then taxiway, etc.)
21. Short-Term Implementation: Will need to know Non-primary entitlement balance and payback obligations?
22. Long-Term Vision: The TAC recognizes the need to maintain the existing airport but would like to push forward with a new airport site. Is there agreement that the existing airport site is inadequate to meet the needs? Are there objections? What additional information is needed?
23. Long-Term Vision: What actions can be supported by WBOA/FAA to move forward with studying a new airport site (e.g. justification/site selection study)? Are there other implications to short-term projects at the existing airport site with exploring a new airport?

Airport Master Plan – Phase 1
Portage Municipal Airport (C47)
WBOA & FAA Meeting
January 15, 2020

MEETING NOTES

Attendees

- Aaron Jahncke, City of Portage
- Matt Malicki, WBOA
- Mary Strait, WBOA
- Mark Graczykowski, WBOA
- Hal Davis, WBOA
- Teresa Klein, WBOA
- Tamera Weaver, WBOA
- Mallory Palmer, WBOA
- Corbin Montgomery, WBOA
- Sandy Lyman, FAA (via phone)
- Marcus Watson, TKDA
- Junior Lindsay, TKDA (via phone)

Background & Study Overview

WBOA provided a general overview of C47. The airport has been in a planning cycle for decades. The last airport master plan study was 2011 which was not effective in solving current airport site deficiencies. He shared there is no ALP or Exhibit 'A' on-file, and believed the airport was not obligated by FAA grant assurances.

TKDA stated purpose of the meeting is to share information and provide feedback at this critical point in the study (alternatives analysis). They provided an overview of the existing airport site, location, and man-made and natural-growth constraints. A critical constrained is the ATC Transmission Line south of the airport. There are several deficiencies to FAA airport design standards including but not limited to the RSA, OFZ, and airspace.

TKDA reviewed the aviation activity forecasts. The "official" forecast to be approved by FAA is the constrained forecast assuming local aviation demand is not satisfied at the existing airport site. The official forecast critical design aircraft is a FAA RDC A-I/B-I Small Aircraft. The "unofficial" unconstrained forecast scenario represents potential increases in activity. Various Planning Activity Levels (PALs) were prepared for each scenario along with a recommended runway length.

- PAL 2 – Small Twin-Engine – 3,300' x 60' – FAA RDC A-I/B-I Small
- PAL 3 – Beechcraft King Air – 3,800' x 75' Runway – FAA RDC B-II Small
- PAL 4 – Business Jet – 5,500' x 75' Runway – FAA RDC B-II Large

Airfield Alternatives Analysis / Terminal/Hangar Area Concept

TKDA reviewed the airfield alternatives analysis based on the memorandum shared with the group beforehand. The options are a "best fit" to meet facility needs on the existing site for each PAL scenario considering operational performance, best planning tenets, environmental, and financial factors.

TKDA reviewed the eight (8) airfield alternative scenarios which included improving existing runways and possible runway realignments. The lowest cost and least impactful option to meet existing safety standards was Alternative 1A. The tradeoff to the lower impacts was reduced utility of the runway (e.g. 2,588' landing distance) using declared distances. PAL 2 (3,300' runway) options ranged between $14 and $23 million, compared to $21 million for a generic new airport site. PAL 3 (3,800') runway options ranged between $26 and $44 million, compared to $27 million for a generic new airport site. PAL 4 (5,500') runway options ranged between $83 and $102 million, more than $45 million for a generic new airport site.

The analysis demonstrated the existing airport site cannot feasibly accommodate existing (and potential future) airport needs. Significant new investment in the existing airport site other than for high priority safety and compliance actions was recommended. There was general concurrence amongst the group with this approach.

Terminal/Hangar Area Alternative T1 was also shared with the group. This concept represents a full-build concept for re-development of the existing hangar area. The concept meets facility needs for ADG-I aircraft. An ADG-II design airplane as identified in PAL 3 or 4 triggers relocation of the terminal/hangar area. Practically, only the highest priority projects would be pursued in the future. No significant investments in the airport are recommended if the airport is exploring a new airport site.

The initial recommended alternative by the local Technical Advisory Committee (TAC) is to proceed with Alternative 1A (Safety & Compliance) for the short-term, and explore a new airport site in the long-term.

Alternative 1A Compliance

Several questions were asked and answered about the technical details of Alternative 1A:

- Declared Distances is typically used for runways serving turbojet aircraft. FAA indicated this may be changing based on draft FAA guidance changes. In addition, some small turbojet aircraft (e.g. Cirrus Jet) could use the runway now using declared distances is acceptable.
- FAA to review whether declared distances with a reduced runway length affects presence of an instrument approach.
- WBOA indicated they may not participate in the funding of pavement reconstruction beyond what is needed to achieve the recommended runway length of 3,300 feet.
- Minimum land ownership area required by FAA is the RSA and OFZ. Ownership of the RPZ is ideal.
- Threshold Siting Surface (FAA Engineering Brief 99) must be cleared. Obstructions identified to FAR Part 77 standards with action plan shown on ALP. Removal of FAR Part 77 obstructions is eligible for AIP funding.
- FAA stated hangars within the primary surface could remain if a favorable aeronautical study was performed. Most likely obstruction lighting would be required.
- WBOA would like clear FAR Part 77 surface if possible, but need to clear the FAA Engineering Brief 99 approach surfaces.
- WBOA recommends acquiring property for two hangars on private property and leasing back to the tenants, or else close off access to the airport. FAA requires Through-The-Fence activity to be documented.
- FAA did not see any issues with the close proximity of Runway 36 with Silver Lake Drive with declared distances, so long as taxiway OFA standards are met.

- Recommend modify taxiway and proposed aircraft tie-down configuration to match available Runway 18 takeoff and landing distance.
- FAA and WBOA indicated any airport relocation study would require coordination and concurrence with FAA Headquarters. FAA also indicated NPIAS requirements (30 miles from another NPIAS airport) may be considered in the relocation of the airport.
- RPZ Analysis will be required if new or modified uses are introduced into the RPZ (not new portions of existing land uses). Fuel facility and parked aircraft would be considered a new land use. Review and approval occurs at FAA Headquarters.
- Direct access from an apron to a runway is currently a “best practice”, but may become an FAA design standard requirement in the future.
- FAA stated the current justification threshold in their office for crosswind runways is 500 regular use operations at the airport by crosswind-critical aircraft (e.g. A-I/B-I aircraft), and the runway less than 95% wind coverage. WBOA added they are looking at funding for crosswind runway statewide. Funding for the crosswind runways may not compete well against other statewide projects, and investment in the crosswind may not be the highest and best use of funds especially if the airport may relocate.

Implementation Plans

TKDA shared the goal of the master plan study is to identify a realistic implementation plan for the airport to implement its preferred on-site development plan. The focus is on the short-term implementation plan to aid the airport in priority safety and compliance standards. The long-term implementation plan is dependent on the outcome of an airport site selection study.

Comments from the group on this topic included:

- FAA stated airport relocation is a 10-20 year process. They recommended to focus on safety projects in the next 10 years even if the airport is on track for relocation, and don’t complete any expansion projects as they would be reviewed more closely. New airport benefit-cost calculations consider investment in the airport.
- FAA would look into what the consequences are of putting money into the existing airport.
- If the airport is obligated (under grant assurances), the sale proceeds of the existing airport would go to the new airport.
- FAA stated there are still a few grant obligations tied to the airport for the planning study (see AIP Handbook, Chapter 2, Paragraph 2-5 e.).
- Based on the fact the airport took AIP money for pavement crack seal work, C47 may actually be an obligated airport. FAA and WBOA to review. If the airport closed then AIP funds would have to be paid back. FAA stated airport closure for obligated airports is very difficult.
- City requested WBOA to review whether the airport is obligated to FAA grant assurances, and to provide letter to city with the determination. FAA would assist with the review. No schedule was established.
- There was discussion about getting FAA Headquarters involved now with respect to airport relocation. Need concurrence from the FAA’s Office of Airport Planning and Programming division and headquarters prior to a new airport being considered. This coordination was recommended before the master plan is finalized.

Portage Municipal Airport (C47)

Airport Master Plan – Phase 1
Airport Commission Update

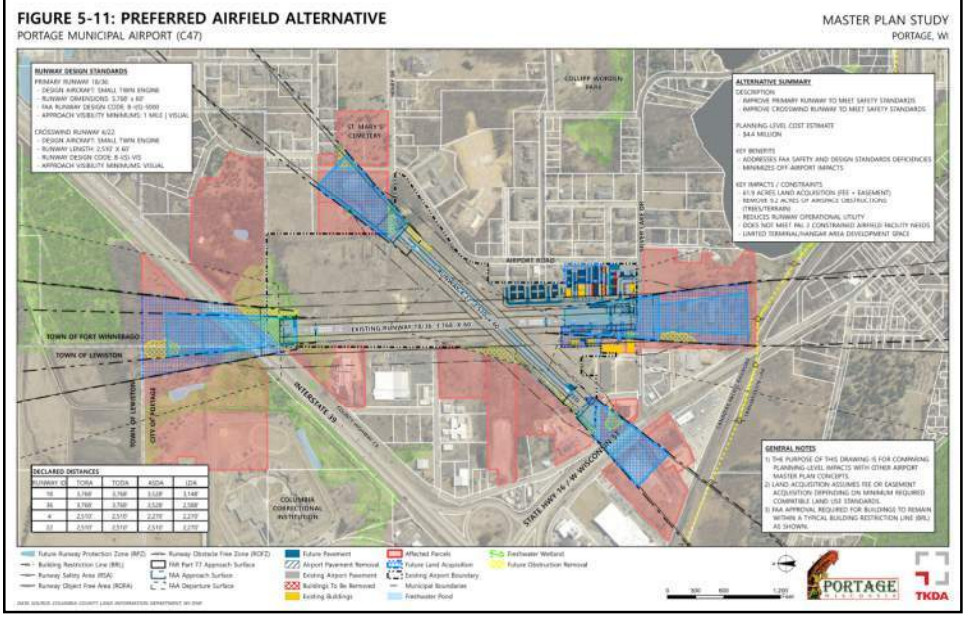
TKDA

November 18, 2020

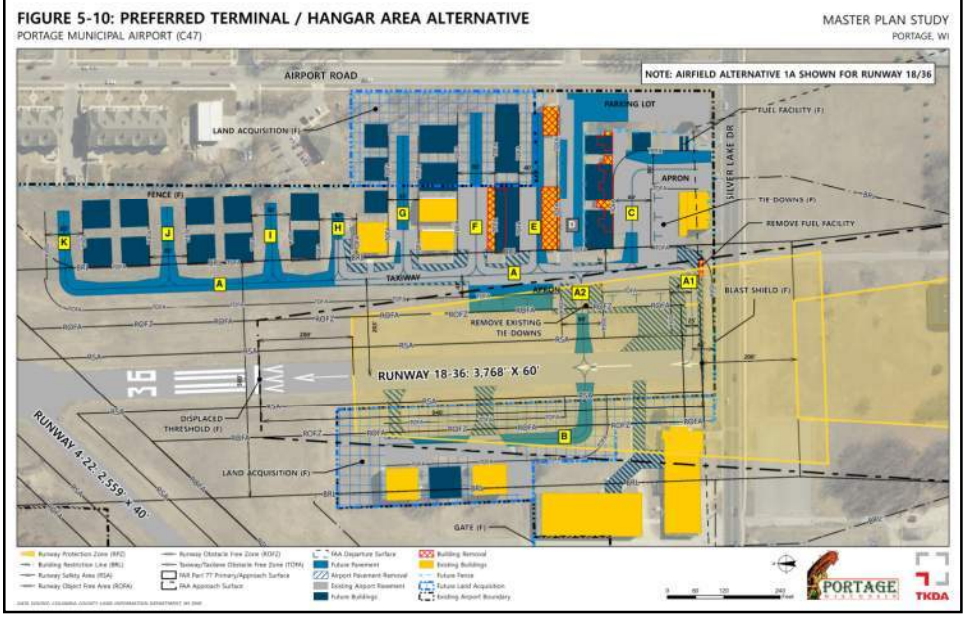
Study Update

- Public Open House (September 29th)
  - 26 attendees, 1 written comment
- TAC Meeting #4 (October 28th)
  - Top on-site alternatives
    - **Alternative 1A: Safety & Compliance**
    - Alternative 2A: Improve Runway 18/36 (3,300')
    - Alternative 2C: New Runway Alignment (3,300')
    - **Terminal Area Concept**
  - Implementation Plan
    - Projects for Capital Improvement Plan
    - $670k in local share – aggressive 10-year scenario
    - FAA grant assurance considerations

Preferred Airfield Alternative 1A



Preferred Terminal/Hangar Area Alternative



Master Plan Recommendation

Options

- ✈ **Close Existing Airport**
  - Obtain FAA/BOA Approval
- ✈ **Improve Existing Airport Site**
  - Implement Alternative 1A
- ✈ **Explore New Airport Site**
  - Complete Site Selection Study
  - Implement Interim Safety Measures

TAC Recommendation

- ✈ **Improve Existing Airport Site**

Thank You!

Portage Municipal Airport
Airport Master Plan – Phase 1
Airport Commission Update

November 18, 2020

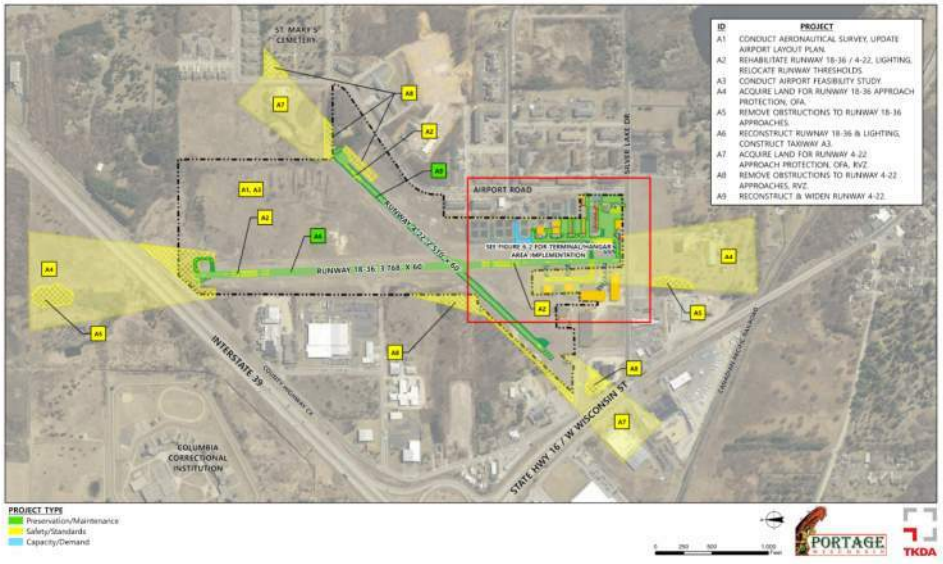
TKDA

Airfield Implementation Plan

DRAFT

FIGURE 6-1: AIRFIELD IMPLEMENTATION PLAN (SHORT/MID-TERM)
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI

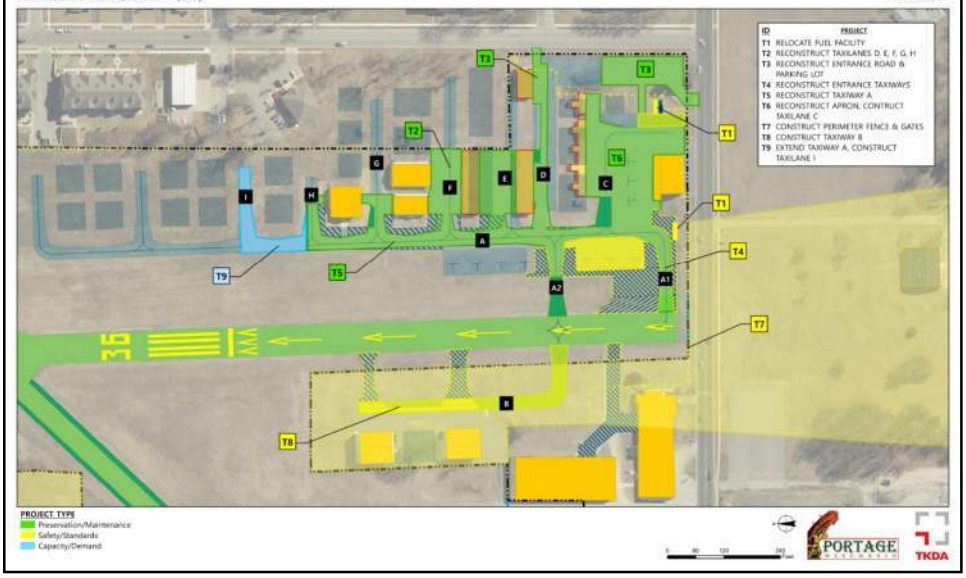


Terminal/Hangar Area Implementation Plan

DRAFT

FIGURE 6-2: TERMINAL/HANGAR AREA IMPLEMENTATION(SHORT/MID-TERM)
PORTAGE MUNICIPAL AIRPORT (C47)

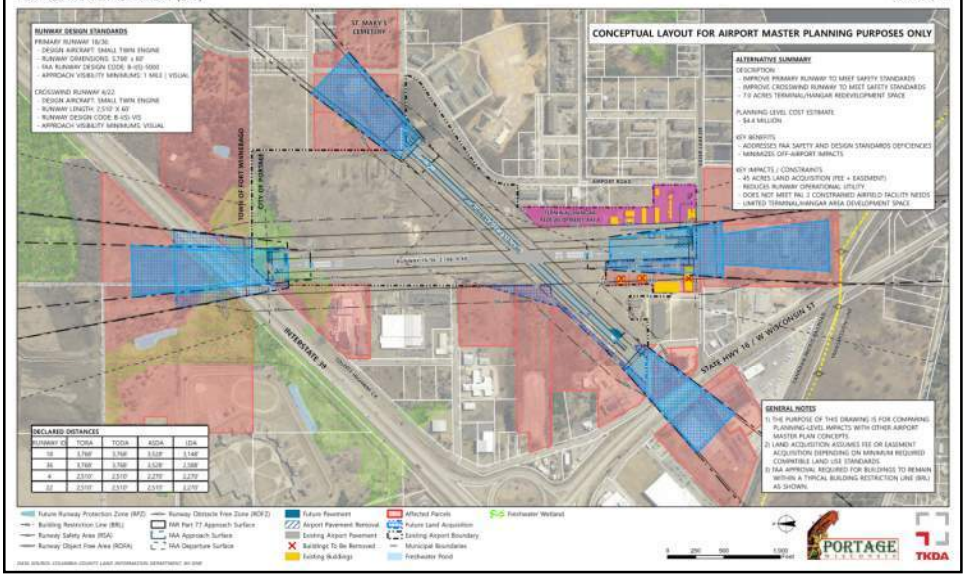
MASTER PLAN STUDY
PORTAGE, WI



Alternative 1A: Safety & Compliance (Preferred)

FIGURE 5-1: ALTERNATIVE 1A - SAFETY & COMPLIANCE
PORTAGE MUNICIPAL AIRPORT (C47)

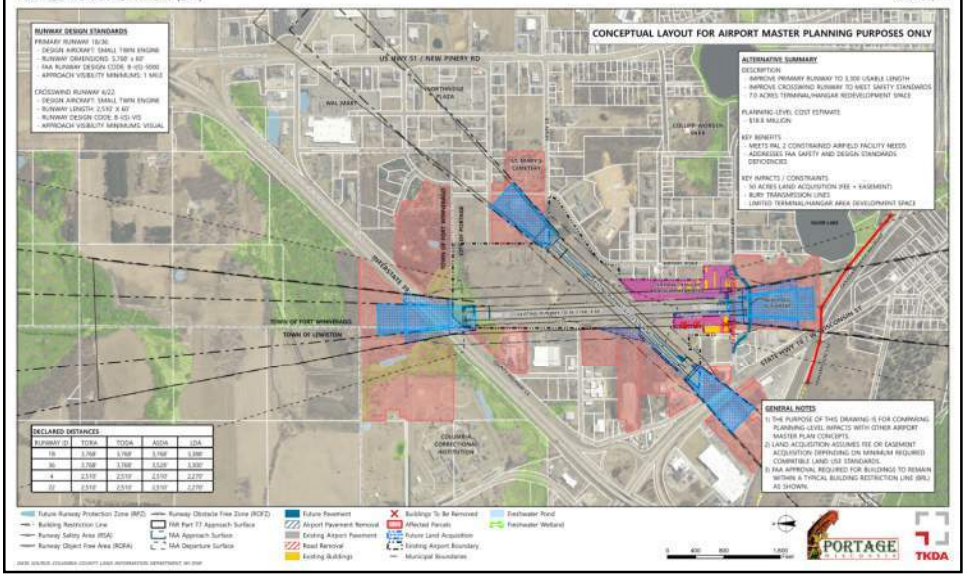
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Alternative 2A: Improve Runway 18/36 to 3,300'

FIGURE 5-2: ALTERNATIVE 2A - IMPROVE RUNWAY 18/36 TO 3,300 FEET USABLE LENGTH
PORTAGE MUNICIPAL AIRPORT (C47)

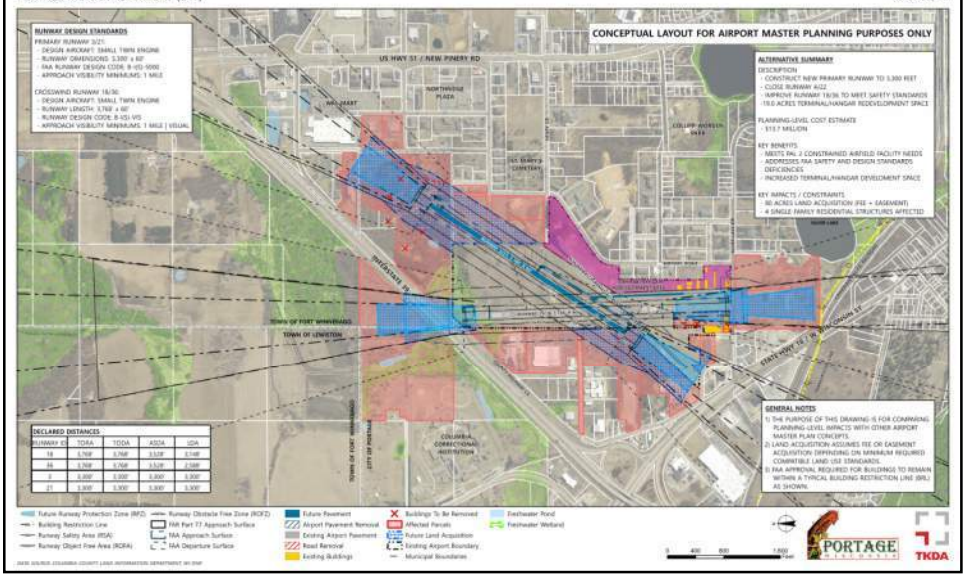
MASTER PLAN STUDY
PORTAGE, WI



Alternative 2C: Construct New 3,300' Runway

FIGURE 5-4: ALTERNATIVE 2C - CONSTRUCT NEW RUNWAY TO 3,300 FEET
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI



Airfield Alternatives Impact Summary

Category	1A	2A	2B	2C	3A	3B	4A	4B
Minimum Primary Runway Distance	**2,588'**	**3,300'**	3,300'	**3,300'**	3,500'*	3,800'	5,500'	5,500'
Crosswind Runway	**Yes**	**Yes**	Yes	**Yes**	No	Yes	No	No
Meets Rec'd Runway Distances	**No**	**Yes**	Yes	**Yes**	Yes	Yes	Yes	Yes
Meets Basic FAA Design Standards	**Yes**	**Yes**	Yes	**Yes**	Yes	Yes	Yes	Yes
Transmission Line Impacts	**No**	**Yes**	No	**No**	Yes	No	Yes	No
Triggers Terminal Area Relocation	**No**	**No**	No	**No**	Yes	No	Yes	Yes
Roadway Impacts	**No**	**Yes**	Yes	**Yes**	Yes	Yes	Yes	Yes
Land Acquisition (acres)	**45 ac**	**50 ac**	75 ac	**80 ac**	60 ac	115 ac	215 ac	230 ac
Residential Structures Impacted	**0**	**0**	11	**4**	0	4	0	5
Other Structures Impacted	**3**	**3**	5	**5**	13	8	21	23
Planning-Level Cost	**$4.4m**	**$18.8m**	$23.3m	**$13.7m**	$26.1m	$43.8m	$82.6m	$102.2m
Local Share*	**$0.3m**	**$12.6m**	$1.3m	**$0.8m**	$14.5m	$3.8m	$17.8m	$7.2m
Development Practicality	**High**	**Medium**	Low	**Medium**	Medium	Medium	Low	Low
Generic New Airport Cost	***$21.3m***	***$21.3m***	*$21.3m*	***$21.3m***	*$26.6m*	*$26.6m*	*$44.9m*	*$44.9m*
Generic New Airport Local Share	**$3.2m**	**$3.2m**	$3.2m	**$3.2m**	$4.0m	$4.0m	$6.8m	$6.8m

**Assumes FAA/WBOA funding participation, crosswind runway eligible for FAA/WBOA funding, and no FAA/WBOA funding for transmission line actions*

PORTAGE WISCONSIN

Conceptual Evaluation for Master Planning Purposes Only

Financial Feasibility Plan

DRAFT

- Summary of all major projects over next 10 years
- Presumes most projects eligible for FAA funding
  - Land acquisition with State funds

Development Phase	Total Cost	FAA Funding	State Funding	Local Funding
Near-Term (2020-2024)	$ 6,031,668	$ 4,524,001	$ 1,052,708	$ 454,958
Mid-Term (2025-2029)	$ 2,590,000	$ 1,881,000	$ 504,500	$ 204,500
Total (2020-2029)	**$ 8,621,668**	**$ 6,405,001**	**$ 1,557,208**	**$ 659,458**
Preservation Projects	$ 5,880,000	$ 5,179,500	$ 385,125	$ 315,375
Safety/Standards Projects	$ 2,741,668	$ 1,225,501	$ 1,172,083	$ 344,083
Demand/Capacity Projects	$ -	$ -	$ -	$ -

**Projects subject to FAA/State/Local approvals, available funding*

Note: Numbers revised after TAC meeting to correct math

Portage Municipal Airport (C47)

Airport Master Plan – Phase 1
City Council Briefing

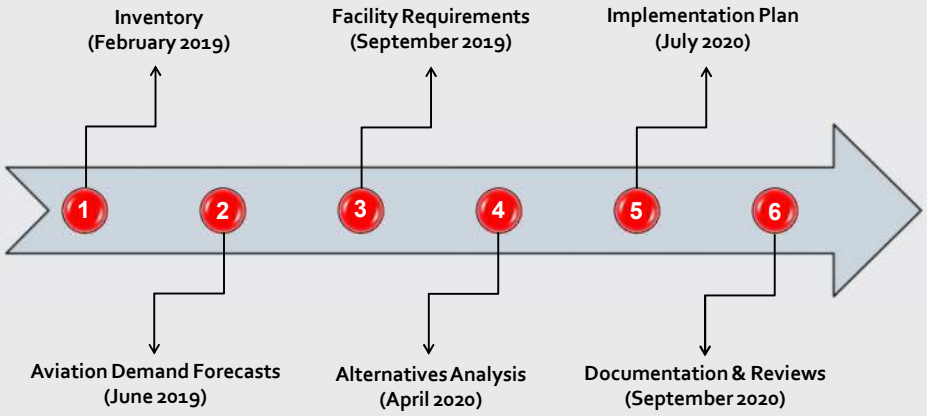
Mark Graczykowski, PE | Wisconsin Bureau of Aeronautics
Marcus Watson, CM | TKDA

August 13, 2020

FAA Grant Assurances (Obligations)

- The airport is obligated from the City accepting federal funds to complete the Exhibit A/Property Map in 2016
- Airport is obligated to certain FAA grant assurances so long as the land is used as an airport (not permanent)
- Useful life of FAA-funded improvements has been met
- New FAA funding would trigger additional grant assurances for the useful life of the improvement
- Land sale proceeds would be used to construct new airport
- FAA approval required to close airport. Closed airport land would not be obligated
- WBOA has prepared written letter for city records

Project Schedule

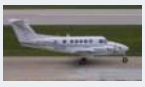


***Schedule subject to change based on review timelines*

Slide #3

Facility Needs Summary

✈Planning Activity Levels (PAL)

Metric	Existing	PAL 2	PAL 3	PAL 4
Forecast Type	-	Constrained	Unconstrained	Unconstrained
Forecast Year	2018	2038	2023	2038
Annual Operations	3,788	4,255	9,740	10,955
Based Aircraft	25	28	37	40
FAA Design Standards	A-I, Small	B-I, Small	B-II, Small	B-II, Large Business Jet
Critical Design Aircraft				
Primary Runway Dimensions	3,768' x 60'*	3,300' x 60'	3,800' x 75'	5,500' x 75'

Slide #4

Future of the Portage Municipal Airport

City Decision

- **Improve the Existing Airport Site**
  - Focus of current study alternatives
- **Move the Airport to a New Site**
  - Requires a new study, approvals, etc.
- **Close the Current Airport**
  - Requires WBOA management and FAA Headquarters approval

Slide #5

Airfield Alternatives

- Eight (8) on-site airfield "build" development options were developed
- Criteria was to meet FAA design standards and facility needs for various activity levels:
  - PAL 2: 3,300' x 60'
  - PAL 3: 3,800' x 75'
  - PAL 4: 5,500' x 75'
- A planning-level impacts evaluation was completed for each option for comparative purposes
- After TAC and Agency feedback the most feasible alternatives meet up to PAL 2 requirements

Slide #6

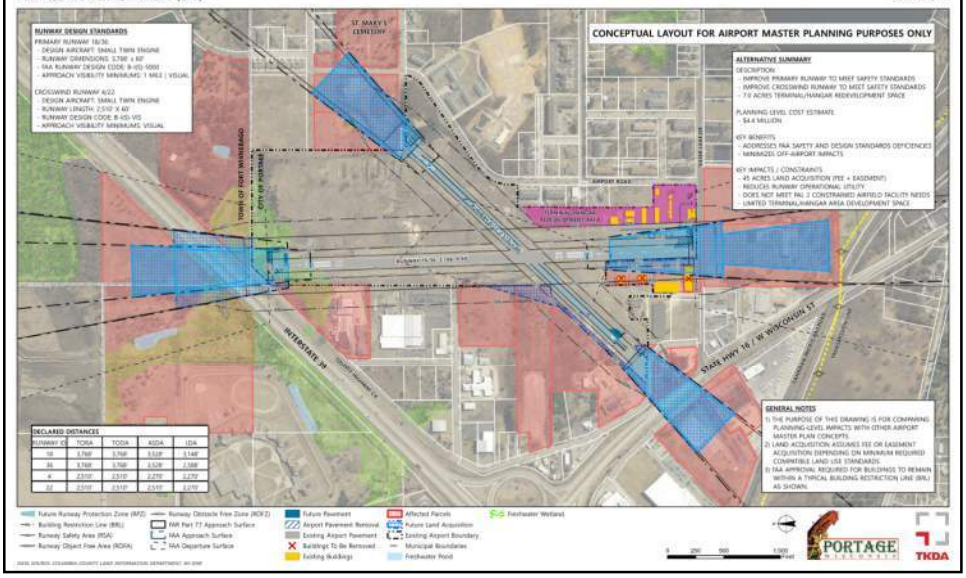
Alternative 1A: Safety & Compliance

Slide #7

Total Estimated Cost: $4.4 million

FIGURE 5-1: ALTERNATIVE 1A - SAFETY & COMPLIANCE
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI



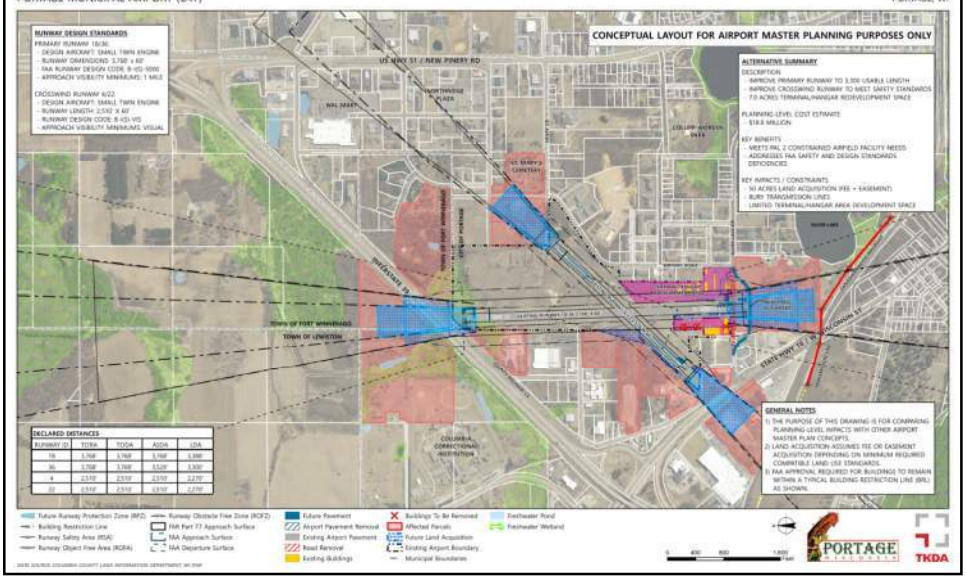
Alternative 2A: Improve Rwy 18/36 to 3,300'

Slide #8

Total Estimated Cost: $18.8 million

FIGURE 5-2: ALTERNATIVE 2A - IMPROVE RUNWAY 18/36 TO 3,300 FEET USABLE LENGTH
PORTAGE MUNICIPAL AIRPORT (C47)

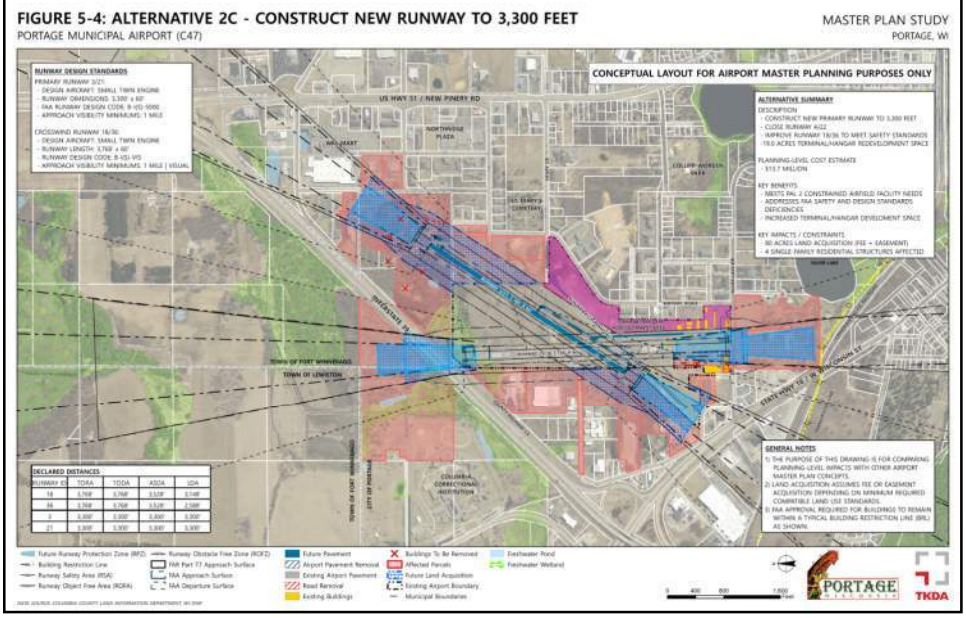
MASTER PLAN STUDY
PORTAGE, WI



Alternative 2C: Construct New 3,300' Rwy

Slide #9

Total Estimated Cost: $13.6 million



Airfield Alternatives Analysis

- The TAC's consensus is that **Alternative 1A** best satisfies the aeronautical needs at the existing airport site considering operational, environmental, and fiscal impacts.

Key considerations:

- **Fewest off-airport impacts and lowest cost** of "build" alternatives to meet basic airport safety needs.
- Heavily weighted impacts to landowners surrounding the airport and local share cost.
- **Decreases airport utility** by reducing usable runway length and eliminating instrument approaches – tradeoff.
- **Interim solution** while a new airport site is explored.

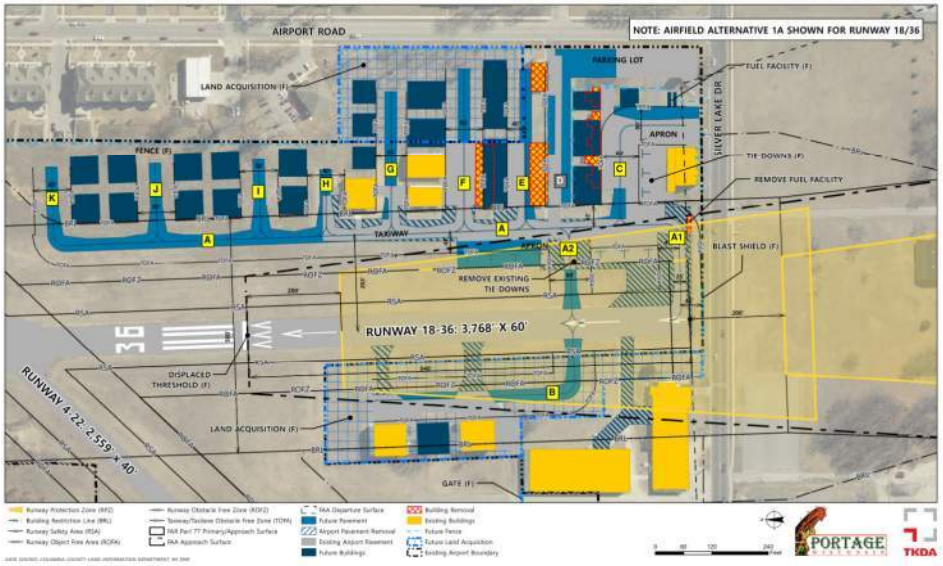
Slide #10

Slide #11

Terminal/Hangar Area Development Concept

FIGURE 5-10: PREFERRED TERMINAL / HANGAR AREA ALTERNATIVE
PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY
PORTAGE, WI



Study Next Steps

- ✈ Public Informational Meeting (Open House)
- ✈ Technical Advisory Committee Meeting #4
- ✈ Implementation Plan / Study Documentation
- ✈ Local Approval of Airport Master Plan

Slide #12

Thank You!

Questions?

Portage Municipal Airport
Airport Master Plan – Phase 1
City Council Briefing

August 13, 2020

TKDA

CITY OF PORTAGE
115 West Pleasant Street
Portage, Wisconsin 53901
Telephone: (608) 742-2176 • Fax: (608) 742-8623

"Where the North Begins"

MEMORANDUM

To: Common Council
From: Aaron J. Jahncke, P.E., Director of Public Works/City Engineer
Subject: Master Plan Recommendation
Date: January 20, 2021

Background:
After two years of planning and multiple presentations at the Ad hoc Airport Technical Advisory Committee (TAC), Airport Commission and the Common Council. The TAC and Airport Commission recommended that Alternative 1A, the safety and compliance option be considered by the Common Council.

In 2016 the City of Portage began the Exhibit A project with the Wisconsin Bureau of Aviation. At the time we were told that this project would not obligate us. "Obligate" means that once the City receives funding from the Federal Aviation Administration (FAA), for capital improvements to an airport, the City is required to operate the airport in compliance with FAA regulations for the life of the capital improvement. During a January, 2020 meeting, the FAA responded that the Portage Municipal Airport was obligated. The BOA provided all of Portage's recent airport projects and the FAA determined that the Exhibit A Survey federally obligated the Airport. The four grant assurances the project triggered were 23 – Exclusive Rights, 25- Airport Revenues, 30 – Civil Rights, and 31 Disposal of Land. These four grant assurances last as long as the airport is owned and operated as an airport.

Exclusive rights – Is that the as long as the airport is operating as an airport that it sole use is an airport.

Airport Revenues – Airport Revenues shall be used at the airport. Seeing that our expenditures are greater than the City's revenues, we comply with this assurance.

Civil Rights – That the Airport doesn't discriminate based on race, creed, religion, and etc.

Disposal of land – If the City decides on building a new Airport that the sale of the existing Airport Land is used to fund the building of a new airport.

There are three basic outcomes of our Master Plan.

1. If the City decides to improve the existing airport site and stay at the existing site nothing new happens in terms of these four obligations. Accepting future entitlements for construction would further obligate the airport.
2. If the City decides to move the airport we would have to use the sale of the land to build a new airport.
3. If the City decides to close the airport. This action would still require congressional approval but because the Master Plan identifies our deficiencies this could be supported by the FAA. The airport would cease operations and the grant assurances would disappear.

Analysis
There were basically five options that result in the three basic outcomes that the Airport Commission considered before their recommendation to council.

- The recommended option from the Airport Commission is Option 1-A the Safety and Compliance option. This option fixes the safety deficiencies at the current airport but also limits the length of the runways to less than what it is now. Leaving the airport at its current site will not allow runway

expansion to 5,000 feet. This option will cost the City an estimated $659,458 (in 2020 dollars) over the next ten years.

In this option, the City would then accept our entitlements for construction. In the first 10 years, the City will use their federal entitlements for the reconstruction of runways, taxiways and parking lots. Acceptance of these entitlements would obligate the Airport for the useful life of those improvements. The useful life for pavement construction defined by the FAA is 20 years. In Option 1A the City also has some property to acquire but we are acquiring that property through an 80/20 cost share split with the Bureau of Aeronautics (BOA) so the City does not obligate the Airport for perpetuity. After the initial 10 years, the City would then consider the possibility of adding hangars. If hangars were added using the entitlements that would further obligate the airport for an additional 40 years after the completion of the hangars.

- Close the existing airport site. Given the deficiencies and compliance issues this option would allow the City to close the airport instead of spending the money to fix the issues. This option may be possible given all of the issues at the airport and the close proximity to neighboring airports. This would need FAA approval and would end all of the airport's current obligations. Closing the airport would remove the City from the NPIAS and would not allow the City to look at new airport sites.

- New Airport Site Study: Scenario A. City staff and the BOA would have to discuss funding this with the FAA. If the FAA did not approve the new site study in early 2021 the City would have to discuss whether to adopt Option 1A or to close the existing airport site in spring or summer of 2021.

- New Airport Site Study: Scenario B. If the new site study was approved and if the new airport site could not be found due to a variety of reasons the City would have to reopen the discussion, 2-3 years later, on whether or not to close the airport or complete the Safety and Compliance Option. Due to the 2-3-year site search timeline the City would have to implement some of the safety and compliance measures. The short-term cost that that the City would expend is estimated at $454,958. City Staff and Airport Commission would carefully select safety and compliance projects that would not further obligate the airport during the site search study. The Airport Site Study would cost around $500,000 but the City has existing funds at the BOA that would cover the City's share.

- New Airport Site Study: Scenario C. If a new site search was approved by the FAA the study would take 2-3 years. If a site could be found and FAA would approve the site, the cost of building a new airport would be approximately $44,900,000 and the City's share of this would $6,800,000. Most likely the Airport would be located outside of the City limits and would have to be City/county or city/another municipality airport. The City would be looking at locating an Airport to the northeast or east of the City off of HWY 33 to meet distance requirements of other GA airports in the vicinity. See the attached service area map. The City would also have to spend the $659,458 over the next ten years to make its current airport safe and compliant (Option 1A) until a new airport could be built. Most likely the construction of the Airport would take 20 years.

Fiscal Note:
As noted above.

Recommendation:
The five options are highlighted above.



_____
Aaron J. Jahncke
Director of Public Works/ City Engineer

Attachment(s)
Service Area Map
C-47 Presentation to council

Portage Municipal Airport (C47)

Airport Master Plan – Phase 1
City Council Presentation

Marcus Watson, CM | TKDA

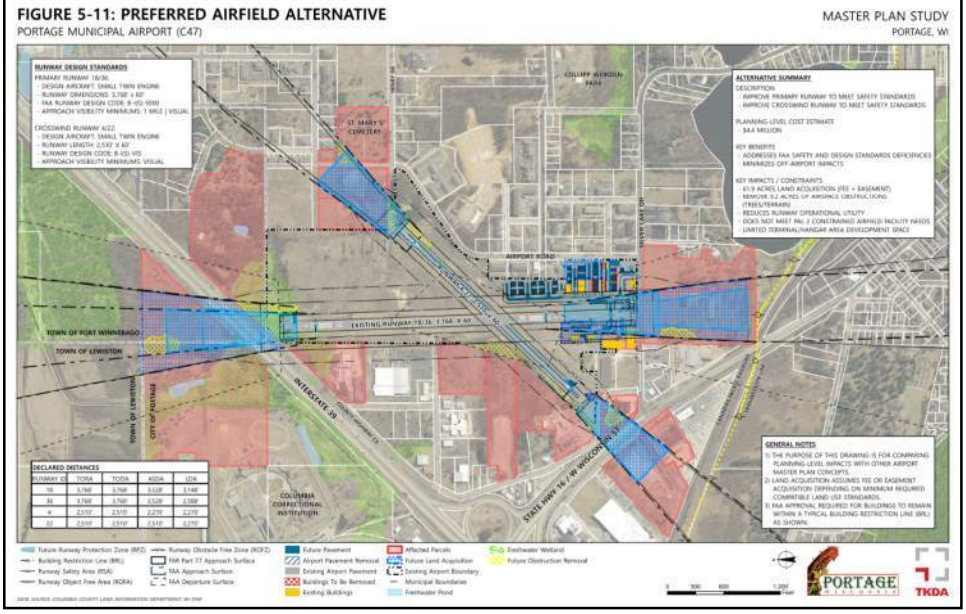
January 28, 2021

Study Update

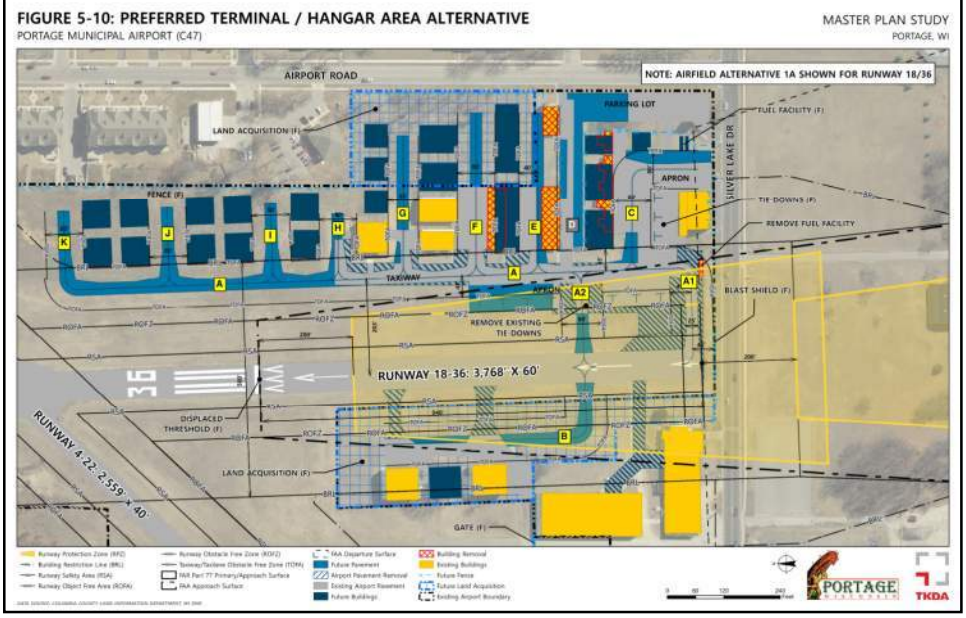


- ✈Project Meetings
  - City Council Briefing (August 13th)
  - Public Open House (September 29th)
  - TAC Meeting #4 (October 28th)
  - Airport Commission (November 18th)
- ✈Recommended Alternative
  - Alternative 1A: Safety & Compliance
  - Terminal Area Concept
  - Technical Advisory Committee & Airport Commission
- ✈Financial Feasibility Plan

Recommended Airfield Alternative 1A



Recommended Terminal/Hangar Area Alternative



Financial Feasibility Plan

- Implementation Plan
  - $8.6M in airport improvements | $660k in local share
  - Preservation & safety projects to be listed on annual CIP

Development Phase	Total Cost	FAA Funding	State Funding	Local Funding
Near-Term (0-5 Years)	$ 6,031,668	$ 4,524,001	$ 1,052,708	$ 454,958
Mid-Term (6-10 Years)	$ 2,590,000	$ 1,881,000	$ 504,500	$ 204,500
Total (0-10 Years)	**$ 8,621,668**	**$ 6,405,001**	**$ 1,557,208**	**$ 659,458**
Preservation Projects	$ 5,880,000	$ 5,179,500	$ 385,125	$ 315,375
Safety/Standards Projects	$ 2,741,668	$ 1,225,501	$ 1,172,083	$ 344,083
Demand/Capacity Projects	$ -	$ -	$ -	$ -

**Projects subject to FAA/State/Local approvals, available funding*

New Airport Site Selection / Process

- **Site Selection Study**
  - Requires approval from BOA and FAA to undertake study
  - Estimated timeline: 2-3 years
- **New Airport Site Development**
  - BOA and FAA approve recommended site
  - Environmental studies completed for new airport site
  - Estimated cost is $45 million | $6.8 million local share for a new airport with a 5,500-foot runway
- **Related Actions**
  - Safety/compliance projects at the existing airport still needed until a new airport is built
  - Disapproval by BOA/FAA at any point will trigger the City to relook at options regarding the airport's future

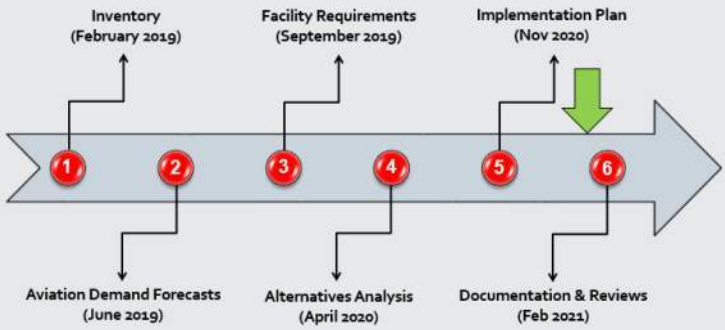
Future of the Portage Municipal Airport

- **Option A: Improve the Existing Airport Site**
  - Focus of current study alternatives
  - Implement master plan Alternative 1A
- **Optional B: Close the Current Airport Site**
  - Close Airport due to deficiencies
  - Requires BOA and FAA approval
- **Option C: Explore New Airport Site**
  - Requires a new study, approvals, etc.
  - Any disapproval will require City to consider Option A or B

- ***Airport Commission recommended Option A***

Study Next Steps

- Local Approval of Airport Master Plan
- Finalize Study Documentation
- Develop Airport Layout Plan (ALP) – Phase 2



Thank You!

Questions?

Portage Municipal Airport
Airport Master Plan – Phase 1
City Council Presentation

January 28, 2021

TKDA

https://www.wiscnews.com/portagedailyregister/news/local/govt-and-politics/officials-vote-for-new-portage-airport/article_2e9ed8f7-43f9-58fe-8393-4df7782296e0.html

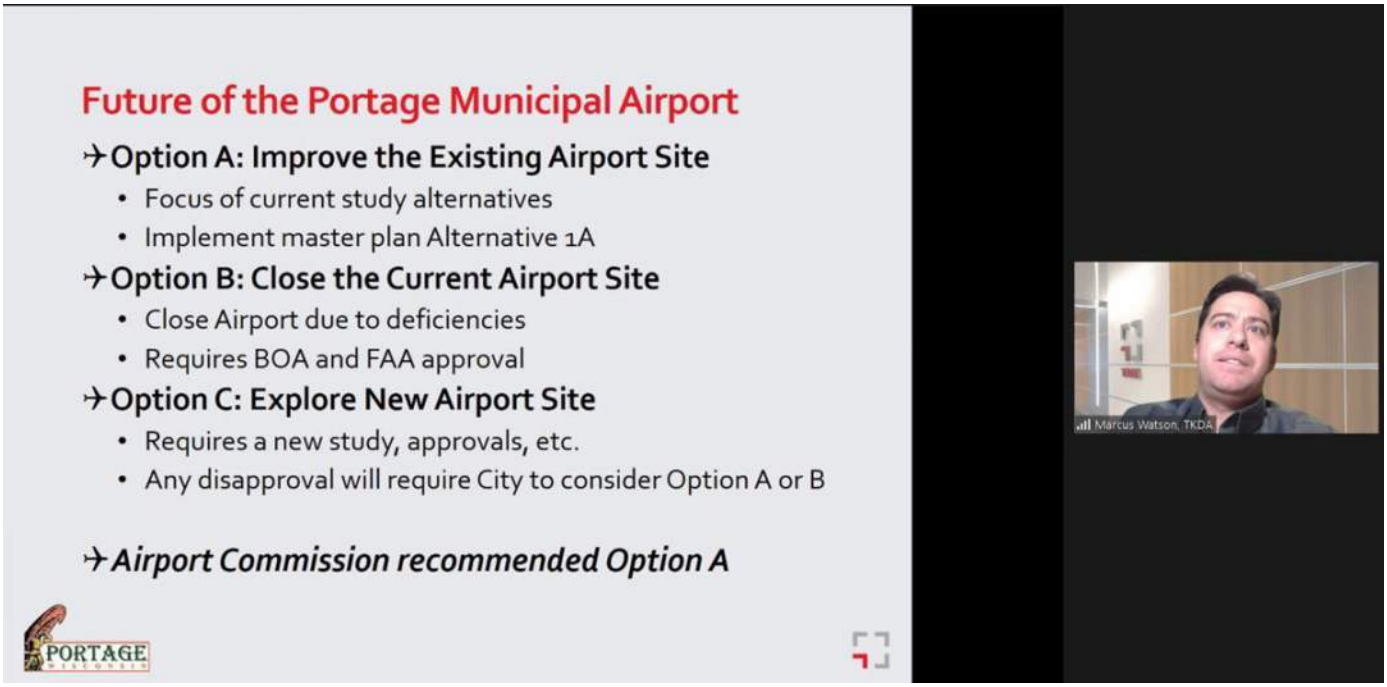
ALERT TOP STORY

Officials vote for new Portage airport

Bridget Cooke
Jan 29, 2021

Portage city officials want to build a new airport.

Bucking the recommendation from the Airport Commission, common council members voted 6-2 during their meeting Thursday to seek out a site for a new airport that would likely be either east or north of the city limits.



Group Manager of Aviation Planning Marcus Watson, of engineering and architecture planning firm TKDA, explains the options that can be taken by city officials during a virtual presentation on the municipal airport Thursday.

ZOOM SCREENSHOT

After more than two years of gathering information from the public and ex[illegible] aviation planning, the Airport Commission had pushed for the option which would make the airport compliant with current safety standards and upgrade the existing airport.

Council member Mike Charles initially moved to accept the recommendation, but after nearly an hour of conversation, rescinded his suggestion and instead decided to embrace the pursuit of a new airport. That process could take roughly 20 years.



Members of the public, city officials and those involved in the project plans attend a virtual presentation Thursday about the future of the Portage Municipal Airport before the Portage Common Council met to vote on it.

ZOOM SCREENSHOT

After a virtual public hearing held before the meeting, council member Mark Hahn said the option to build new was the only one to consider.

“I’m not in favor of spending the amount of money in option number A,” H[illegible] “The airport does not get improved at all. It’s not going to bring anymore people here, in my opinion, just because of the size of the runway. And if we really want to make an airport that is going to grow, hopefully with the city, I think we have to look at expansion.”

Engineering and architecture planning firm TKDA of St. Paul held the virtual public meeting. Group Manager of Aviation Planning Marcus Watson laid out three options for the city.

In Option A, which was suggested by the Airport Commission, the airport master plan would be implemented for $8.6 million in airport improvements with roughly $660,000 in costs to the city. Much of the work would address current safety issues with the airport and bring it back to FAA compliance, Watson said. The work would be done over a 10-year period, but estimates for the cost do not consider inflation rates.



Portage resident David Tesch reviews airport plans during an open house in October at the Portage Airport.

DAILY REGISTER ARCHIVE

Improvements would ensure that the airport would meet FAA standards it is currently not meeting due to its runway length and tall objects which block the airfield, Watson said. Its primary and crosswind runways need to be improved and hangars and terminals need to be replaced to be compliant with safety standards. Improvements would shorten the usable length of the airport.

According to Phase 1 of the master plan, one of the runways has not had major rehabilitation work completed since it was rebuilt in 1996. The other, according to state records cited in the report, has not received major work since its original construction in 1948.



Portage Municipal Airport

DAILY REGISTER ARCHIVE

By becoming compliant, the airport would remain eligible for federal fund[illegible] for local businesses and recreational flyers.

Option B outlines the closure of the airport due to its deficiencies. This move would require approval from both the Wisconsin Bureau of Aeronautics and the FAA. Watson said some issues could arise with officials based on how much government funding the airport received.

“There are always strings attached,” Watson said.

Option C explores the possibility of a new airport site. A study to search for usable land would begin. A number of tests would need to be performed and it would require official approval. If any authorities disapprove, the city would then have to reconsider the first two options.

Council member Allan Radant was one of the dissenters and said he solely supported permanently closing the airport. The purchase of land by the city for a new airport when he had previously served as a council member was never used, so he did not want to pursue a new site but also did not favor fixing the current one.

“Unfortunately, I can’t support this at all,” Radant said. “I can go with Option B and just closing the airport down.”

Director of Public Works Aaron Jahncke said the city purchased that land before gaining FAA approval and that it has “substandard soil” and had more than one environmental concern. City Administrator Shawn Murphy said he has a copy of the letter in which the aviation authorities “called us on the carpet for not going through them.”

Council member Eric Shimpach also voted against it, citing costs as a concern and said he felt funding could go toward other projects throughout the city.

In adopting Option C, the city will still need to evaluate needed updates to the current airport because of its use in the interim of studying whether a new structure can be built. Jahncke said during that process the city will likely end up working with other

government agencies, like Columbia or Marquette County, because the new [illegible] not be built within city limits.

Officials vote for new Portage airport SHARE THIS comments

Council members also:

- Approved the appointment of Jeffrey F. Montfort as chair of the Airport Commission to replace former council member Rita Maass
- Extended the COVID-19 proclamation extending the city state of emergency to the end of March
- Approved the resignation of Heather Stenberg from the Library Board
- Approved part-time employee pay plan adjustments
- Approved the revised temporary workplace employee leave protocol to adjust for the expiration of federal programs to cover the cost of staff absences due to COVID-19



Jonnie Byxbe, 9, maneuvers a snowblower onto his neighbor's walkway Wednesday morning on 2nd Avenue in Baraboo. To see more photos of the snowstorm's aftermath, go to **baraboonewsrepublic.com**.

SUSAN ENDRES/News Republic

Portage Municipal Airport (C47)

Airport Master Plan Study – Phase 1



Welcome

Welcome to the website for the Airport Master Plan study of the Portage Municipal Airport (C47). This site will be updated with current study information, including opportunities to participate in the planning process.

Airport Master Planning

An Airport Master Plan study analyzes the airport's environment, identifies aviation demand, reviews development options, evaluates potential impacts, and creates a "roadmap" that will guide future airport improvements. Understanding current issues and identifying future opportunities will help the airport meet the needs of the community.

Local Considerations

The Portage Municipal Airport is constrained by the natural and man-made environment. An updated airport master plan is needed to review the viability of the existing airport site to meet aviation demand in the Portage area. The goal is to allow the City to make an informed decision on future investment at the airport.

Key study objectives include:

- Identify aviation demand and airport facility needs in the Portage area
- Document airport design standard deficiencies
- Review feasibility of meeting facility needs on the existing airport site
- Engage local stakeholders throughout the study
- Develop a decision-making document on the future of the airport
- Identify a realistic action plan moving forward

Funding & Schedule

The Federal Aviation Administration (FAA), Wisconsin Department of Transportation – Bureau of Aeronautics (BOA), and the City of Portage are funding this study.

The study began in October 2018. A draft airport master plan study is scheduled to be completed by March 2021.

Public Engagement

The City of Portage encourages stakeholder engagement throughout this study. A diverse Technical Advisory Committee (TAC) has been established to provide ongoing feedback to the city.

This project website is a resource for the community to stay informed. You can also participate in this study by participating in an open house meeting, submitting a public comment, or by contacting us with questions.

Meetings

Open House #1 (11/14/18)
- Boards
- Presentation

Technical Advisory Committee #1 (2/13/19)
- Presentation

Technical Advisory Committee #2 (5/15/19)
- Presentation
- Documents

Technical Advisory Committee #3 (11/13/19)
- Presentation
- Documents

City Council Presentation (8/13/20)
- Presentation

Open House #2 (9/29/20)
- Presentation
- Boards

Technical Advisory Committee #4 (10/28/20)
- Presentation
- Documents

City Council Presentation (1/28/21)
- Presentation
- Documents

Project Documents

Report
- Chapter 2: Inventory (Mar. 2019)
- Chapter 3: Forecasts (Mar. 2019)
- Chapter 4: Facility Requirements (Jan. 2020)

Newsletters
- Newsletter #1 (Nov. 2018)
- Newsletter #2 (Jan. 2020)
- Newsletter #3 (Sept. 2020)

Videos
- February 2019 Update
- June 2019 Update
- January 2020 Update
- October 2020 Update

Other
- Planning Considerations Map
- Facility Deficiencies Memo
- Alternatives Analysis Memo
- FAA Forecast Approval Letter
- TAC Recommended Alternative Maps

Links

- City of Portage
- Portage Airport Commission
- Portage Municipal Airport (Air Portage)
- Portage Airport Information
- Wisconsin Bureau of Aeronautics

Airport Surveys

Surveys completed

Contacts

City of Portage
Aaron Jahncke, PE
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aaron.jahncke@portagewi.gov

Wisconsin DOT – Bureau of Aeronautics
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Airport Development Engineer
608-266-2729
lucas.ward@dot.wi.gov

TKDA (Project Consultant)
Marcus Watson
Group Manager Aviation Planning
TKDA
651-292-4599
marcus.watson@tkda.com

Comments

Please click the button below to submit comments on the study

Submit Comment

Site designed and maintained by

Engineering
Architecture
Planning
TKDA

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Portage Municipal Airport
Airport Master Plan Study
Project Newsletter #1: November 2018

Background
An Airport Master Plan study analyzes an airport's built and natural environment, identifies aviation demand, reviews development options, evaluates potential impacts, and creates a "roadmap" that will guide future airport improvements. Understanding current issues and identifying future opportunities will help the airport meet the needs of the community.

Be A Part of the Airport's Future!

Public Open House
November 14, 2018: 4pm - 6pm
Portage City Municipal Building

The Portage Municipal Airport opened in 1941. It supports business and personal aviation serving Portage and neighboring communities. The airport has a paved primary runway 18-36 (3,768' x 60'), a paved crosswind runway (2,559' x 40'), and is home to 25 based aircraft.



Local Considerations
The Portage Municipal Airport is constrained by the natural and man-made environment. An updated airport master plan is needed to review the viability of the existing airport site to meet aviation demand in the Portage area. The goal is to allow the City to make an informed decision on the future investment at the airport.

Key study objectives include:
- Identify area aviation demand and facility needs
- Document airport design standard deficiencies
- Review feasibility of meeting needs on existing airport site
- Engage local stakeholders throughout the study
- Develop a decision-making document on the future of the airport
- Identify a realistic action plan moving forward

How to Be Engaged
The City of Portage encourages stakeholder engagement throughout this study.
A diverse Technical Advisory Committee (TAC) has been established to provide ongoing feedback to the city.

Please visit **www.portageairportplan.tkda.com** to view study information and submit comments to the study team. Two public open house meetings will be held to share information and collect feedback from community members before decisions are made.

Project Contacts

Aaron Jahncke, City of Portage — aaron.jahncke@portagewi.gov
Mark Graczykowski, Wisconsin Bureau of Aeronautics — mark.graczykowski@dot.wi.gov
Marcus Watson, TKDA — marcus.watson@tkda.com

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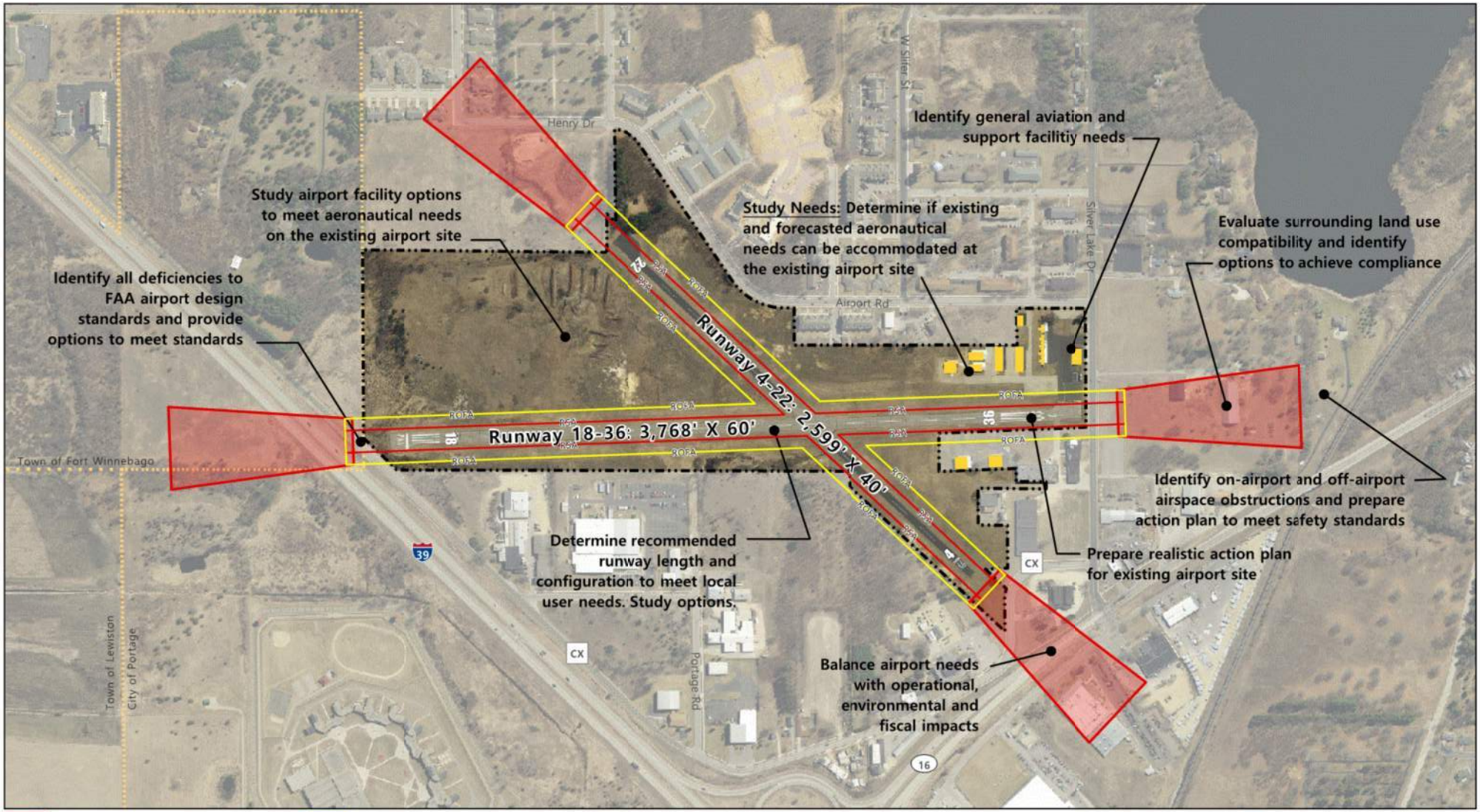
Current Study Schedule

Facility Needs	*Summer 2019*
Development Options	*Winter 2020*
Draft Study Documents	*Summer 2020*

TKDA

PORTAGE MUNICIPAL AIRPORT

Planning Considerations Map



Portage Municipal Airport
Airport Master Plan Study
Project Newsletter #2: January 2020

Background
The Airport Master Plan study for the Portage Municipal Airport analyzes the airport facility, identifies aviation demand, reviews development options, evaluates potential impacts, a creates a "roadmap" that will guide future improvements at the existing airport site.



Project Update
The study team has completed the inventory, activity forecasts, facility requirements, and initial alternatives analysis elements of the study. The team is currently refining the planning-level development options in coordination with local and agency officials.

Key Findings To Date
- The community's aviation needs are not fully met due to the size and design of the existing airport
- The airport has several deficiencies to FAA and State airport design standards; action is needed
- The recommended runway length to meet existing constrained activity is 3,300 feet
- Implementing a runway length of at least 3,800 feet results in greater impacts and is not cost effective at the existing airport site

Development Alternatives
The Technical Advisory Committee (TAC) evaluated eight (8) initial on-site development alternatives at their November 2019 meeting. The consensus was to further evaluate Alternative 1A to meet safety and compliance standards. This draft alternative is shown on the reverse side of this newsletter. This alternative along with a corresponding terminal/hangar plan will be further analyzed and refined. This effort will more clearly identify the impacts, costs, and timing of implementing elements of the option.

How to Stay Engaged
The City of Portage encourages stakeholder engagement throughout this study. The TAC, an ad-hoc committee of the city, has met three (3) times to provide ongoing feedback to the city as the study has progressed. The TAC will meet again to make a recommendation to the city on the preferred on-site airport development plan.

Please visit **www.portageairportplan.tkda.com** to view study information and submit comments to the study team. A second public open house meeting will be held in the spring of 2020 to share information and collect feedback from community members about the airport development alternatives before decisions are made on the future of the airport.

Stay tuned for details on a future Public Open House in Spring 2020!

Project Contacts

Aaron Jahncke, City of Portage — aaron.jahncke@portagewi.gov
Mark Graczykowski, Wisconsin Bureau of Aeronautics — mark.graczykowski@dot.wi.gov
Marcus Watson, TKDA — marcus.watson@tkda.com

PORTAGE WISCONSIN

Current Study Schedule

Development Options	*Winter 2020*
Preferred Alternative	*Spring 2020*
Implementation Plan	*Summer 2020*

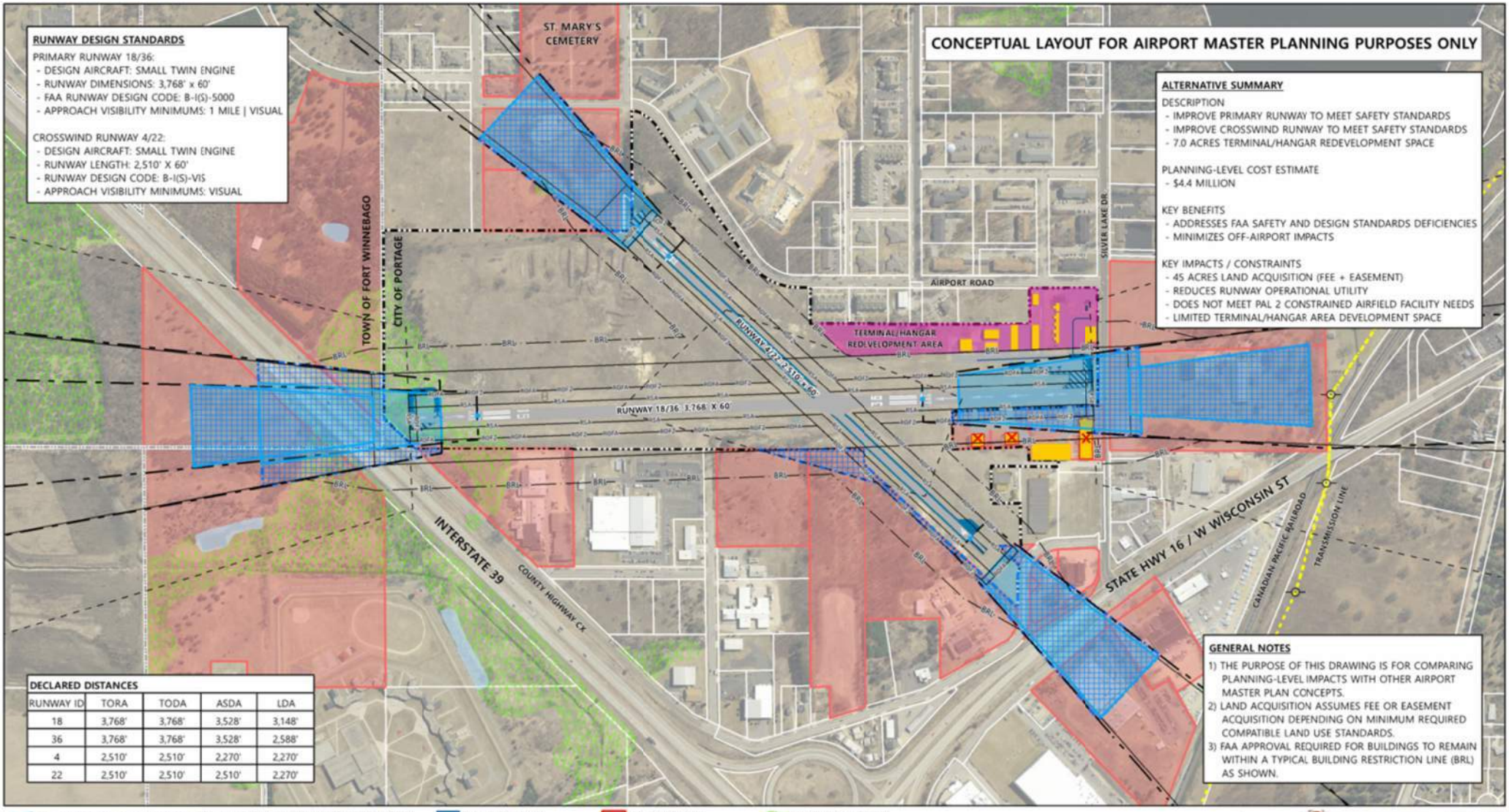
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ALTERNATIVE 1A: SAFETY & COMPLIANCE

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI



Portage Municipal Airport
Airport Master Plan Study
Project Newsletter #3: September 2020



Background
The Airport Master Plan study for the Portage Municipal Airport analyzes the airport facility, identifies aviation demand, reviews development options, evaluates potential impacts, a creates a "roadmap" that will guide future improvements at the existing airport site.

Public Open House
September 29, 2020
4:30 p.m. - 6:30 p.m
Portage Airport Main Hangar

Project Update
The study team completed the inventory, activity forecasts, facility requirements, and alternatives analysis elements of the study. Portage City Council was briefed on the study status on August 13, 2020. A public open house is scheduled for September 29, 2020. COVID-19 has delayed the overall project schedule.

Key Findings To Date
- The community's aviation needs are not fully met due to the size and design of the existing airport
- The airport has several deficiencies to FAA and State airport design standards; action is needed
- The recommended runway length to meet existing constrained activity is 3,300 feet
- Implementing a runway length of at least 3,800 feet results in greater impacts and is not cost effective at the existing airport site

Development Alternatives
The Technical Advisory Committee (TAC) evaluated eight initial on-site development alternatives at their November 2019 meeting. The TAC's consensus is that Alternative 1A (Safety & Compliance) best satisfies the aeronautical needs at the existing site considering operational, environmental, and fiscal impacts. This option has the fewest off-airport impacts and has the lowest cost of the "build" options evaluated. This option however decreases airport utility but could be an interim solution if a new airport site is explored. A graphic of this alternative is shown on the reverse side of this newsletter.

Local Decision on Airport
The City of Portage will evaluate information from the draft master plan study considering input from the public, TAC and Airport Commission before making a decision on the future of the Portage Municipal Airport. Options will include (1) Improve the Existing Site, (2) Move the Airport to a New Site, or (3) Close the Current Airport.

How to Stay Engaged
The City of Portage encourages stakeholder engagement. A public open house is scheduled for September 29, 2020 to share information and collect feedback from community members about the airport development alternatives before decisions are made on the future of the airport. Individuals can also view study and meeting materials online at **www.portageairportplan.tkda.com**. The public comment period will run through **October 13, 2020**.

Project Contacts

Aaron Jahncke PE, City of Portage — aaron.jahncke@portagewi.gov
Lucas Ward PE, Wisconsin Bureau of Aeronautics — lucas.ward@dot.wi.gov
Marcus Watson CM, TKDA — marcus.watson@tkda.com

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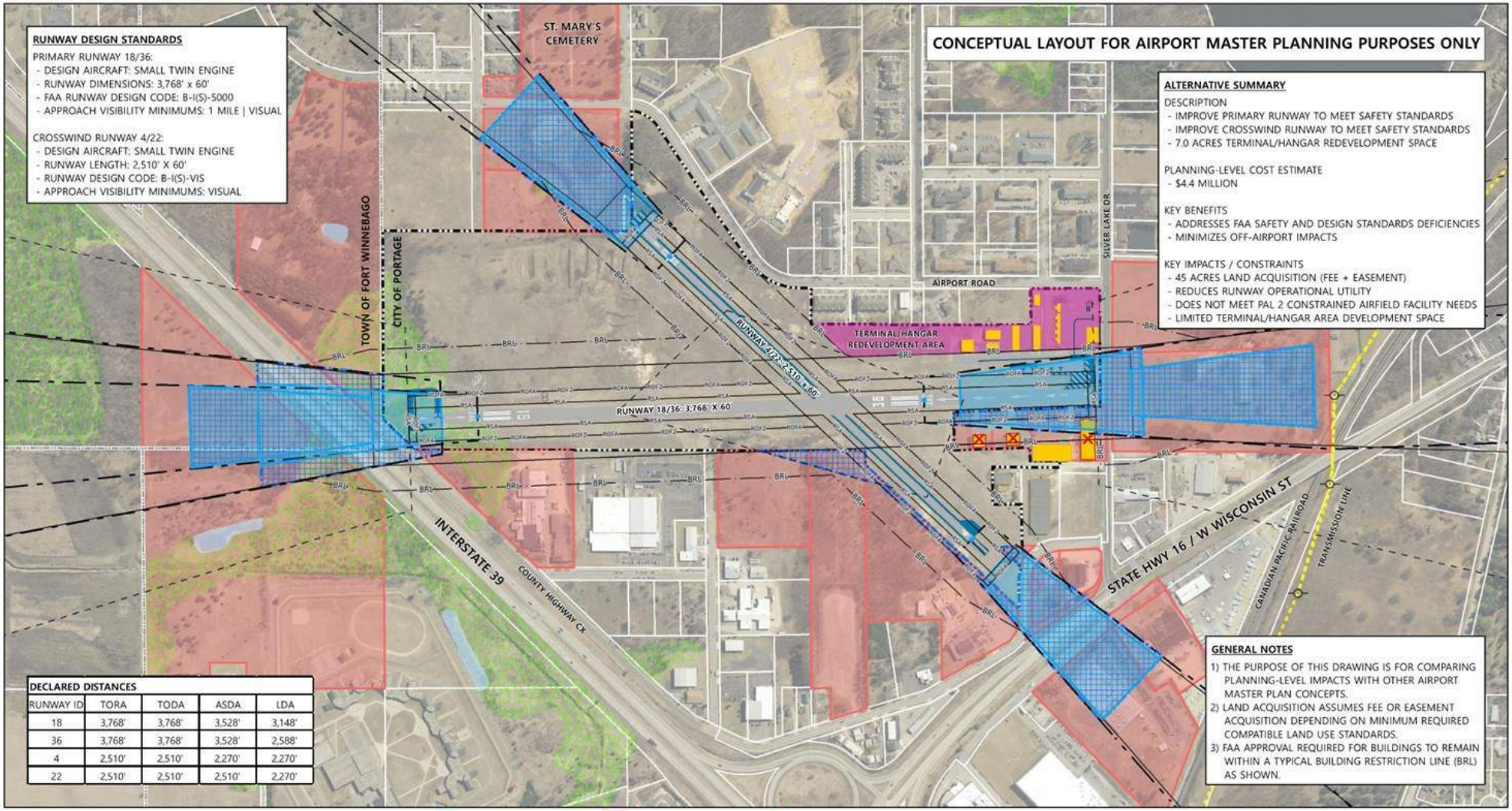
TKDA

FIGURE 5-1: ALTERNATIVE 1A - SAFETY & COMPLIANCE

PORTAGE MUNICIPAL AIRPORT (C47)

MASTER PLAN STUDY

PORTAGE, WI



APPENDIX B

AIRPORT USER SURVEY

PORTAGE MUNICIPAL AIRPORT

AIRPORT MASTER PLAN – PHASE 1

TKDA

TKDA
444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

November 14, 2018

Re: Airport User Survey
Airport Master Plan Study
Portage Municipal Airport (C47)

Dear Airport User:

TKDA is assisting the City of Portage in developing an airport master plan study for the Portage Municipal Airport in Portage, Wisconsin.

On behalf of the city, we would like to invite you to complete an airport user survey. The purpose of this survey is to collect information about your use of the airport to help identify aeronautical demand.

You are receiving this survey invitation because you have been identified as a user of the Portage Municipal Airport from operational records.

The user survey is available online here -> **https://tinyurl.com/C47-UserSurvey**. We kindly request you complete the survey no later than **December 15, 2018**.

If you know of any other users or potential users of the airport, we ask that you please forward the survey link to them.

Thank you in advance for your participation in the survey. We encourage you to visit www.portageairportplan.tkda.com for more information about the study, with links to the airport user survey.

Please contact Junior Lindsay, Airport Planner at junior.lindsay@tkda.com with any specific questions about the survey.

Sincerely,

Marcus S. Watson
Group Manager Aviation Planning

MSW

An employee-owned company promoting affirmative action and equal opportunity.

Portage Municipal Airport (C47)
Airport Master Plan Study
Airport User Survey Summary

The Portage Airport User Survey was conducted in December 2018. The purpose of this survey was to collect information that could be used to help identify the aeronautical demand at the airport.

A total of 62 users took part in the survey. Respondents indicated various types of aeronautical uses including flight training, police search and rescue operations, corporate business travel, and agriculture. All of the respondents indicated personal/recreational use at Portage, with 28% of the users indicating use for flight training and corporate travel purposes.

Operations data gathered from these users showed that collectively these users were conducting 1,215 annual operations at Portage in 2018, with future operations within the next 5 years estimated to grow by over 50%. Table 1 below summarizes annual operations data for all users.

Table 1: User Survey Operations

	2018	2023	Growth
Annual Operations	1,215	1,927	58%
Peak Month Operations	292	392	34%
Peak % of Annual	24%	20%	

Source: Portage Airport User Survey (December 2018)

From this pool of users, 11 users had aircraft based at Portage that contributed towards almost 50% of the total annual operations recorded. Users who are based at Portage estimate annual operations growing to 924 operations within the next five years. Table 2 below summarizes annual operations data for users with aircraft based at Portage.

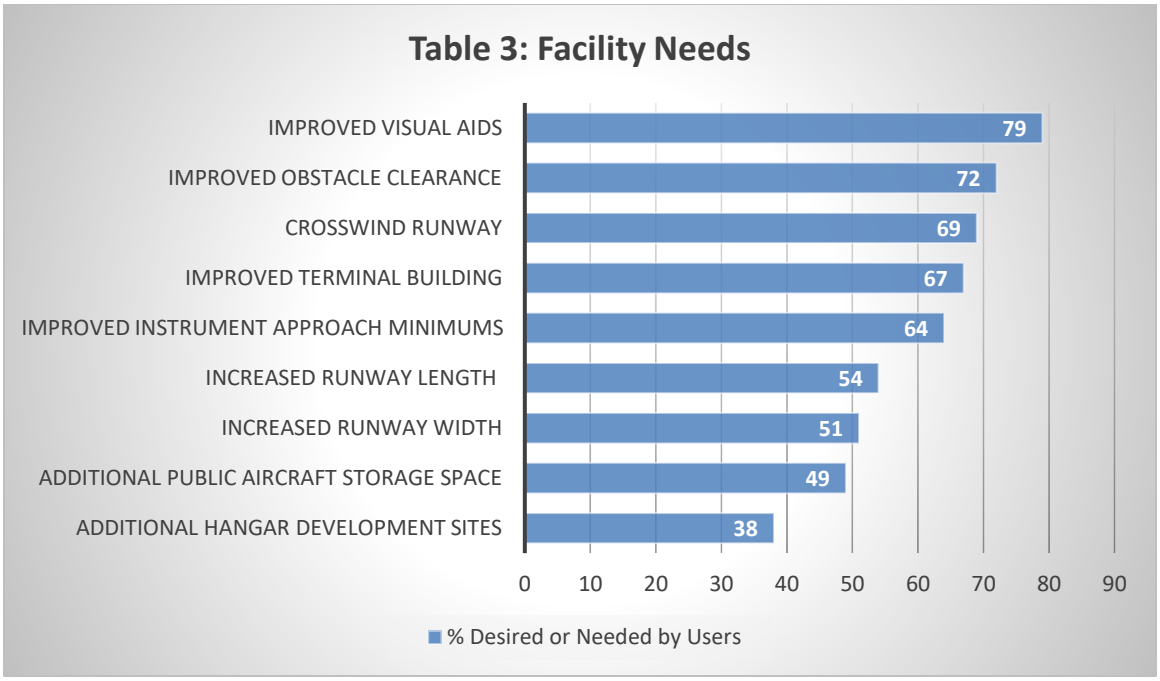
Table 2: Based Aircraft Operations

	2018	2023	Growth
Annual Operations	574	924	60%
Peak Month Operations	133	203	52%
Peak % of Annual	47%	48%	

Source: Portage Airport User Survey (December 2018)

Over 90% of the respondents indicated that they would have a need to continue flying into Portage within the next 5 years, with the reminding users indicating retirement from aviation activities. These users all operate single-engine aircraft expect for one user, who currently operates a twin-engine aircraft and conducts 20 annual operations at Portage. Over 20% of the respondents have intentions to upgrading/changing their aircraft fleet in the next 5 years.

The survey allowed users to provide feedback on the airfield facilities they would need to continue their operations within the next 5 years. This information provides insight into key airfield characteristics that users deemed most vital to their continued use of Portage. A summary of user's airfield facility needs ranked from least desired to most is shown below in Table 3.



Source: Portage Airport User Survey (December 2018)

Additional comments on facility needs revealed that access to rental car facilities near the airport is something many users felt should be considered.

Existing deficiencies at the airport facility that currently limit the use of Portage by uses included runway length and obstacles, repair facility and availability of a client meeting room at the terminal building. These deficiencies led to 29% of users using Baraboo-Wisconsin Dells Regional and Dane County Regional Airport (Madison) as alternatives to Portage to conduct their operations.

The busiest month for flight operations at Portage was July. A total of 40% of users stated that they conducted night operations at Portage and 45% said that they used the crosswind runway 4/22 for their operations at least 5% of the time. A summary of the runway length requirements needed by users at Portage is shown below in Table 4.

Table 4: Runway Length Needs

Runway Requirements	Length
Average Minimum Crosswind Runway	2,700 feet
Average Minimum Takeoff Distance	2,700 feet
Average Minimum Landing Distance	2,800 feet
Average Runway Length Needed	3,100 feet

Source: Portage Airport User Survey (December 2018)

The existing runway length of (3,768 feet) meets the existing and future needs of 90% of Portage users with the average runway length needed of 3,100 feet.

Three (3) users stated that they would be willing to do more operations or would consider moving their operations to Portage if some of the airport deficiencies were addressed. One user desires to establish an aircraft repair facility if the airport were to remain operational.

Notable Survey Comments

Why you do not base your aircraft in Portage?

- No space available.
- No longer in flying club that had an aircraft based at C47.
- Sold airplane because they were closing

Please provide comments about the future of the airport facilities that you feel should be considered by the airport owner

- The airport has a rundown look and feel, which doesn't attract new or existing pilots.
- Show an interest in improving the airport
- New terminal building
- Improve existing hangar space
- Access to car rental. This is critical.
- Better snow plowing in the winter
- The airport at Portage is essential for existing and future businesses

Are there deficiencies to the existing airport facility that limit your use of it?

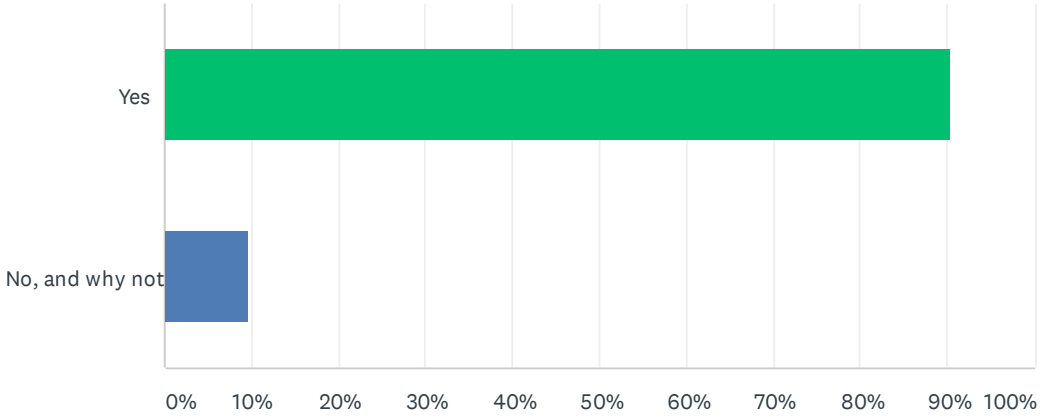
- Snow plowing could be better
- Runway and FBO
- Aircraft repair
- Length of runway, obstacles
- Available and attractive aircraft storage
- Easier access to facilities when unattended

Please provide any other feedback you feel should be considered by the airport owner on the Portage airport master plan study.

- I believe it is a mistake to consider closing the Portage Airport, an improved runway/airport in Portage will bring in additional business. I work at the Baraboo-Dells airport and we regularly receive aircraft traffic, both business & private that indicate they'd prefer to land in Portage but don't due to the current airport limitations.
- Key factors in my selection of an airport to use to store my plane include the availability of fuel, available hangar space (to own or rent) and the presence of certified aircraft mechanics.
- I own a hangar at KDLL (Baraboo Dells Airport.) Initially looked at C47 when I moved to Portage where I now live. Factors in my decision to go to KDLL included runway length, lack of development around the airport, airport longevity, and a full time aircraft mechanic on site.
- Get rental cars. Unless I am getting picked up I have to fly to KDLL because they have car rental. Rental cars will make C47 much more attractive.
- As stated, I would like to open an aircraft repair facility when you get this figured out
- The City of Portage needs to take the study very seriously. Airports are a very important part of the future for any city that has an airport. Airports attract businesses which bring jobs, tax dollars and a large influx of money into the local economy.

Q2 Do you or your company use the Portage Municipal Airport? Will you have a need to fly into Portage anytime in the next 5 years?

Answered: 62 Skipped: 2

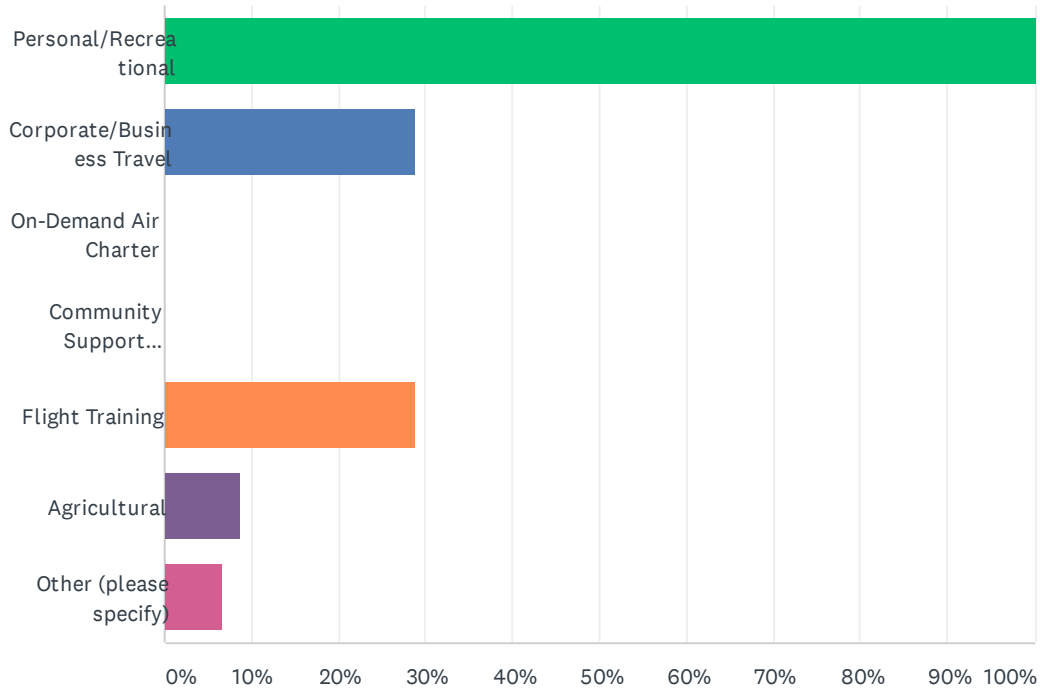


ANSWER CHOICES	RESPONSES	
Yes	90.32%	56
No, and why not	9.68%	6
TOTAL		62

#	NO, AND WHY NOT	DATE
1	Reedsburg C35 is the closest base of operations, offers competitive fuel pricing, and has RNAV approaches for both main runways	12/7/2018 3:32 PM
2	retired from flying	12/7/2018 12:52 PM
3	Possibly would use the airport but there are alternatives that are just as close to my home in Lodi that can be an alternative.	11/30/2018 5:49 PM
4	Fly for pleasure.	11/25/2018 12:30 PM
5	I no longer fly.	11/23/2018 2:31 PM
6	My aircraft is based at portage.	11/15/2018 8:31 AM

Q3 What types of aeronautical uses do you have at Portage? Please check all that apply.

Answered: 45 Skipped: 19



ANSWER CHOICES	RESPONSES	
Personal/Recreational	100.00%	45
Corporate/Business Travel	28.89%	13
On-Demand Air Charter	0.00%	0
Community Support (Medevac, Police, Municipal Spraying, etc)	0.00%	0
Flight Training	28.89%	13
Agricultural	8.89%	4
Other (please specify)	6.67%	3
Total Respondents: 45		

#	OTHER (PLEASE SPECIFY)	DATE
1	Police search and rescue	12/12/2018 4:27 PM
2	educational	12/11/2018 9:38 AM
3	Fuel. You have long had unleaded fuel, and the Carr Valley Cheese Curds at the gas station and the restaurant. Good stop for BRD-08C or BRD-FRH	12/1/2018 8:04 PM

Q4 What type/model of aircraft do you currently use at Portage?

Answered: 45 Skipped: 19

ANSWER CHOICES	RESPONSES	
Aircraft #1: Manufacturer	100.00%	45
Aircraft #1: Model	93.33%	42
Aircraft #1: N-Number	86.67%	39
Aircraft #2: Manufacturer	22.22%	10
Aircraft #2: Model	17.78%	8
Aircraft #2: N-Number	15.56%	7
Aircraft #3: Manufacturer	8.89%	4
Aircraft #3: Model	8.89%	4
Aircraft #3: N-Number	8.89%	4

#	AIRCRAFT #1: MANUFACTURER	DATE
1	Cessna	12/15/2018 7:44 PM
2	Piper	12/15/2018 5:42 PM
3	Aero Commander	12/15/2018 5:32 AM
4	PA-28-151piper	12/14/2018 6:56 PM
5	Cessna	12/14/2018 3:52 PM
6	piper	12/13/2018 10:25 PM
7	Piper	12/12/2018 4:27 PM
8	Piper	12/12/2018 4:06 PM
9	Vans	12/11/2018 3:00 PM
10	Beechcraft	12/11/2018 9:38 AM
11	Wag aero	12/10/2018 10:37 AM
12	Piper	12/7/2018 4:18 PM
13	Piper	12/7/2018 4:08 PM
14	Beech	12/7/2018 3:26 PM
15	bellanca	12/6/2018 5:37 PM
16	Beechcraft	12/5/2018 10:11 PM
17	Piper	12/4/2018 5:53 PM
18	Cessna	12/4/2018 2:13 PM
19	Cessna	12/4/2018 1:07 PM
20	Vans	12/4/2018 10:38 AM
21	piper	12/3/2018 1:25 PM

22	Piper	12/2/2018 2:55 AM
23	Cessna	12/1/2018 8:04 PM
24	Cessna	12/1/2018 11:28 AM
25	Piper	11/30/2018 6:03 PM
26	Cessna	11/30/2018 2:13 PM
27	Zenith	11/30/2018 1:55 PM
28	Cessna	11/30/2018 10:26 AM
29	Piper	11/30/2018 9:52 AM
30	ed	11/30/2018 9:24 AM
31	Cessna	11/30/2018 8:53 AM
32	Cessna	11/30/2018 8:37 AM
33	Cessna	11/29/2018 8:35 PM
34	Beech	11/29/2018 3:56 PM
35	Cessna	11/29/2018 1:53 PM
36	Ercoupe	11/29/2018 12:36 PM
37	Cerrus	11/29/2018 9:28 AM
38	Corben	11/28/2018 5:17 PM
39	American Champion Aircraft	11/26/2018 7:40 AM
40	Piper	11/25/2018 6:14 PM
41	Cessna	11/25/2018 2:56 PM
42	Experimental	11/25/2018 8:22 AM
43	Cessna	11/24/2018 5:07 PM
44	Cessna	11/21/2018 4:26 PM
45	Aero Commander	11/20/2018 10:16 AM
#	**AIRCRAFT #1: MODEL**	**DATE**
1	172G	12/15/2018 7:44 PM
2	Cherokee	12/15/2018 5:42 PM
3	M200	12/15/2018 5:32 AM
4	PA-28-151	12/14/2018 6:56 PM
5	182	12/14/2018 3:52 PM
6	PA-22	12/12/2018 4:27 PM
7	Piper Colt	12/12/2018 4:06 PM
8	RV-7	12/11/2018 3:00 PM
9	BE35	12/11/2018 9:38 AM
10	cub	12/10/2018 10:37 AM
11	Arrow	12/7/2018 4:18 PM
12	PA 22 Colt	12/7/2018 4:08 PM
13	F33A	12/7/2018 3:26 PM

14	Bonanza	12/5/2018 10:11 PM
15	PA15	12/4/2018 5:53 PM
16	T210J	12/4/2018 2:13 PM
17	C172	12/4/2018 1:07 PM
18	RV-7	12/4/2018 10:38 AM
19	pa-28	12/3/2018 1:25 PM
20	Twin Comanche	12/2/2018 2:55 AM
21	C182M	12/1/2018 8:04 PM
22	182S	12/1/2018 11:28 AM
23	Pa-22	11/30/2018 6:03 PM
24	172	11/30/2018 2:13 PM
25	CH 701	11/30/2018 1:55 PM
26	172	11/30/2018 10:26 AM
27	Archer	11/30/2018 9:52 AM
28	ed	11/30/2018 9:24 AM
29	172	11/30/2018 8:53 AM
30	172N	11/30/2018 8:37 AM
31	205	11/29/2018 8:35 PM
32	V35B	11/29/2018 3:56 PM
33	340A	11/29/2018 1:53 PM
34	SR22	11/29/2018 9:28 AM
35	C	11/28/2018 5:17 PM
36	7GCAA	11/26/2018 7:40 AM
37	J3Cub	11/25/2018 6:14 PM
38	172	11/25/2018 2:56 PM
39	Skyranger	11/25/2018 8:22 AM
40	150J	11/24/2018 5:07 PM
41	172	11/21/2018 4:26 PM
42	200	11/20/2018 10:16 AM

#	AIRCRAFT #1: N-NUMBER	DATE
1	N3862L	12/15/2018 7:44 PM
2	N8009N	12/15/2018 5:42 PM
3	2902T	12/15/2018 5:32 AM
4	N3954x	12/14/2018 6:56 PM
5	N31YB	12/14/2018 3:52 PM
6	N9959D	12/12/2018 4:27 PM
7	N5816Z	12/12/2018 4:06 PM
8	N957RV	12/11/2018 3:00 PM

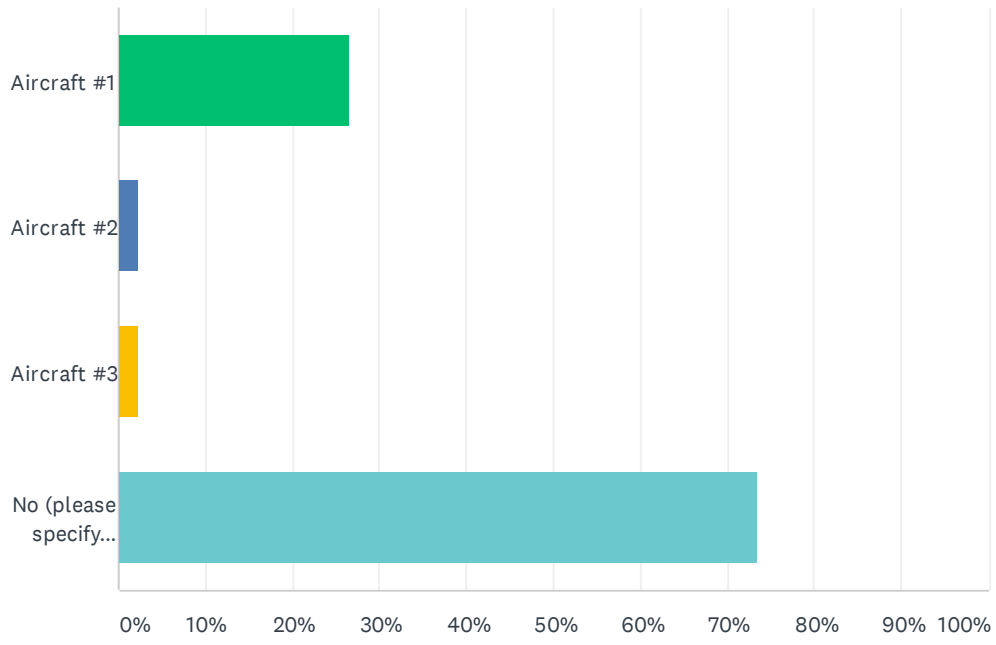
9	17PK	12/11/2018 9:38 AM
10	N14LS	12/10/2018 10:37 AM
11	N2464q	12/7/2018 4:18 PM
12	5816Z	12/7/2018 4:08 PM
13	N1074W	12/7/2018 3:26 PM
14	6736L	12/5/2018 10:11 PM
15	N4310H	12/4/2018 5:53 PM
16	N2265R (will be changed to N210DK)	12/4/2018 2:13 PM
17	65045	12/4/2018 1:07 PM
18	N767EW	12/4/2018 10:38 AM
19	N95271	12/3/2018 1:25 PM
20	N8682Y	12/2/2018 2:55 AM
21	N1904F	12/1/2018 8:04 PM
22	N4183N	12/1/2018 11:28 AM
23	7918U	11/30/2018 2:13 PM
24	N952XP	11/30/2018 1:55 PM
25	Varies -	11/30/2018 10:26 AM
26	N7679F	11/30/2018 9:52 AM
27	d	11/30/2018 9:24 AM
28	N4968F	11/30/2018 8:37 AM
29	N8112Z	11/29/2018 8:35 PM
30	N60RM	11/29/2018 3:56 PM
31	N6827L	11/29/2018 1:53 PM
32	N87413	11/29/2018 12:36 PM
33	N515G	11/28/2018 5:17 PM
34	5047U	11/26/2018 7:40 AM
35	98872	11/25/2018 6:14 PM
36	8130B	11/25/2018 2:56 PM
37	3219X	11/25/2018 8:22 AM
38	N6917X	11/21/2018 4:26 PM
39	2902T	11/20/2018 10:16 AM

#	AIRCRAFT #2: MANUFACTURER	DATE
1	Bellanca	12/15/2018 5:32 AM
2	Bell	12/14/2018 3:52 PM
3	thrush	12/13/2018 10:25 PM
4	Piper	12/12/2018 4:27 PM
5	Piper	12/10/2018 10:37 AM
6	helicopter	12/6/2018 5:37 PM

7	Cessna	12/4/2018 1:07 PM
8	Cessna	12/2/2018 2:55 AM
9	Cessna	11/30/2018 8:53 AM
10	Great Lakes	11/25/2018 6:14 PM
#	**AIRCRAFT #2: MODEL**	**DATE**
1	7ECA	12/15/2018 5:32 AM
2	47	12/14/2018 3:52 PM
3	PA-20	12/12/2018 4:27 PM
4	PA-28-180	12/10/2018 10:37 AM
5	C182	12/4/2018 1:07 PM
6	C172	12/2/2018 2:55 AM
7	152	11/30/2018 8:53 AM
8	2T-1	11/25/2018 6:14 PM
#	**AIRCRAFT #2: N-NUMBER**	**DATE**
1	5047U	12/15/2018 5:32 AM
2	975BH	12/14/2018 3:52 PM
3	N8829C	12/12/2018 4:27 PM
4	N4851L	12/10/2018 10:37 AM
5	96418	12/4/2018 1:07 PM
6	various N-numbers	12/2/2018 2:55 AM
7	11338	11/25/2018 6:14 PM
#	**AIRCRAFT #3: MANUFACTURER**	**DATE**
1	Socata	12/15/2018 5:32 AM
2	Piper	12/12/2018 4:27 PM
3	Cessna	12/4/2018 1:07 PM
4	Cessna	11/25/2018 6:14 PM
#	**AIRCRAFT #3: MODEL**	**DATE**
1	TBM700	12/15/2018 5:32 AM
2	PA-15	12/12/2018 4:27 PM
3	C210	12/4/2018 1:07 PM
4	150K	11/25/2018 6:14 PM
#	**AIRCRAFT #3: N-NUMBER**	**DATE**
1	449MA	12/15/2018 5:32 AM
2	N4382H	12/12/2018 4:27 PM
3	761SP	12/4/2018 1:07 PM
4	6688G	11/25/2018 6:14 PM

Q5 Are any of these aircraft based at Portage? Please check all that apply.

Answered: 45 Skipped: 19



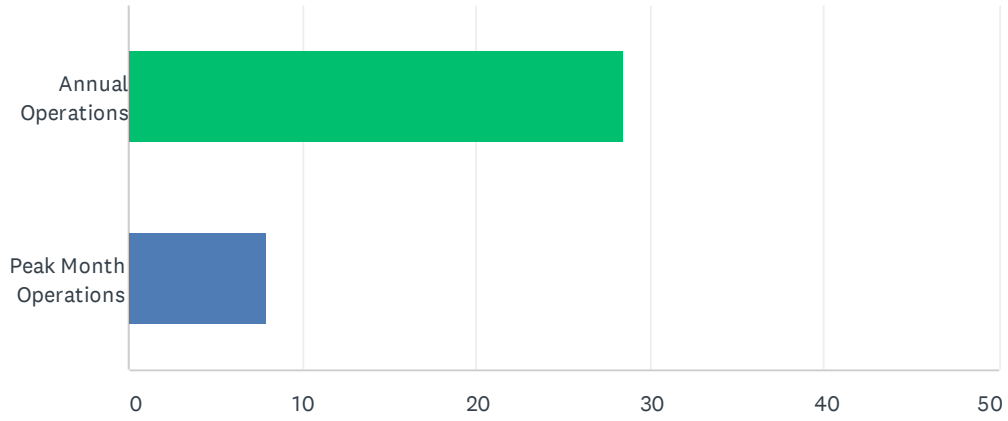
ANSWER CHOICES	RESPONSES	
Aircraft #1	26.67%	12
Aircraft #2	2.22%	1
Aircraft #3	2.22%	1
No (please specify location, and why you do not base your aircraft in Portage)	73.33%	33
Total Respondents: 45		

#	NO (PLEASE SPECIFY LOCATION, AND WHY YOU DO NOT BASE YOUR AIRCRAFT IN PORTAGE)	DATE
1	Blackhawk in Cottage Grove, live closer to Blackhawk	12/15/2018 7:44 PM
2	Based in Baraboo. I live in Baraboo. I based my aircraft at C47 while KDLL was under construction this past spring/summer.	12/15/2018 5:42 PM
3	JVL. Conveniance and amneties	12/14/2018 3:52 PM
4	I have my own runway	12/13/2018 10:25 PM
5	I live in Washington	12/11/2018 3:00 PM
6	I live in another state	12/11/2018 9:38 AM
7	UNU	12/10/2018 10:37 AM
8	KTHA I visit my sister in Portage	12/7/2018 4:18 PM
9	KLOT	12/7/2018 3:26 PM
10	Montello, home field	12/6/2018 5:37 PM
11	Based at KIGQ	12/5/2018 10:11 PM

12	KFCM - located in the Minneapolis area	12/4/2018 1:07 PM
13	1L9 - Parowan UT. I live in UT.	12/4/2018 10:38 AM
14	KDLL, closer to home and no longer in flying club that had a aircraft based at c47.	12/3/2018 1:25 PM
15	Baraboo-Dells Airport. No space available	12/2/2018 2:55 AM
16	French Lick Indiana -- work/live there. Have 2nd home in MN	12/1/2018 8:04 PM
17	Reedsburg, Wisconsin (C35)	12/1/2018 11:28 AM
18	Have hanger at DLL	11/30/2018 6:03 PM
19	Rio, WI	11/30/2018 2:13 PM
20	distance from my residence	11/30/2018 1:55 PM
21	I fly into portage	11/30/2018 10:26 AM
22	3y2	11/30/2018 9:52 AM
23	I live closest to Dells airport	11/30/2018 8:53 AM
24	KDLL, club sold airplane based in Portage	11/30/2018 8:37 AM
25	SN34, don’t live near C47.	11/29/2018 8:35 PM
26	1T8	11/29/2018 3:56 PM
27	KARR	11/29/2018 1:53 PM
28	Baraboo - Closest to Baraboo	11/29/2018 12:36 PM
29	I sold the plane because they were closeing	11/29/2018 9:28 AM
30	RIO	11/26/2018 7:40 AM
31	Based at Hartford (HXF) because of grass runway and airport community	11/25/2018 6:14 PM
32	WN39 is my home private field.	11/25/2018 2:56 PM
33	Located at different airport	11/24/2018 5:07 PM

Q6 What are your existing annual flight operations (landings and takeoffs) at Portage? Please include touch-and-go operations.

Answered: 45 Skipped: 19



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Annual Operations	28	1,278	45
Peak Month Operations	8	310	39
Total Respondents: 45			

#	ANNUAL OPERATIONS	DATE
1	50	12/15/2018 7:44 PM
2	6	12/15/2018 5:42 PM
3	40	12/15/2018 5:32 AM
4	110	12/14/2018 6:56 PM
5	40	12/14/2018 3:52 PM
6	100	12/13/2018 10:25 PM
7	100	12/12/2018 4:27 PM
8	0	12/12/2018 4:06 PM
9	1	12/11/2018 3:00 PM
10	1	12/11/2018 9:38 AM
11	12	12/10/2018 10:37 AM
12	5	12/7/2018 4:18 PM
13	0	12/7/2018 4:08 PM
14	2	12/7/2018 3:26 PM
15	5	12/6/2018 5:37 PM
16	5	12/5/2018 10:11 PM
17	70	12/4/2018 5:53 PM
18	50	12/4/2018 2:13 PM

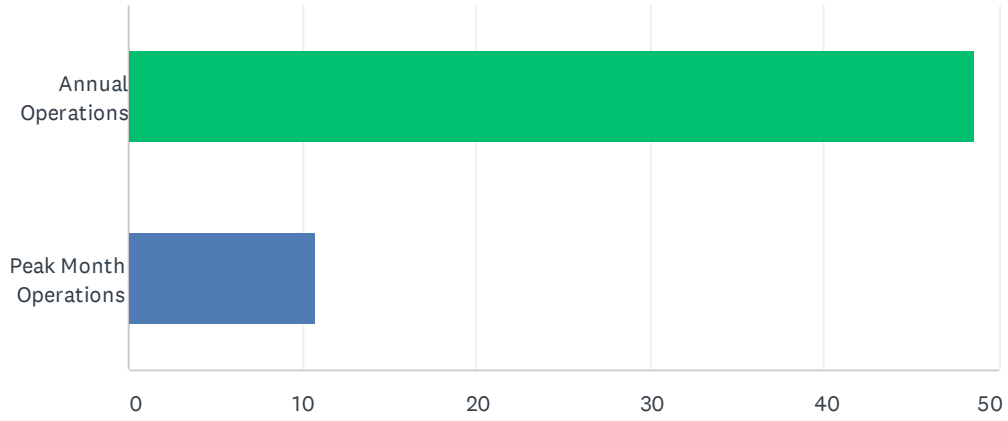
19	10	12/4/2018 1:07 PM
20	1	12/4/2018 10:38 AM
21	10	12/3/2018 1:25 PM
22	20	12/2/2018 2:55 AM
23	18	12/1/2018 8:04 PM
24	4	12/1/2018 11:28 AM
25	15	11/30/2018 6:03 PM
26	10	11/30/2018 2:13 PM
27	6	11/30/2018 1:55 PM
28	25	11/30/2018 10:26 AM
29	4	11/30/2018 9:52 AM
30	7	11/30/2018 9:24 AM
31	10	11/30/2018 8:53 AM
32	6	11/30/2018 8:37 AM
33	2	11/29/2018 8:35 PM
34	1	11/29/2018 3:56 PM
35	40	11/29/2018 1:53 PM
36	4	11/29/2018 12:36 PM
37	120	11/29/2018 9:28 AM
38	64	11/28/2018 5:17 PM
39	100	11/26/2018 7:40 AM
40	20	11/25/2018 6:14 PM
41	20	11/25/2018 2:56 PM
42	50	11/25/2018 8:22 AM
43	24	11/24/2018 5:07 PM
44	40	11/21/2018 4:26 PM
45	50	11/20/2018 10:16 AM

#	PEAK MONTH OPERATIONS	DATE
1	10	12/15/2018 7:44 PM
2	3	12/15/2018 5:42 PM
3	12	12/15/2018 5:32 AM
4	5	12/14/2018 6:56 PM
5	25	12/14/2018 3:52 PM
6	2	12/13/2018 10:25 PM
7	15	12/12/2018 4:27 PM
8	0	12/12/2018 4:06 PM
9	1	12/11/2018 9:38 AM
10	2	12/10/2018 10:37 AM

11	0	12/7/2018 4:08 PM
12	7	12/5/2018 10:11 PM
13	10	12/4/2018 2:13 PM
14	3	12/4/2018 1:07 PM
15	1	12/4/2018 10:38 AM
16	4	12/3/2018 1:25 PM
17	5	12/2/2018 2:55 AM
18	8	12/1/2018 8:04 PM
19	5	12/1/2018 11:28 AM
20	4	11/30/2018 6:03 PM
21	3	11/30/2018 2:13 PM
22	4	11/30/2018 1:55 PM
23	4	11/30/2018 10:26 AM
24	5	11/30/2018 9:24 AM
25	4	11/30/2018 8:53 AM
26	4	11/30/2018 8:37 AM
27	2	11/29/2018 8:35 PM
28	1	11/29/2018 3:56 PM
29	10	11/29/2018 1:53 PM
30	3	11/29/2018 12:36 PM
31	15	11/29/2018 9:28 AM
32	64	11/28/2018 5:17 PM
33	25	11/26/2018 7:40 AM
34	6	11/25/2018 6:14 PM
35	7	11/25/2018 2:56 PM
36	7	11/25/2018 8:22 AM
37	4	11/24/2018 5:07 PM
38	10	11/21/2018 4:26 PM
39	10	11/20/2018 10:16 AM

Q7 What are your estimated future annual flight operations (landings and takeoffs) in the next 5 years at Portage?

Answered: 45 Skipped: 19



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Annual Operations	49	2,190	45
Peak Month Operations	11	420	39
Total Respondents: 45			

#	ANNUAL OPERATIONS	DATE
1	250	12/15/2018 7:44 PM
2	6	12/15/2018 5:42 PM
3	200	12/15/2018 5:32 AM
4	120	12/14/2018 6:56 PM
5	200	12/14/2018 3:52 PM
6	100	12/13/2018 10:25 PM
7	200	12/12/2018 4:27 PM
8	60	12/12/2018 4:06 PM
9	1	12/11/2018 3:00 PM
10	1	12/11/2018 9:38 AM
11	20	12/10/2018 10:37 AM
12	25	12/7/2018 4:18 PM
13	10	12/7/2018 4:08 PM
14	3	12/7/2018 3:26 PM
15	25	12/6/2018 5:37 PM
16	5	12/5/2018 10:11 PM
17	70	12/4/2018 5:53 PM
18	60	12/4/2018 2:13 PM

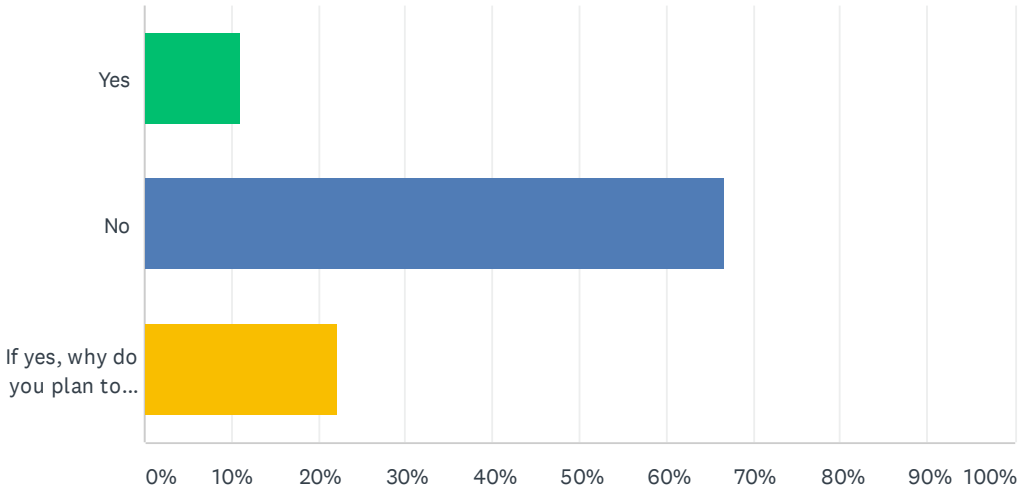
19	12	12/4/2018 1:07 PM
20	1	12/4/2018 10:38 AM
21	10	12/3/2018 1:25 PM
22	30	12/2/2018 2:55 AM
23	18	12/1/2018 8:04 PM
24	4	12/1/2018 11:28 AM
25	50	11/30/2018 6:03 PM
26	10	11/30/2018 2:13 PM
27	6	11/30/2018 1:55 PM
28	25	11/30/2018 10:26 AM
29	4	11/30/2018 9:52 AM
30	7	11/30/2018 9:24 AM
31	20	11/30/2018 8:53 AM
32	6	11/30/2018 8:37 AM
33	10	11/29/2018 8:35 PM
34	1	11/29/2018 3:56 PM
35	40	11/29/2018 1:53 PM
36	12	11/29/2018 12:36 PM
37	200	11/29/2018 9:28 AM
38	64	11/28/2018 5:17 PM
39	100	11/26/2018 7:40 AM
40	20	11/25/2018 6:14 PM
41	20	11/25/2018 2:56 PM
42	50	11/25/2018 8:22 AM
43	24	11/24/2018 5:07 PM
44	40	11/21/2018 4:26 PM
45	50	11/20/2018 10:16 AM

#	PEAK MONTH OPERATIONS	DATE
1	20	12/15/2018 7:44 PM
2	3	12/15/2018 5:42 PM
3	60	12/15/2018 5:32 AM
4	5	12/14/2018 6:56 PM
5	25	12/14/2018 3:52 PM
6	3	12/13/2018 10:25 PM
7	25	12/12/2018 4:27 PM
8	5	12/12/2018 4:06 PM
9	1	12/11/2018 9:38 AM
10	5	12/10/2018 10:37 AM

11	2	12/7/2018 4:08 PM
12	7	12/5/2018 10:11 PM
13	10	12/4/2018 2:13 PM
14	3	12/4/2018 1:07 PM
15	1	12/4/2018 10:38 AM
16	4	12/3/2018 1:25 PM
17	10	12/2/2018 2:55 AM
18	8	12/1/2018 8:04 PM
19	5	12/1/2018 11:28 AM
20	4	11/30/2018 6:03 PM
21	3	11/30/2018 2:13 PM
22	4	11/30/2018 1:55 PM
23	5	11/30/2018 10:26 AM
24	5	11/30/2018 9:24 AM
25	6	11/30/2018 8:53 AM
26	4	11/30/2018 8:37 AM
27	2	11/29/2018 8:35 PM
28	1	11/29/2018 3:56 PM
29	10	11/29/2018 1:53 PM
30	6	11/29/2018 12:36 PM
31	30	11/29/2018 9:28 AM
32	64	11/28/2018 5:17 PM
33	25	11/26/2018 7:40 AM
34	6	11/25/2018 6:14 PM
35	7	11/25/2018 2:56 PM
36	7	11/25/2018 8:22 AM
37	4	11/24/2018 5:07 PM
38	10	11/21/2018 4:26 PM
39	15	11/20/2018 10:16 AM

Q8 Do you have any intentions within next 5 years of upgrading/changing your current aircraft fleet?

Answered: 45 Skipped: 19



ANSWER CHOICES	RESPONSES	
Yes	11.11%	5
No	66.67%	30
If yes, why do you plan to upgrade?	22.22%	10
TOTAL		45

#	IF YES, WHY DO YOU PLAN TO UPGRADE?	DATE
1	getting rid of plane and getting bigger helicopter	12/6/2018 5:37 PM
2	aircraft with larger useful load	12/3/2018 1:25 PM
3	may purchase another aircraft	11/30/2018 1:55 PM
4	Speed and capability	11/30/2018 10:26 AM
5	purchase instead of flying club	11/30/2018 8:53 AM
6	Speed	11/29/2018 1:53 PM
7	Plane that can haul more weight	11/29/2018 9:28 AM
8	more and more people are learning to fly	11/26/2018 7:40 AM
9	Expanded flight training	11/25/2018 6:14 PM
10	More seats	11/24/2018 5:07 PM

Q9 Please provide the make and model of the aircraft you are considering that would be used at Portage.

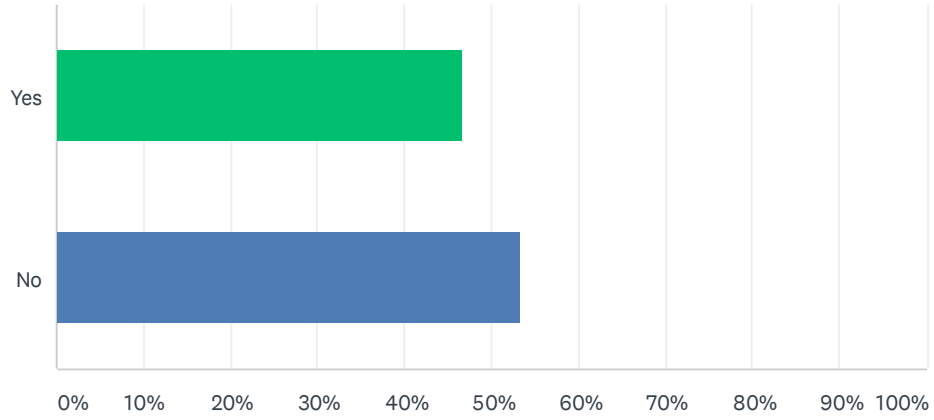
Answered: 15 Skipped: 49

ANSWER CHOICES	RESPONSES	
New Aircraft #1	100.00%	15
New Aircraft #2	20.00%	3
New Aircraft #3	6.67%	1

#	NEW AIRCRAFT #1	DATE
1	A36 Bonaza	12/14/2018 6:58 PM
2	unknown at this time	12/14/2018 3:53 PM
3	Cessna 175	12/12/2018 4:29 PM
4	unknown	12/6/2018 5:39 PM
5	unknow	12/3/2018 1:30 PM
6	Baron 58	12/2/2018 2:56 AM
7	Cessna C172	11/30/2018 1:56 PM
8	Cirrus	11/30/2018 10:27 AM
9	Cessna 172	11/30/2018 8:54 AM
10	Cirrus SR20	11/30/2018 8:38 AM
11	Cessna Ciation	11/29/2018 1:54 PM
12	Bananza A36	11/29/2018 9:29 AM
13	Piper Arrow 200	11/26/2018 7:43 AM
14	Pitts S2-B	11/25/2018 6:14 PM
15	Piper Cherokee	11/24/2018 5:08 PM
#	NEW AIRCRAFT #2	DATE
1	King Air 90	11/29/2018 1:54 PM
2	Beechcraft Baron	11/26/2018 7:43 AM
3	Cessna 172	11/25/2018 6:14 PM
#	NEW AIRCRAFT #3	DATE
1	King Air 200	11/29/2018 1:54 PM

Q10 Will you be replacing any of your existing aircraft?

Answered: 15 Skipped: 49



ANSWER CHOICES	RESPONSES	
Yes	46.67%	7
No	53.33%	8
TOTAL		15

#	IF YES, WHICH AIRCRAFT WILL YOU BE REPLACING?	DATE
1	Pa28-151	12/14/2018 6:58 PM
2	Unknown	12/14/2018 3:53 PM
3	Piper PA22	12/12/2018 4:29 PM
4	unknown	12/6/2018 5:39 PM
5	pa-28	12/3/2018 1:30 PM
6	PA-30	12/2/2018 2:56 AM
7	Cessna 340a	11/29/2018 1:54 PM
8	Cessna	11/24/2018 5:08 PM

Q11 What are your estimated future flight operations (landings and takeoffs) in 2022 at Portage in new aircraft type(s)?

Answered: 15 Skipped: 49

ANSWER CHOICES	RESPONSES	
Annual Operations	100.00%	15
Peak Month Operations	93.33%	14

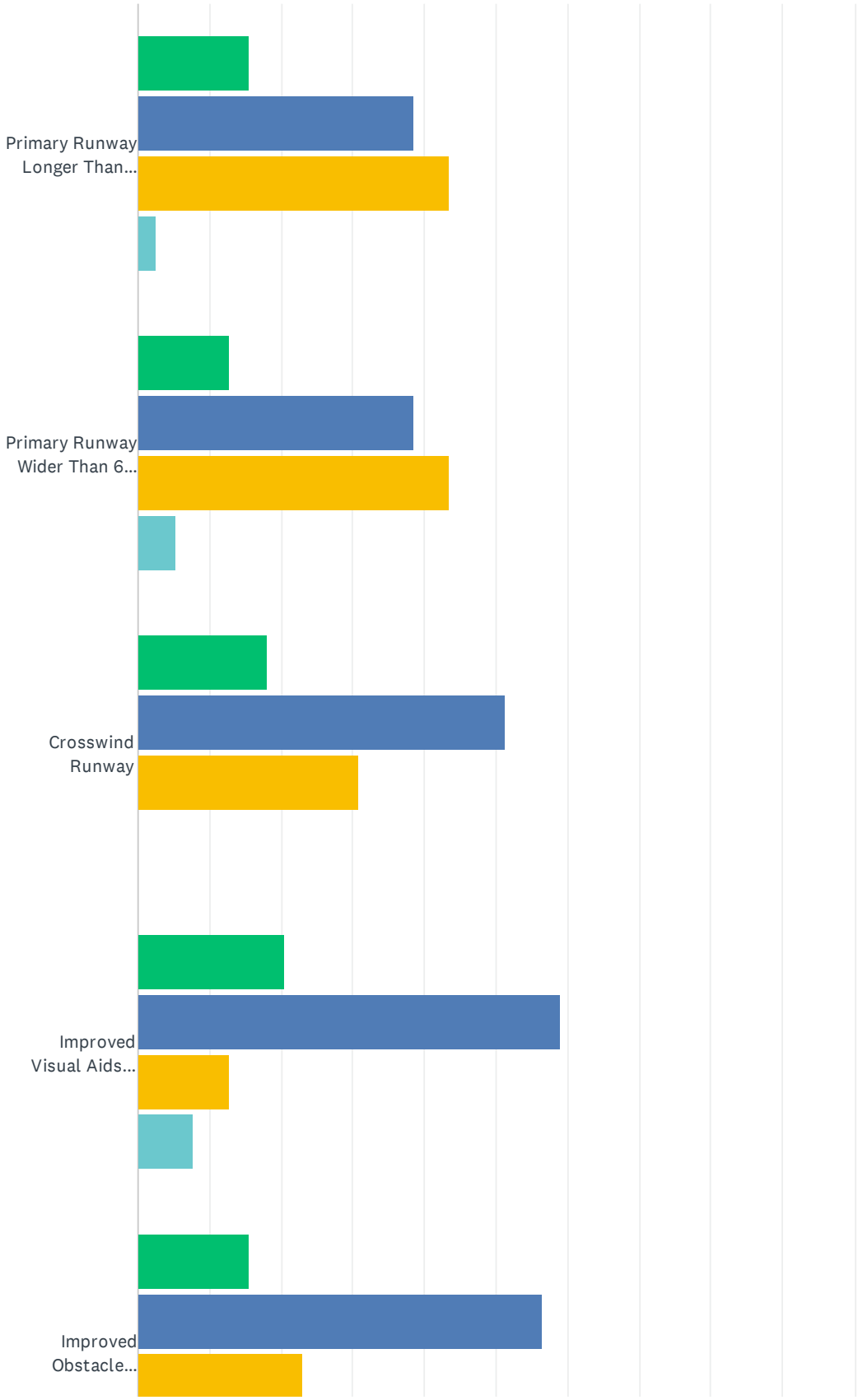
#	ANNUAL OPERATIONS	DATE
1	60	12/14/2018 6:58 PM
2	40	12/14/2018 3:53 PM
3	200	12/12/2018 4:29 PM
4	5	12/6/2018 5:39 PM
5	10	12/3/2018 1:30 PM
6	30	12/2/2018 2:56 AM
7	6	11/30/2018 1:56 PM
8	25	11/30/2018 10:27 AM
9	24	11/30/2018 8:54 AM
10	6	11/30/2018 8:38 AM
11	40	11/29/2018 1:54 PM
12	250	11/29/2018 9:29 AM
13	200	11/26/2018 7:43 AM
14	20	11/25/2018 6:14 PM
15	24	11/24/2018 5:08 PM

#	PEAK MONTH OPERATIONS	DATE
1	7	12/14/2018 6:58 PM
2	25	12/14/2018 3:53 PM
3	30	12/12/2018 4:29 PM
4	4	12/3/2018 1:30 PM
5	10	12/2/2018 2:56 AM
6	4	11/30/2018 1:56 PM
7	5	11/30/2018 10:27 AM
8	6	11/30/2018 8:54 AM
9	4	11/30/2018 8:38 AM
10	10	11/29/2018 1:54 PM
11	50	11/29/2018 9:29 AM
12	100	11/26/2018 7:43 AM

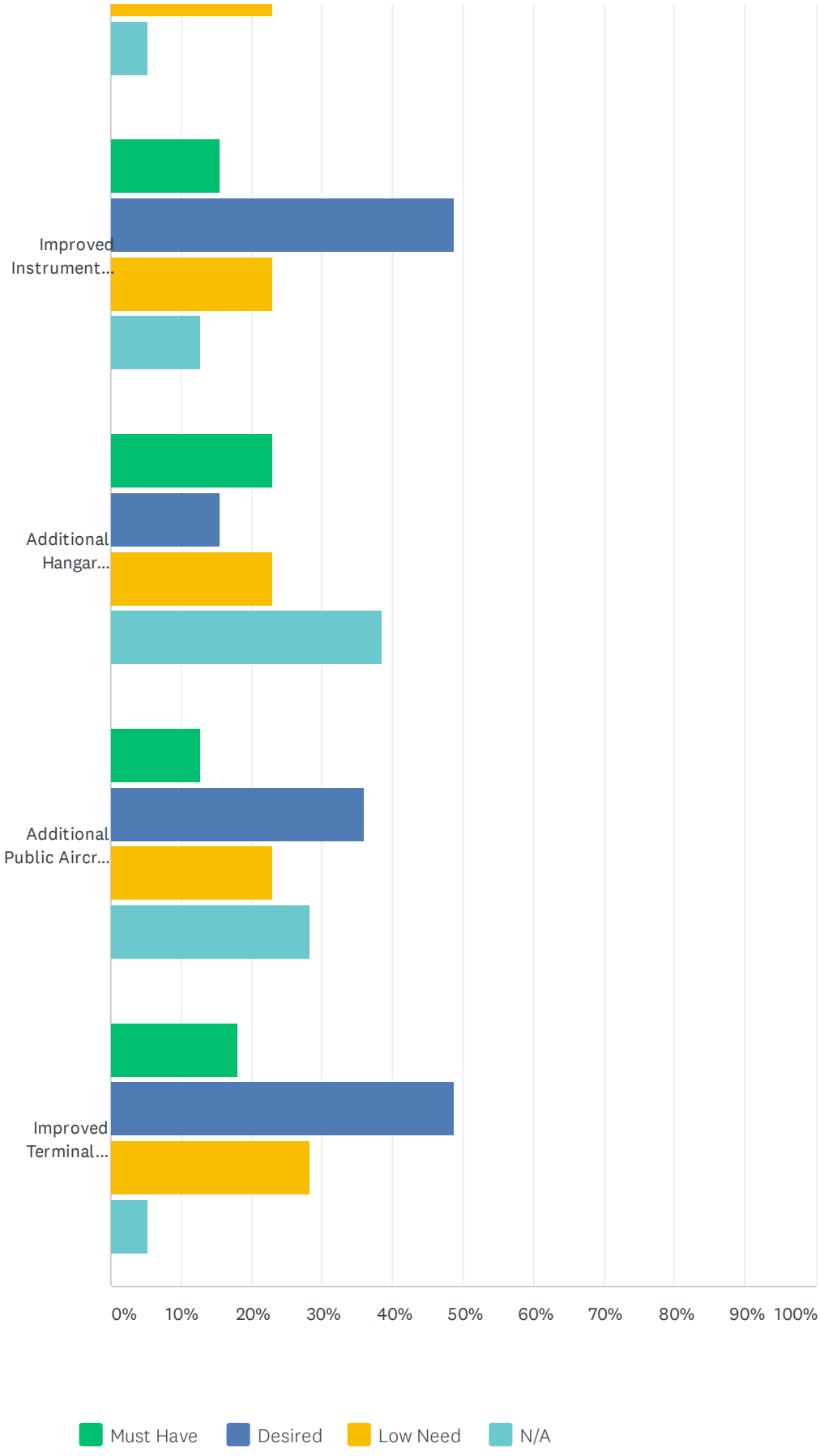
13	6	11/25/2018 6:14 PM
14	4	11/24/2018 5:08 PM

Q12 What airfield facilities do you need at Portage in the next 5 years?

Answered: 39 Skipped: 25



Portage Municipal Airport (C47)
Airport Master Plan
User Survey



	MUST HAVE	DESIRED	LOW NEED	N/A	TOTAL	WEIGHTED AVERAGE
Primary Runway Longer Than 3,768 feet	15.38% 6	38.46% 15	43.59% 17	2.56% 1	39	1.71
Primary Runway Wider Than 60 feet	12.82% 5	38.46% 15	43.59% 17	5.13% 2	39	1.68
Crosswind Runway	17.95% 7	51.28% 20	30.77% 12	0.00% 0	39	1.87
Improved Visual Aids (e.g. PAPI, REIL)	20.51% 8	58.97% 23	12.82% 5	7.69% 3	39	2.08
Improved Obstacle Clearance	15.38% 6	56.41% 22	23.08% 9	5.13% 2	39	1.92
Improved Instrument Approach Minimums	15.38% 6	48.72% 19	23.08% 9	12.82% 5	39	1.91
Additional Hangar Development Sites	23.08% 9	15.38% 6	23.08% 9	38.46% 15	39	2.00
Additional Public Aircraft Storage Space	12.82% 5	35.90% 14	23.08% 9	28.21% 11	39	1.86
Improved Terminal Building	17.95% 7	48.72% 19	28.21% 11	5.13% 2	39	1.89

Q13 Please provide comments about the future of the airport facilities that you feel should be considered by the airport owner.

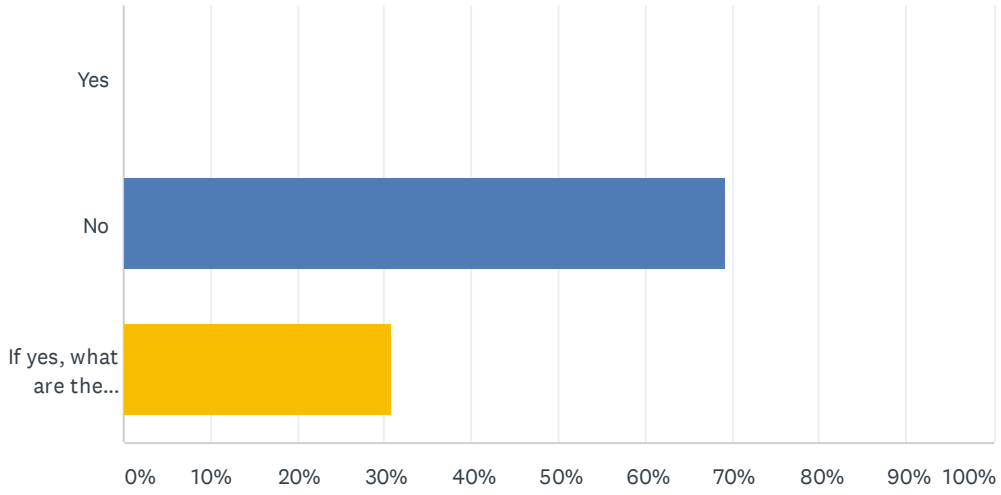
Answered: 27 Skipped: 37

#	RESPONSES	DATE
1	The airport at Portage is essential for existing and future businesses.	12/15/2018 5:40 AM
2	Better snow plowing in the winter.	12/14/2018 7:04 PM
3	Badly need of an upgrade	12/14/2018 3:56 PM
4	Full time 7 days a week operations with normal hours of operations.	12/12/2018 4:37 PM
5	Show an intrest in improving the airport	12/12/2018 4:30 PM
6	Expanded transient paved parking areas and tiedowns would be nice.	12/11/2018 8:22 PM
7	New terminal building	12/7/2018 4:23 PM
8	Access to car rental. This is critical.	12/7/2018 3:31 PM
9	different types of fuel	12/6/2018 6:04 PM
10	If you want city of Portage to prosper....you must have an adequate airport for business.	12/4/2018 6:00 PM
11	The viability of this airport has EVERYTHING to do the City of Portage proactively supporting the airport, in stead of secretly turning operations away. ie Culvers and UW Medflight both desired to build hangars and base operations at C47. Keeping this airport viable has nothing to do with my needs in the questions that follow.	12/4/2018 2:28 PM
12	Airport Shower, camping, crew car	12/4/2018 10:41 AM
13	Maintaining the new UL94, lower cost aircraft fuel.	12/3/2018 1:37 PM
14	We would consider moving our base of operations there if the airport was suitable.	12/2/2018 3:01 AM
15	I love this airport and everything about it. I have had to go elsewhere a few times because I didn't have a GPS enabled IFR approach radio, which is changing this month. I do use NDB approaches (or did before the FAA pulled the plug on a lot of them), and have a conventional panel.	12/1/2018 8:11 PM
16	The airport is in a great spot if the state which is why I fly there vs KDLL.	11/30/2018 10:30 AM
17	do not close this airport. Even though i'm not a heavy user, it is vital to be able to fly there when needed.	11/30/2018 8:59 AM
18	The airport has a rundown look and feel, which doesn't attract new or existing pilots.	11/30/2018 8:46 AM
19	We use C47 due to it’s convenient, walking distance, from a restaurant, and low fuel price. Any improvement should consider these two factors to preserve transient traffic use.	11/29/2018 8:41 PM
20	I like the off-hours access to fuel and facilities. Future car rental might become needed.	11/29/2018 4:01 PM
21	I can not believe that a town would ever not have a airport when they have one already. You wonder why it doesn't get used more, Look at the building. Who really want to fly into that place. Look around and see smaller towns that have nice airports and they have manufactures and the town is growing. Then look at portage, not going any where.	11/29/2018 9:39 AM
22	The current FBO is one of only a few Quonset Hut style bldgs. remaining in the US typical of the Golden Age of aviation and as such a deliberate attempt should be made to preserve it. Including registering it with the national society of historic buildings.	11/28/2018 5:30 PM
23	local businesses need overnight airmail service as well as corporate turboprop and turbojet aircraft to commute engineers and sales personnel to their facilities.	11/26/2018 7:56 AM

24	10 years ago I sent a letter to the airport commission with desires to open a repair facility when they figure out what's going to happen long term. I'm still interested in it.	11/25/2018 3:01 PM
25	It is obvious that longer/wider runways are desired by larger aircraft. These larger aircraft are more than likely used by used by and for businesses. These businesses, it seems is what is needed to help keep an airport and local economy thriving. That said, if longer wider runways are not possible, making the airport the "best" it could be would seem to be the next best option. Make it as attractive as possible to both the business community and the rest of the aviation world. This could include on airport businesses like mechanics, training,storage and transportation services. Related businesses like restaurants, community use facilities and motels that service both aviation and non aviation groups. So once again making the airport the best it can be. That's what I think should be considered.	11/25/2018 9:28 AM
26	Improve existing hanger space.	11/21/2018 4:33 PM
27	Longer, wider runway would attract more businesses. See Baraboo-Dells airport.	11/20/2018 10:32 AM

Q14 Are there deficiencies to the existing airport facility that limit your use of it?

Answered: 39 Skipped: 25

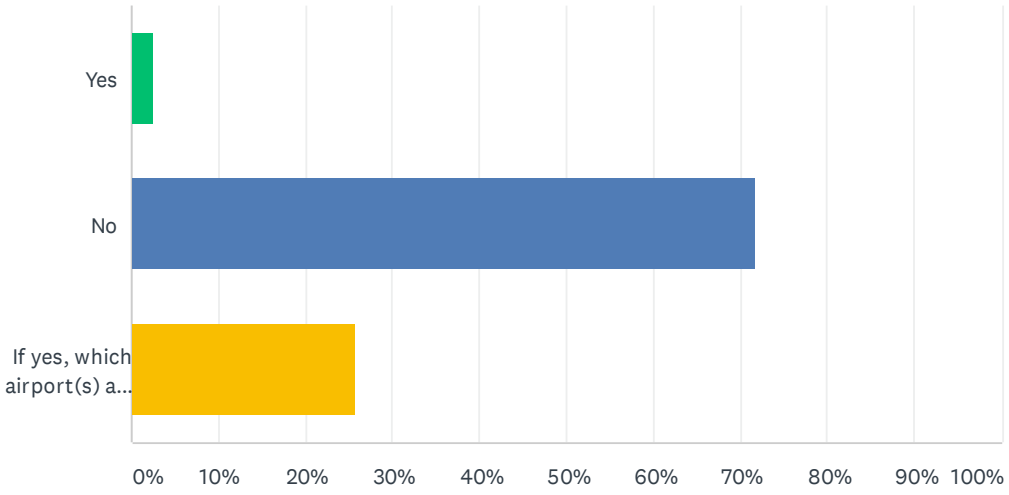


ANSWER CHOICES	RESPONSES	
Yes	0.00%	0
No	69.23%	27
If yes, what are the deficiencies and how is your use limited?	30.77%	12
TOTAL		39

#	IF YES, WHAT ARE THE DEFICIENCIES AND HOW IS YOUR USE LIMITED?	DATE
1	Snow plowing could be better	12/14/2018 7:04 PM
2	Runway and FBO	12/14/2018 3:56 PM
3	Availability of people to speak with on the weekends	12/12/2018 4:37 PM
4	easier access to facilities when unattended	12/12/2018 4:30 PM
5	See above	12/7/2018 3:31 PM
6	Length of runway, obstacles	12/2/2018 3:01 AM
7	GPS only approach, otherwise it's fine.	12/1/2018 8:11 PM
8	Aircraft repair.	11/30/2018 2:15 PM
9	would be nice to have a nice client meeting room at the terminal building - Like Reedsburg's new terminal building	11/30/2018 8:59 AM
10	Look above	11/29/2018 9:39 AM
11	short runway,substandard terminal facility	11/26/2018 7:56 AM
12	Available and attractive aircraft storage	11/25/2018 9:28 AM

Q15 Do you use any alternative airports in the Portage area because of an airport facility deficiency?

Answered: 39 Skipped: 25

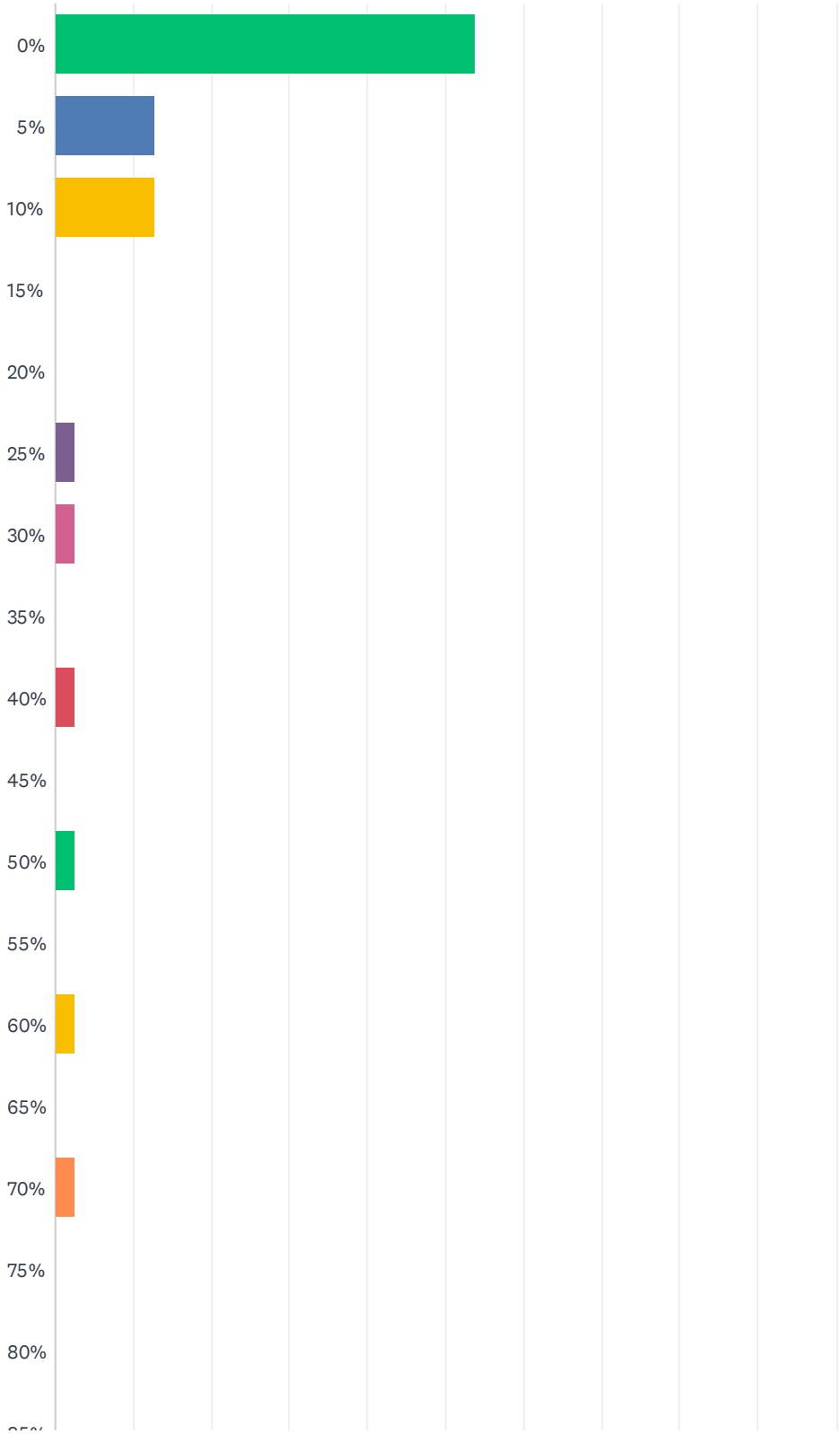


ANSWER CHOICES	RESPONSES	
Yes	2.56%	1
No	71.79%	28
If yes, which airport(s) and why?	25.64%	10
TOTAL		39

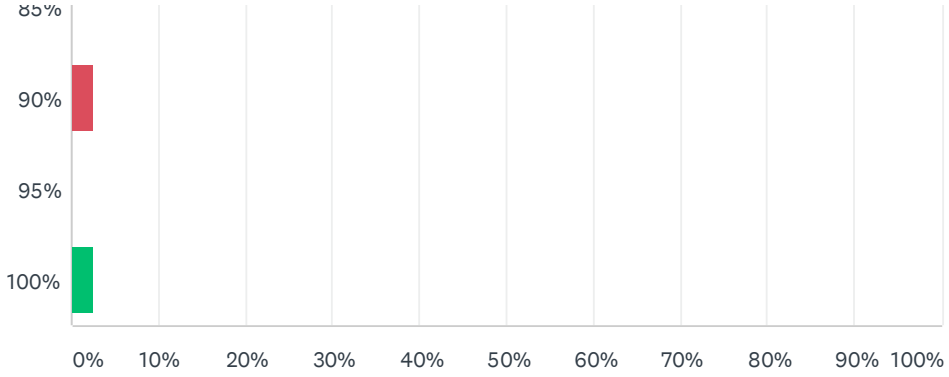
#	IF YES, WHICH AIRPORT(S) AND WHY?	DATE
1	Baraboo. Much nicer facilities.	12/15/2018 5:46 PM
2	MSN, precision approach	12/15/2018 5:40 AM
3	DLL, Instrument approaches and runway length	12/14/2018 3:56 PM
4	94C has hanger space availability	12/12/2018 4:37 PM
5	Baraboo or Madison for access to rental car if arriving on weekend	12/11/2018 8:22 PM
6	KDLL	12/7/2018 3:31 PM
7	Baraboo-Dells, Reedsburg	12/2/2018 3:01 AM
8	RAC because I have family there and they have an ILS	12/1/2018 8:11 PM
9	KMSN and DLL	11/26/2018 7:56 AM
10	Baraboo.The lack of on site mechanical facilities	11/25/2018 9:28 AM

Q16 What percentage of your airport operations in the Portage area is performed at other area airports because Portage airport facilities do not meet your needs?

Answered: 39 Skipped: 25



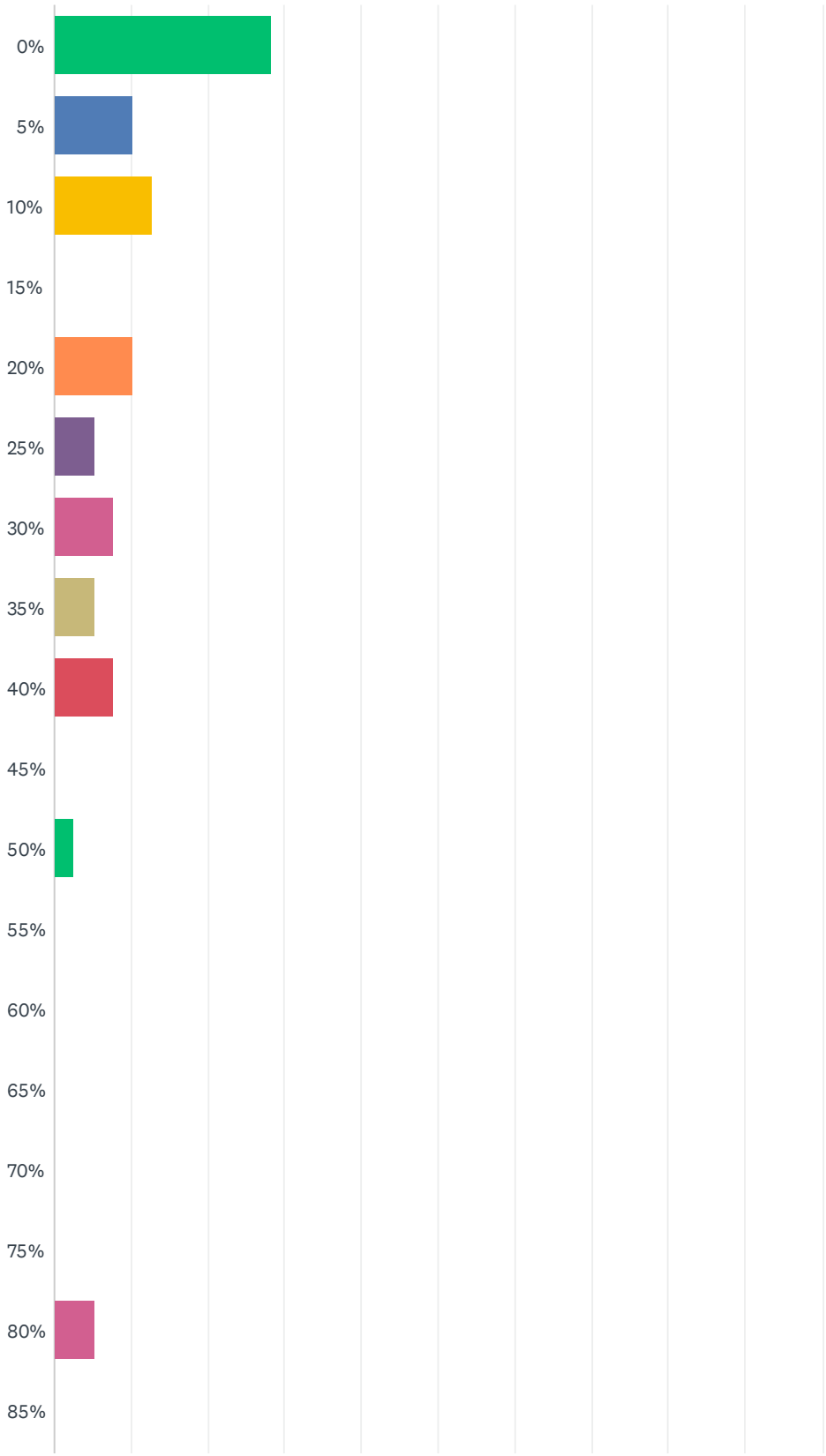
Portage Municipal Airport (C47)
Airport Master Plan
User Survey

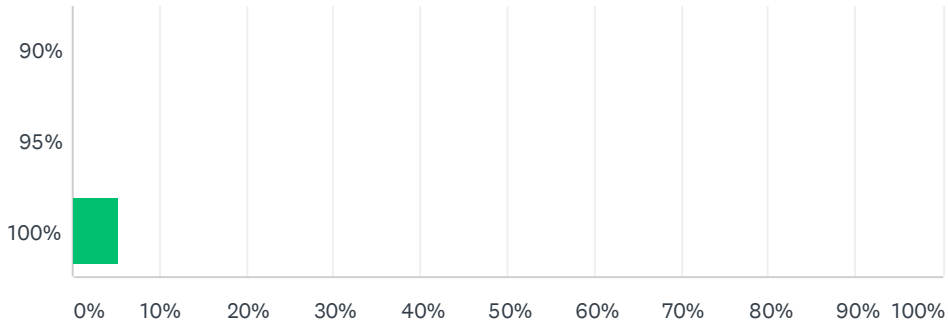


ANSWER CHOICES	RESPONSES	
0%	53.85%	21
5%	12.82%	5
10%	12.82%	5
15%	0.00%	0
20%	0.00%	0
25%	2.56%	1
30%	2.56%	1
35%	0.00%	0
40%	2.56%	1
45%	0.00%	0
50%	2.56%	1
55%	0.00%	0
60%	2.56%	1
65%	0.00%	0
70%	2.56%	1
75%	0.00%	0
80%	0.00%	0
85%	0.00%	0
90%	2.56%	1
95%	0.00%	0
100%	2.56%	1
TOTAL		39

Q17 What percentage of your flight operations at Portage are conducted on Runway 4/22?

Answered: 39 Skipped: 25





ANSWER CHOICES	RESPONSES	
0%	28.21%	11
5%	10.26%	4
10%	12.82%	5
15%	0.00%	0
20%	10.26%	4
25%	5.13%	2
30%	7.69%	3
35%	5.13%	2
40%	7.69%	3
45%	0.00%	0
50%	2.56%	1
55%	0.00%	0
60%	0.00%	0
65%	0.00%	0
70%	0.00%	0
75%	0.00%	0
80%	5.13%	2
85%	0.00%	0
90%	0.00%	0
95%	0.00%	0
100%	5.13%	2
TOTAL		39

Q18 What minimum runway length do you need for a crosswind runway at Portage?

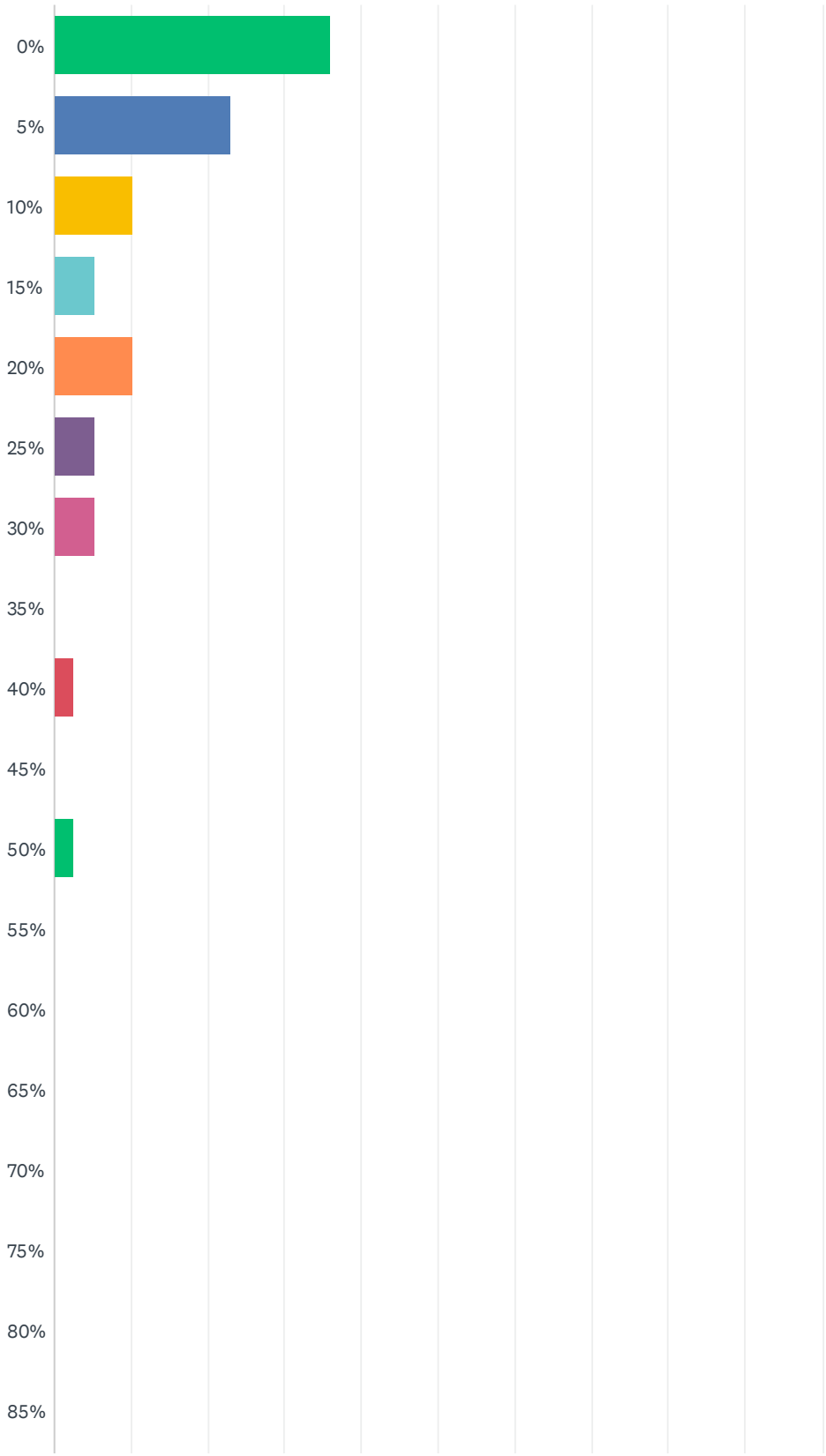
Answered: 39 Skipped: 25

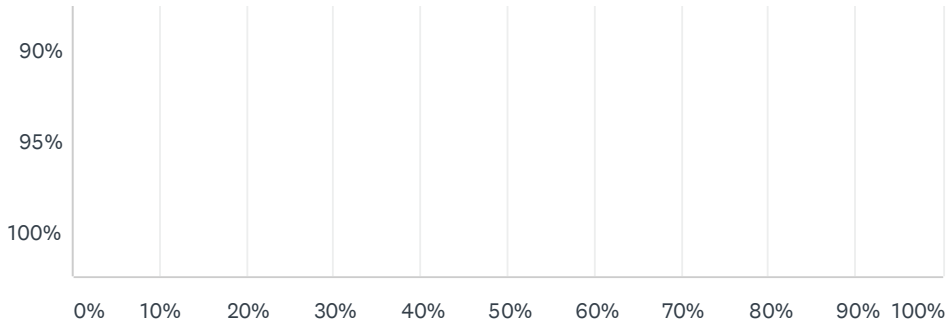
#	RESPONSES	DATE
1	2500	12/15/2018 7:52 PM
2	3000 ft	12/15/2018 5:46 PM
3	3768	12/15/2018 5:40 AM
4	3000 feet	12/14/2018 7:04 PM
5	5000	12/14/2018 3:56 PM
6	1500	12/13/2018 10:28 PM
7	3500	12/12/2018 4:37 PM
8	3000	12/12/2018 4:30 PM
9	3000	12/11/2018 8:22 PM
10	3000	12/11/2018 3:02 PM
11	1500	12/10/2018 10:41 AM
12	3000	12/7/2018 4:23 PM
13	2400'	12/7/2018 3:31 PM
14	3000	12/6/2018 6:04 PM
15	3000	12/5/2018 10:14 PM
16	3000'	12/4/2018 6:00 PM
17	2500	12/4/2018 2:28 PM
18	3000	12/4/2018 1:10 PM
19	2500	12/4/2018 10:41 AM
20	2200	12/3/2018 1:37 PM
21	2500'	12/2/2018 3:01 AM
22	1700'	12/1/2018 8:11 PM
23	2500	12/1/2018 11:30 AM
24	4000	11/30/2018 6:05 PM
25	2000	11/30/2018 2:15 PM
26	2800	11/30/2018 10:30 AM
27	1800	11/30/2018 8:59 AM
28	2500	11/30/2018 8:46 AM
29	2500	11/29/2018 8:41 PM
30	2500	11/29/2018 4:01 PM
31	4000'	11/29/2018 9:39 AM

32	1700	11/28/2018 5:30 PM
33	3500	11/26/2018 7:56 AM
34	2000	11/25/2018 6:18 PM
35	2000	11/25/2018 3:01 PM
36	Because of the size of my aircraft, the existing runway is adequate.	11/25/2018 9:28 AM
37	3200 ft.	11/24/2018 5:12 PM
38	2500	11/21/2018 4:33 PM
39	2500	11/20/2018 10:32 AM

Q19 What percentage of your total flight operations at Portage are conducted at night?

Answered: 39 Skipped: 25

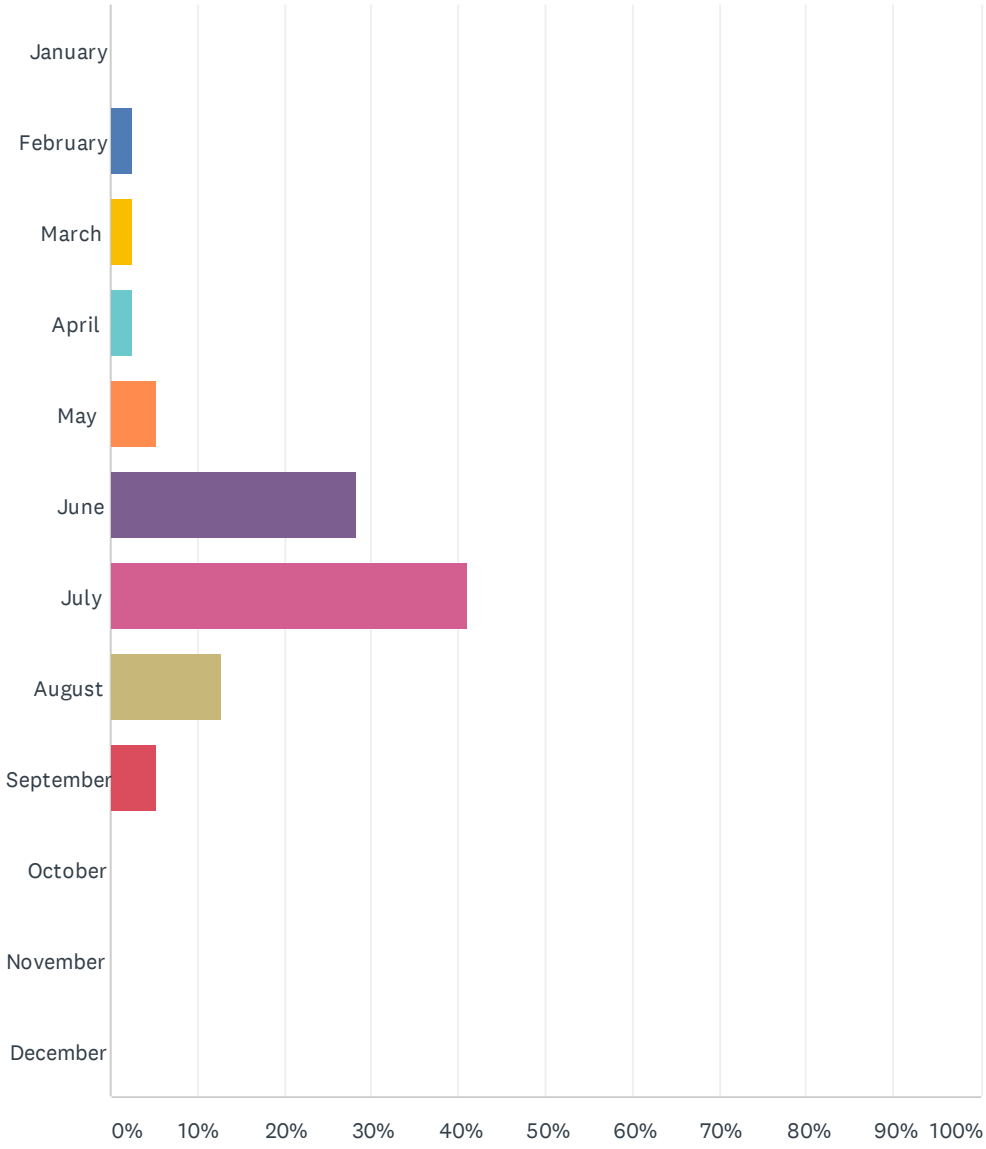




ANSWER CHOICES	RESPONSES	
0%	35.90%	14
5%	23.08%	9
10%	10.26%	4
15%	5.13%	2
20%	10.26%	4
25%	5.13%	2
30%	5.13%	2
35%	0.00%	0
40%	2.56%	1
45%	0.00%	0
50%	2.56%	1
55%	0.00%	0
60%	0.00%	0
65%	0.00%	0
70%	0.00%	0
75%	0.00%	0
80%	0.00%	0
85%	0.00%	0
90%	0.00%	0
95%	0.00%	0
100%	0.00%	0
TOTAL		39

Q20 What is your busiest month of flight operations at Portage?

Answered: 39 Skipped: 25



ANSWER CHOICES	RESPONSES	
January	0.00%	0
February	2.56%	1
March	2.56%	1
April	2.56%	1
May	5.13%	2
June	28.21%	11
July	41.03%	16
August	12.82%	5
September	5.13%	2
October	0.00%	0
November	0.00%	0
December	0.00%	0
TOTAL		39

Q21 What is the absolute minimum takeoff distance you need to operate at Portage to continue your missions?

Answered: 39 Skipped: 25

#	RESPONSES	DATE
1	3000	12/15/2018 7:52 PM
2	2000	12/15/2018 5:46 PM
3	3768	12/15/2018 5:40 AM
4	3000	12/14/2018 7:04 PM
5	5000	12/14/2018 3:56 PM
6	3000	12/13/2018 10:28 PM
7	3800	12/12/2018 4:37 PM
8	2000	12/12/2018 4:30 PM
9	2700	12/11/2018 8:22 PM
10	2500	12/11/2018 3:02 PM
11	1500	12/10/2018 10:41 AM
12	3000	12/7/2018 4:23 PM
13	2500	12/7/2018 3:31 PM
14	2500	12/6/2018 6:04 PM
15	2500	12/5/2018 10:14 PM
16	1000	12/4/2018 6:00 PM
17	2500	12/4/2018 2:28 PM
18	2500	12/4/2018 1:10 PM
19	3000	12/4/2018 10:41 AM
20	2200	12/3/2018 1:37 PM
21	3500	12/2/2018 3:01 AM
22	1750	12/1/2018 8:11 PM
23	2500	12/1/2018 11:30 AM
24	3000	11/30/2018 6:05 PM
25	3000	11/30/2018 2:15 PM
26	2800	11/30/2018 10:30 AM
27	1800	11/30/2018 8:59 AM
28	2500	11/30/2018 8:46 AM
29	2500	11/29/2018 8:41 PM
30	3000	11/29/2018 4:01 PM
31	3500	11/29/2018 9:39 AM

32	2500	11/28/2018 5:30 PM
33	3900	11/26/2018 7:56 AM
34	2000	11/25/2018 6:18 PM
35	2000	11/25/2018 3:01 PM
36	3768	11/25/2018 9:28 AM
37	2400	11/24/2018 5:12 PM
38	3000	11/21/2018 4:33 PM
39	2000	11/20/2018 10:32 AM

Q22 What is the absolute minimum landing distance you need to operate at Portage to continue your missions?

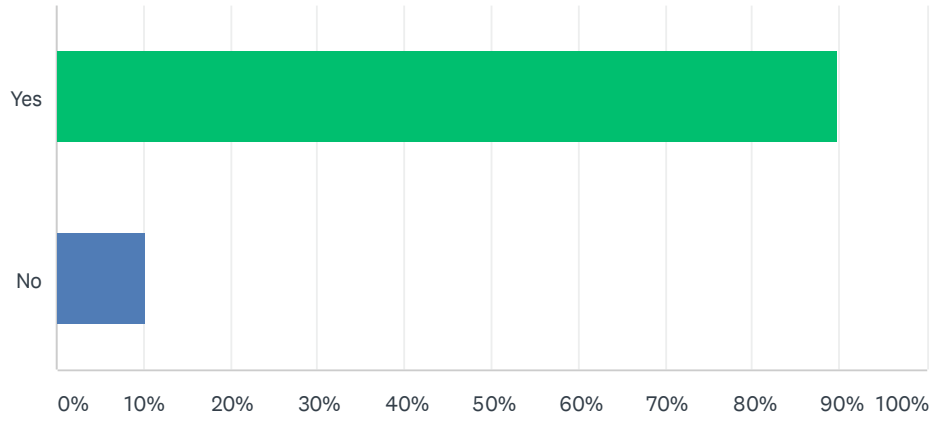
Answered: 39 Skipped: 25

#	RESPONSES	DATE
1	2500	12/15/2018 7:52 PM
2	3000	12/15/2018 5:46 PM
3	3768	12/15/2018 5:40 AM
4	3000	12/14/2018 7:04 PM
5	5000	12/14/2018 3:56 PM
6	3000	12/13/2018 10:28 PM
7	3800	12/12/2018 4:37 PM
8	2000	12/12/2018 4:30 PM
9	3000	12/11/2018 8:22 PM
10	3500	12/11/2018 3:02 PM
11	1500	12/10/2018 10:41 AM
12	3000	12/7/2018 4:23 PM
13	2500	12/7/2018 3:31 PM
14	2500	12/6/2018 6:04 PM
15	2500	12/5/2018 10:14 PM
16	3000	12/4/2018 6:00 PM
17	2500	12/4/2018 2:28 PM
18	2500	12/4/2018 1:10 PM
19	2500	12/4/2018 10:41 AM
20	2200	12/3/2018 1:37 PM
21	4000	12/2/2018 3:01 AM
22	1750	12/1/2018 8:11 PM
23	2500	12/1/2018 11:30 AM
24	3000	11/30/2018 6:05 PM
25	3000	11/30/2018 2:15 PM
26	2800	11/30/2018 10:30 AM
27	1800	11/30/2018 8:59 AM
28	2500	11/30/2018 8:46 AM
29	2500	11/29/2018 8:41 PM
30	2500	11/29/2018 4:01 PM
31	3500	11/29/2018 9:39 AM

32	2500	11/28/2018 5:30 PM
33	2900	11/26/2018 7:56 AM
34	2000	11/25/2018 6:18 PM
35	2000	11/25/2018 3:01 PM
36	3768	11/25/2018 9:28 AM
37	1800	11/24/2018 5:12 PM
38	3000	11/21/2018 4:33 PM
39	2500	11/20/2018 10:32 AM

Q23 Does the current runway length (3,768 feet) at Portage meet your current and future needs?

Answered: 39 Skipped: 25



ANSWER CHOICES	RESPONSES	
Yes	89.74%	35
No	10.26%	4
TOTAL		39

Q24 What runway length (in feet) do you need to complete your flight missions at Portage?

Answered: 39 Skipped: 25

#	RESPONSES	DATE
1	3000	12/15/2018 7:55 PM
2	3000	12/15/2018 5:47 PM
3	3768	12/15/2018 5:41 AM
4	3000	12/14/2018 7:05 PM
5	5000	12/14/2018 3:57 PM
6	3700	12/13/2018 10:30 PM
7	5000	12/12/2018 4:40 PM
8	3000	12/12/2018 4:33 PM
9	3000	12/11/2018 8:23 PM
10	3500	12/11/2018 3:03 PM
11	1500	12/10/2018 10:43 AM
12	3000	12/7/2018 4:24 PM
13	2500	12/7/2018 3:32 PM
14	3000	12/6/2018 6:05 PM
15	3000	12/5/2018 10:14 PM
16	3000	12/4/2018 6:01 PM
17	3000	12/4/2018 2:30 PM
18	3500	12/4/2018 1:11 PM
19	2500	12/4/2018 10:42 AM
20	2200	12/3/2018 1:38 PM
21	5000	12/2/2018 3:01 AM
22	2000	12/1/2018 8:12 PM
23	2500	12/1/2018 11:31 AM
24	3000	11/30/2018 6:08 PM
25	3000	11/30/2018 2:16 PM
26	2500	11/30/2018 10:31 AM
27	1800	11/30/2018 9:00 AM
28	2500	11/30/2018 8:47 AM
29	2500	11/29/2018 8:41 PM
30	2500	11/29/2018 4:02 PM
31	4000	11/29/2018 9:40 AM

32	2500	11/28/2018 5:33 PM
33	5000	11/26/2018 7:59 AM
34	2000	11/25/2018 6:18 PM
35	2000	11/25/2018 3:01 PM
36	3768	11/25/2018 9:32 AM
37	3600	11/24/2018 5:14 PM
38	3000	11/21/2018 4:41 PM
39	2500	11/20/2018 10:38 AM

Q25 Please indicate the aircraft make/model assumed for the runway length noted above

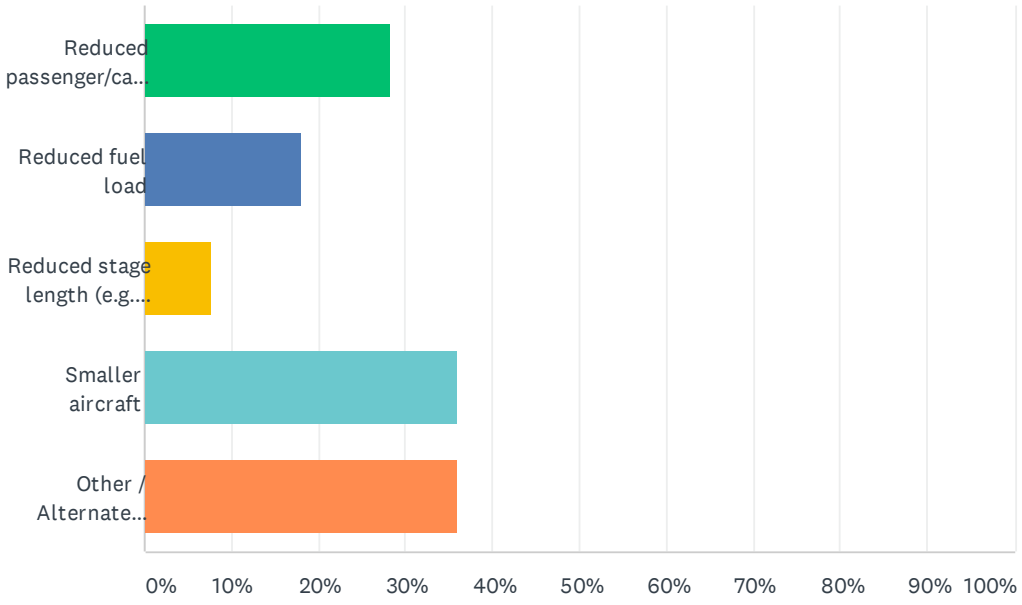
Answered: 39 Skipped: 25

#	RESPONSES	DATE
1	Cessna 172 during high density days	12/15/2018 7:55 PM
2	PA28-140 Piper Cherokee	12/15/2018 5:47 PM
3	M200	12/15/2018 5:41 AM
4	PA-28	12/14/2018 7:05 PM
5	HS-125	12/14/2018 3:57 PM
6	thrush 502	12/13/2018 10:30 PM
7	Cessna Citation	12/12/2018 4:40 PM
8	Piper Colt	12/12/2018 4:33 PM
9	Beechcraft BE35	12/11/2018 8:23 PM
10	Vans RV-7	12/11/2018 3:03 PM
11	PA-28-180	12/10/2018 10:43 AM
12	Piper Arrow	12/7/2018 4:24 PM
13	F33A	12/7/2018 3:32 PM
14	bellanca viking	12/6/2018 6:05 PM
15	A36	12/5/2018 10:14 PM
16	Piper PA15	12/4/2018 6:01 PM
17	Cessna T210J	12/4/2018 2:30 PM
18	Cessna 210	12/4/2018 1:11 PM
19	Vans RV7	12/4/2018 10:42 AM
20	piper pa-28	12/3/2018 1:38 PM
21	Piper Pa-30	12/2/2018 3:01 AM
22	C182M	12/1/2018 8:12 PM
23	C182S	12/1/2018 11:31 AM
24	Piper PA-22	11/30/2018 6:08 PM
25	C 172	11/30/2018 2:16 PM
26	Cirrus SR22	11/30/2018 10:31 AM
27	Cessna 172	11/30/2018 9:00 AM
28	Cirrus SR20	11/30/2018 8:47 AM
29	Cessna 205	11/29/2018 8:41 PM
30	Beech V35B	11/29/2018 4:02 PM
31	Bananza	11/29/2018 9:40 AM

32	Cessna Skyhawk	11/28/2018 5:33 PM
33	Embraer EMB-145	11/26/2018 7:59 AM
34	Piper J3 Cub	11/25/2018 6:18 PM
35	Cessna 172	11/25/2018 3:01 PM
36	Experimental skyranger	11/25/2018 9:32 AM
37	Piper Cherokee	11/24/2018 5:14 PM
38	3000	11/21/2018 4:41 PM
39	Aero Commander 200	11/20/2018 10:38 AM

Q26 Please identify your operational restrictions with the current runway length at Portage.

Answered: 39 Skipped: 25



ANSWER CHOICES	RESPONSES	
Reduced passenger/cargo load	28.21%	11
Reduced fuel load	17.95%	7
Reduced stage length (e.g. fuel stop)	7.69%	3
Smaller aircraft	35.90%	14
Other / Alternate airport (please specify airport)	35.90%	14
Total Respondents: 39		

#	OTHER / ALTERNATE AIRPORT (PLEASE SPECIFY AIRPORT)	DATE
1	Ok with current lengths	12/15/2018 7:55 PM
2	Baraboo-Dells	12/15/2018 5:47 PM
3	UNU,MSN	12/10/2018 10:43 AM
4	none	12/7/2018 3:32 PM
5	None, it is adequate for my aircraft/missions	12/1/2018 8:12 PM
6	NA	12/1/2018 11:31 AM
7	N/A	11/30/2018 6:08 PM
8	no operational restrictions	11/30/2018 9:00 AM
9	None	11/29/2018 8:41 PM
10	None	11/29/2018 4:02 PM
11	None	11/28/2018 5:33 PM

12	For safety reasons the addition of taxi ways to and from all ends of both runways	11/25/2018 9:32 AM
13	none	11/24/2018 5:14 PM
14	None	11/20/2018 10:38 AM

Q27 Please provide any other feedback you feel should be considered by the airport owner on the Portage airport master plan study.

Answered: 28 Skipped: 36

#	RESPONSES	DATE
1	I believe it a mistake to consider closing the Portage Airport. An improved runway/airport in Portage will bring in additional business. I work at the Baraboo-Dells airport and we regularly receive aircraft traffic, both business & private that indicate they'd prefer to land in Portage but don't due to the current airport limitations.	12/15/2018 5:49 PM
2	The need is to improve the existing airport so more planes and people can use it. Questions including the the phrase “absolute minimum” are not helpful. (What is the absolute minimum width of a public parking spot?) The need is for a runway 5002 feet long and 100 feet wide.	12/15/2018 5:45 AM
3	To make aircraft suitable for use for intermediate size aircraft to warrant feasable operations.	12/12/2018 4:41 PM
4	the importance of a good airport to bring new business and jobs to the Portage area	12/12/2018 4:40 PM
5	Smaller airports provide more income to the community than town planners often consider. Please look at the financial benefits to hotel/motel, restaurant, car rental etc when general aviation aircraft utilize the airport and its services.	12/11/2018 8:26 PM
6	Courtesy vehicles greatly increase the use-fullness of any airport.	12/10/2018 10:45 AM
7	Get rental cars. Unless I am getting picked up I have to fly to KDLL because they have car rental.. Rental cars will make C47 much more attractive	12/7/2018 3:34 PM
8	na	12/7/2018 12:52 PM
9	Hate to have Portage lose their airport	12/6/2018 6:05 PM
10	"The airport runway is the most important Main Street in any town". Norm Crabtree, Former Aviation Director for the State of Ohio. The City of Portage must realize that the airport is, and/or can be, the most important bargaining chip to lure new businesses to Portage. Administrators need to view it as an asset, instead if the liability it does now.	12/4/2018 2:36 PM
11	Great reliever / fueling stop for Oshkosh Airventure!	12/4/2018 10:42 AM
12	There is an increase in pilot instruction in the Madison area that Portage may be able to tap into.	12/3/2018 1:40 PM
13	We do business with several clients in Portage and would use the airport more frequently if the runway was 5000 or more. This is more of an insurance issue though.	12/2/2018 3:03 AM
14	Keep the Unleaded aircraft fuel! Please!	12/1/2018 8:12 PM
15	Key factors in my selection of an airport to use to store my plane include the availability of fuel, available hangar space (to own or rent) and the presence of certified aircraft mechanics.	11/30/2018 5:53 PM
16	C47 is a great airport in a nice city to visit and transit.	11/30/2018 10:32 AM
17	I like flying into Portage. I like having clients meet me at the portage airport. For a city to have an airport is a huge bonus in my travels. I spend money in the towns and cities I can fly to.	11/30/2018 9:02 AM
18	Airports are an important tool to attract and grow good business. It would have been nice to have the previous new location go through, this would have allowed better options for business and personal jets.	11/30/2018 8:51 AM
19	I use Portage as a stop enroute to EAA Airventure annually. I stage from there when OSH opens in the afternoon. I have never seen any airport personnel present.	11/29/2018 4:04 PM
20	What you need to look at is not what we have now but what we should have to increase the business in this town. I would say that you would not have Cardinal Glass here. I remember when I first flew in here on a plane the first thing that I asked was, are they going to update the	11/29/2018 9:49 AM

	airport. They said yes and you see what happened, nothing. Here we are at the intersection of two interstate highways and we have very little manufacturing and this town should be booming with manufacturing and high end businesses. It all starts with easy excess and a airport.	
21	As the number of small municipal airports declines across the US those that remain open benefit from those that close. You would do well to hold on to yours while others lose theirs.	11/28/2018 5:38 PM
22	build it and they will come	11/26/2018 8:00 AM
23	As stated, I would like to open an aircraft repair facility when you get this figured out.	11/25/2018 3:02 PM
24	I own a hangar at KDLL (Baraboo Dells Airport.) Initially looked at C47 when I moved to Portage where I now live. Factors in my decision to go to KDLL included runway length, lack of development around the airport, airport longevity, and a full time aircraft mechanic on site.	11/25/2018 12:34 PM
25	Taxi ways for both runways	11/25/2018 9:32 AM
26	I just moved to this airport last year because of convenience and hanger space.	11/21/2018 4:44 PM
27	If this airport had been expanded years ago, I believe we would havé attracted a number of companies that use small jets and turboprops to Portage. The interstates and railroads are here; a good airport should be.	11/20/2018 10:43 AM
28	The city of portage needs to take the study very seriously. Airports are a very important part of the future for any city that has an airport. Airports attract businesses which bring jobs,tax dollars and a large influx of money into the local economy.	11/15/2018 8:40 AM

APPENDIX C

AIRPORT BUSINESS USER SURVEY

PORTAGE MUNICIPAL AIRPORT

AIRPORT MASTER PLAN – PHASE 1

TKDA

TKDA
444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

November 8, 2018

Re: Business Survey
Airport Master Plan Study
Portage Municipal Airport (C47)

Dear Business Representative:

TKDA is assisting the City of Portage in developing an airport master plan for the Portage Municipal Airport. One of the study goals is to review the viability of the existing airport site and its ability to satisfy the community's aviation demand.

On behalf of the city, we ask that you please complete a business survey. The purpose of this survey is to collect information about your use of general aviation to support your business operations. Your input is very important to the outcome of the airport planning study.

The user survey is available online here -> **https://tinyurl.com/C47-BusinessSurvey**. We kindly request you please complete the survey within the next few weeks.

You may be contacted by a member of the study team for additional supporting information after the survey is submitted.

Thank you in advance for your participation in the study. Please feel free to contact me at marcus.watson@tkda.com with any questions.

Sincerely,

Marcus S. Watson
Group Manager Aviation Planning

MSW

An employee-owned company promoting affirmative action and equal opportunity.

Portage Municipal Airport (C47)
Airport Master Plan Study
Airport Business User Survey Summary

Airport Use

The Portage Airport Business User Survey offered some key insights into the use of General Aviation (GA) from a business user perspective. The survey results were gathered from November 4, 2018 thru December 3, 2018. The goal of this survey was to determine the GA needs of business users for use in the Portage Airport Master Plan Study.

A total of 45 business owners took part in the survey, which captured businesses from many industries including: Aviation, Agriculture, Manufacturing, Entertainment, Retail/Restaurant, Health Services, and Professional Services. About one-third of the businesses responded the location of GA airport as somewhat, very, or extremely important to their business or customers.

Operations data helps to quantify the demand for GA activity. Users were asked to quantify the number of takeoffs and landings for GA at Portage area airports. Of the three (3) businesses that provided current and future data, a total of 132 annual takeoffs and landing operations were performed in 2017, with users estimating 768 yearly operations in year 2022. These include:

- Business #1: The company indicates operating three (3) aircraft including a Beechcraft King Air B350 turboprop, Hawker 900XP and Cessna Citation Encore business jets all totaling 50 monthly takeoffs/landings in the future. The businesses bases their aircraft at the Baraboo/Wisconsin Dells airport because of the inadequate runway length at Portage. They would like to set up operations at the Portage airport but cannot due to its size. They indicate a need for a 6,000-foot runway.
- Business #2: The company estimates 10 monthly trips to/from Portage area airports in a Bombardier Challenger 300 business jet. The airplane travels to/from the Portage area for business. The runway at Portage is too short for their types of aircraft. These aircraft require a minimum of a 5,000-foot long runway.
- Business #3: The company, based in Portage, utilizes a Cessna 182 single-engine piston aircraft with four (4) monthly takeoffs/landings estimated in the future.

Table 1 summarizes the operations by business users.

Table 1
Portage GA Business Users

Business Name	Aircraft Type(s)	Annual Operations (2017)	Annual Operations (2022)	Operations at Portage
Business #1	King Air 350, Hawker 900XP, Cessna Encore+	48	600	1
Business #2	Challenger 300	60	120	0
Business #3	Cessna 182	24	48	5
	Total	**132**	**768**	**6**

Source: C47 Airport Business User Survey (November 2018)

Two (2) users had historical operations in the Portage area but did not include operations in 2017 or in the future. These include:

- Business #4: This business in Portage indicated 10 monthly takeoffs/landings from Portage area airports in 2012. They indicate the runway was too short to use the Portage Municipal Airport. The business operates a Cessna Citation Sovereign and Cessna Citation Excel business jets using the Baraboo/Wisconsin Dells and Madison airports.
- Business #5: Historically had 10 monthly takeoffs/landings from Portage area airports using single/multi-engine aircraft. A jet aircraft would be used if necessary. The business responded that there is a need to lengthen the runways so jets can land to attract new business to Portage.

Individual businesses will be interviewed to confirm activity numbers and any commitment to use the Portage Municipal Airport if facility improvements were made.

Portage Municipal Airport is only able to capture only less than 5% of the GA business demand in the community in 2017. Numerous responses indicate the current runway length limits business users from increasing their use of the Portage Municipal Airport with larger aircraft. Operators use the Baraboo/Wisconsin Dells (KDLL) or Madison/Dane County Regional (KMSN) airports to support business operations in Portage.

Survey Comments

Why does your business not use the Portage Municipal Airport?

- Runway is too short for our type of aircraft.
- Runway is too short for our jets.
- Runway is not long enough. We are in the process of acquiring a jet and we'll have to keep it at the Baraboo airport because of the runway length.

Would your business be affected if it did not have access to the Portage Municipal Airport?

- Portage needs [the airport] to attract new business to Portage
- We would like to set up our operations at the Portage, WI airport but can't due to size.
- I would have to land in Baraboo and get a ride down to Portage

What improvements do you feel area needed at the Portage Municipal Airport to support your business activities?

- There are trees on the approaches that need to be trimmed or removed
- Our aircraft operations require a minimum of 5,000 ft. of runway
- Need to lengthen runways so jets can land
- An airport relocation would open up development in this area
- New airport
- Expansion
- The airport needs a lot of improvement
- I do feel that private pilots would continue to use the airport to visit Portage and perhaps our business as an alternative mode of transportation.
- Safety improvements. Overhead power lines are always a safety hazard for helicopters. Current airport is in a part of the city that has realized growth. Would be nice to be able to relocate the airport to an area that would accommodate future growth. Future growth of the Industrial Park could mean an increased need for smaller company jets. Baraboo airport seems to get more of this type of business due to longer runways and the ability to accommodate other types of aircraft?? This is not related to my current business, but adding this in as a resident of Portage.
- But I think that if Portage was to ever be a viable airport like in Wautoma, it would need to be able to take on private jets. If you haven't seen Wautoma's airport, I highly recommend checking it out.
- Bigger to accommodate bigger company aircraft
- Availability of jet fuel
- 6000+ foot runway. If a new airport was to be built we would move our operations to Portage!!
- Local weather (AWOS)

CARDINAL FG
A CARDINAL GLASS INDUSTRIES COMPANY

Mr. Aaron Jahncke
Director of Public Works
City of Portage
115 West Pleasant Street
Portage, WI 53901

RE: Portage Municipal Airport
Airport Master Plan Study

Dear Aaron:

The purpose of this letter is to document our use of general aviation to support our business operations in Portage.

Cardinal FG began operations in Portage in 1996. Since then we have consistently provided almost 200,000 tons of glass per year to our customers in the Upper Midwest and Canada. We employ nearly 230 people from the surrounding area and have invested over $200,000,000 in our facility here in Portage including recent additions to our warehouse and improved pollution control equipment. With seven other Cardinal facilities within one hour of our location we have a long term commitment to the city of Portage.

The use of general aviation allows us to save time as we travel to customer and vendor locations or to other Cardinal facilities primarily throughout the Midwest with occasional flights to North Carolina and Oklahoma. Our customers appreciate the convenience of using local airports and saving time over commercial air travel.

We are currently operating Cessna Citation Excels and Sovereign jets and utilizing both Dane County Regional Airport and Baraboo-Wisconsin Dells Airport with approximately 25 takeoffs and landings per year.

We anticipate that our use in local airports will remain consistent over the next five years. We will be replacing our older Cessna Citation Excel with Cessna Citation Sovereign jets for enhanced range and capacity.

Our general aviation operations require runway lengths of at least 5000 feet and the availability of Jet-A fuel.

Our business would utilize the Portage Municipal Airport if it were upgraded to meet our airport facility needs.

Please contact me at (608) 742-1966 or bjonet@cardinalcorp.com with any questions.

Sincerely,

Bruce Jonet
Plant Manager
Cardinal FG

Stevenson S & L Liegel COMPANIES

2651 Kirking Court Portage, WI 53901 - Phone: 1(608)742-2893 - Fax: 1(608)742-2903

Mr. Aaron Jahncke
Director of Public Works
City of Portage
115 West Pleasant Street
Portage, WI 53901

RE: Portage Municipal Airport
Airport Master Plan Study

Dear Aaron:

The purpose of this letter is to document our use of general aviation to support our business operations in Portage.

We currently use the Portage airport, when weather permits, for chartering flights. We own 33 Culver's restaurants in 4 states and employ 1900 team members. We plan on expanding our franchise business by 10-15% a year for the foreseeable future. In order to accomplish these goals, we've set up our own aviation department. In order to reach our destinations across the country, without refueling, we needed a midsize aircraft for our missions. We have purchased a Hawker 900 xp. It is impossible to base this aircraft in the city where our corporate headquarters is located and we live, because of the runway restraints. We have no choice but to base our operations in Baraboo, WI. The Baraboo airport's runway is 5000 feet and wider than Portage's.

With our new flight department, we plan on flying 200-250 hours per year. These figures may increase as time goes on.

If the Portage, WI airport was to ever expand their runway, we would strongly consider moving our operations to be based out of Portage, WI. It would be much closer to our corporate headquarters and homes. The time savings and ease of use would be worth the move.

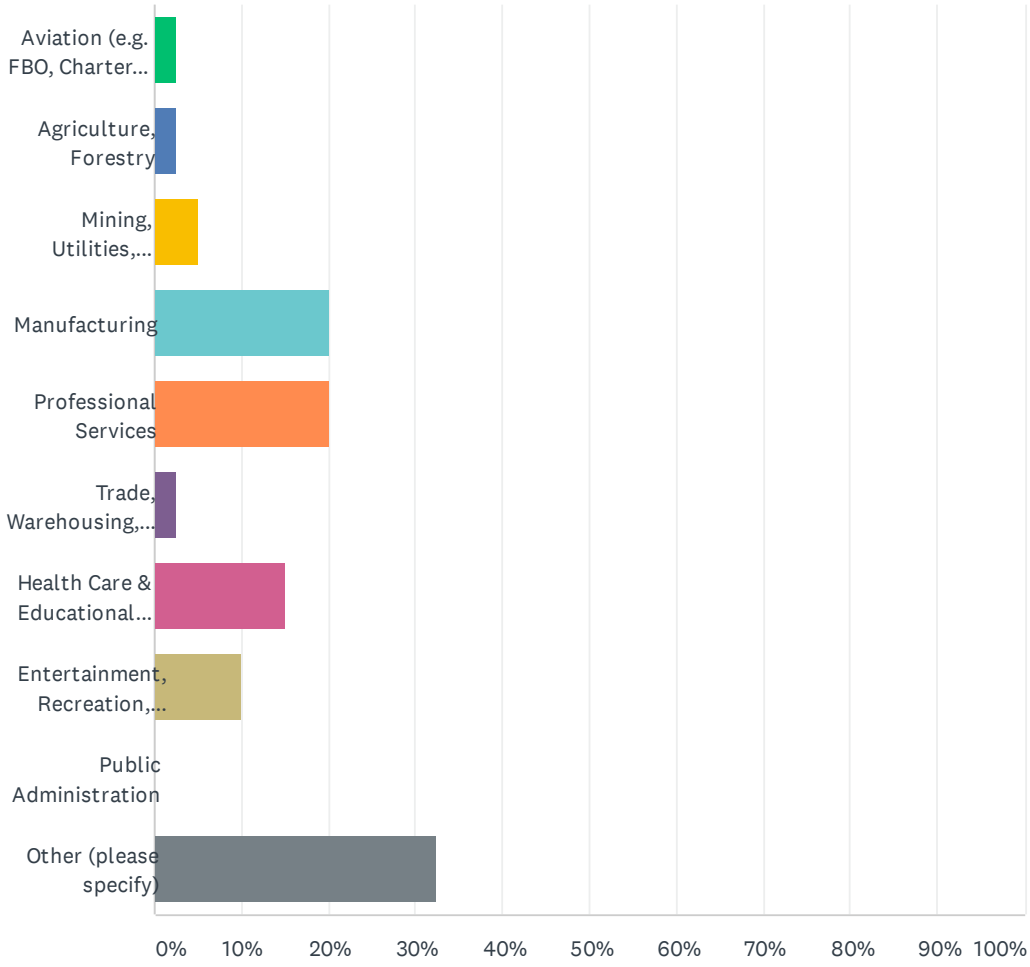
Please contact me at 609-697-1101 with any questions.

Sincerely,

Jeffrey J Liegel
S & L Companies
2651 Kirking Ct
Portage, WI 53901
608-742-2893 x 205

Q2 Please indicate your business industry type (check all that apply)

Answered: 40 Skipped: 6



ANSWER CHOICES	RESPONSES	
Aviation (e.g. FBO, Charter Services, Mechanic, Flight Instruction)	2.50%	1
Agriculture, Forestry	2.50%	1
Mining, Utilities, Construction	5.00%	2
Manufacturing	20.00%	8
Professional Services	20.00%	8
Trade, Warehousing, Transportation	2.50%	1
Health Care & Educational Services	15.00%	6
Entertainment, Recreation, Accommodations	10.00%	4
Public Administration	0.00%	0
Other (please specify)	32.50%	13
Total Respondents: 40		

#	OTHER (PLEASE SPECIFY)	DATE
1	Collection Agency	11/14/2018 3:25 PM
2	Grocery	11/14/2018 10:13 AM
3	Drive line and Transmission Repair on cars and Trucks	11/12/2018 1:44 PM
4	Restaurant Bar	11/11/2018 8:31 AM
5	retail	11/10/2018 10:57 AM
6	reatial store	11/9/2018 5:46 PM
7	Fraternity	11/9/2018 10:55 AM
8	BANKING/FINANCE	11/9/2018 10:35 AM
9	Non-Profit, Therapeutic Horseback Riding	11/9/2018 9:11 AM
10	Travel Agent	11/9/2018 8:52 AM
11	Petroleum Distribution	11/9/2018 8:50 AM
12	Retail	11/9/2018 8:43 AM
13	Culver's restaurant franchisee	11/8/2018 11:37 AM

Q3 Please describe your business operations in the Portage area (e.g. location, business type, employees, etc.)

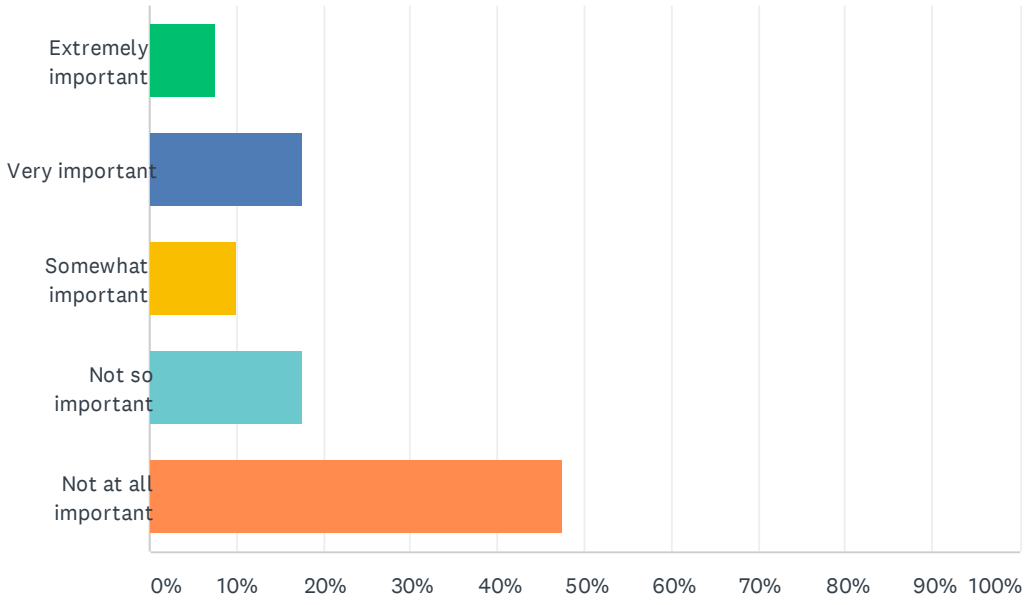
Answered: 40 Skipped: 6

#	RESPONSES	DATE
1	Hunting and Fishing Guide	2/14/2019 7:20 PM
2	MFLLC operation (Mathaire Field) operates at the east side of Columbia County	12/3/2018 11:13 AM
3	The SG Portage site manufactures silicone and plastic components for the medical industry.	11/19/2018 5:07 PM
4	2425 Airport Rd 14 employees	11/14/2018 3:25 PM
5	Operate grocery stores throughout WI. including Portage.	11/14/2018 10:13 AM
6	Oldest Manufacturer in the city of Portage and maybe the county.	11/13/2018 6:02 PM
7	Consulting engineering to municipal and private clients; municipal building inspection services; surveying; grants/funding. 50+ employees. Based out of Portage, WI.	11/12/2018 7:23 PM
8	Located behind airport next to I39, manufacturing Hearing Aid Batteries with approximately 210 employees over 3 shifts Monday through Friday.	11/12/2018 1:47 PM
9	north side of portage Automotive specialty transmission and drive line repair 2 employees	11/12/2018 1:44 PM
10	Health care	11/12/2018 11:39 AM
11	Glass manufacturing.	11/12/2018 10:39 AM
12	General Dentistry	11/12/2018 10:37 AM
13	North side of Portage, Banking, 10 employees	11/12/2018 9:56 AM
14	Glass Printing	11/12/2018 8:37 AM
15	Law firm in downtown Portage with approximately 10 employees.	11/12/2018 8:18 AM
16	Curling Club	11/11/2018 8:45 PM
17	1207 Dunn St. Bar/restaurant. 12 employees	11/11/2018 8:31 AM
18	N/A	11/10/2018 8:33 PM
19	womens clothing boutique	11/10/2018 10:57 AM
20	5 employees, we teach classes, sell bead related items	11/9/2018 5:46 PM
21	225 employees manufacturing flat glass in Portage WI	11/9/2018 2:31 PM
22	Manufacturer of Animal/AG stock tanks 15-20 employees	11/9/2018 2:22 PM
23	We are a stone's throw from the airport on Silver Lake Drive. We are a professional engineering consultant that has approximately 50 employees.	11/9/2018 11:30 AM
24	Town of Caledonia, Ski Resort. 500 employees and volunteers	11/9/2018 11:24 AM
25	insurance in downtown portage, 4 employees	11/9/2018 11:21 AM
26	The Independent Order of Odd Fellows (IOOF) is a non-political and non-sectarian international fraternal order of Odd Fellowship. The order is also known as the Triple Link Fraternity, referring to the order's "Triple Links" symbol, alluding to its motto "Friendship, Love and Truth"	11/9/2018 10:55 AM
27	Insurance Sales	11/9/2018 10:42 AM
28	BANKING/FINANCE	11/9/2018 10:35 AM
29	UW Health Primary and Specialty Clinic. Employees include Physicians, Physician	11/9/2018 9:30 AM

	Assistants, Registered Nurses, Medical Assistants, Schedulers	
30	Thereapeutic Horseback Riding for disabled and special-needs children and adults.	11/9/2018 9:11 AM
31	Down town Portage, Free Spirit Travel, 2 employees	11/9/2018 8:52 AM
32	I distribute refined crude products as well as propane. I also own gasoline retail locations. I also sell 100 LL Av Gas to the airport in Portage.	11/9/2018 8:50 AM
33	Title Insurance Company	11/9/2018 8:48 AM
34	Children's toys, puzzles, books. I own my own business at The Mercantile, no other employees.	11/9/2018 8:43 AM
35	50 employees, one location, plumbing contractor	11/9/2018 8:05 AM
36	Accounting Firm with around 15 employees	11/9/2018 8:01 AM
37	Hotel with about 20 employees	11/9/2018 7:39 AM
38	Assisted Living	11/9/2018 7:36 AM
39	We currently operate 33 Culver's restaurants in four states. We have 2000 team members and our corporate headquarters are located in Portage, WI	11/8/2018 11:37 AM
40	We are a precast concrete manufacturer	11/8/2018 10:17 AM

Q4 How important is the location of a general aviation airport to your business or customers?

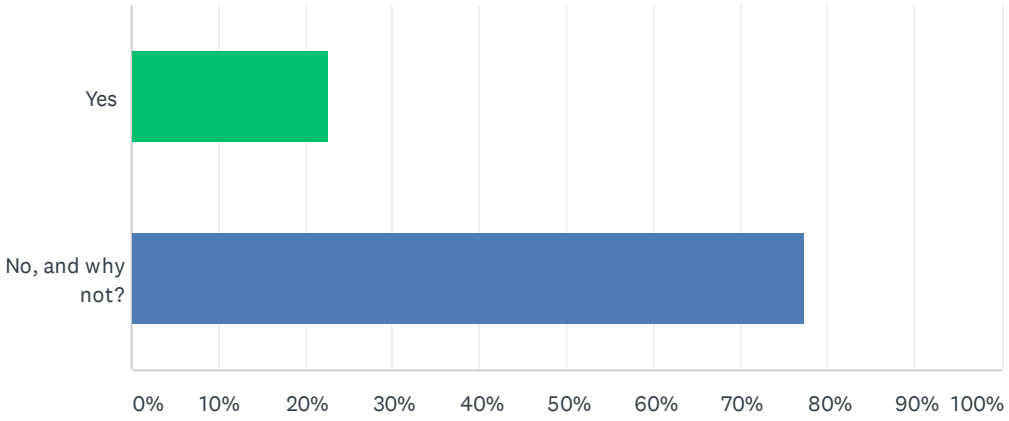
Answered: 40 Skipped: 6



ANSWER CHOICES	RESPONSES	
Extremely important	7.50%	3
Very important	17.50%	7
Somewhat important	10.00%	4
Not so important	17.50%	7
Not at all important	47.50%	19
TOTAL		40

Q5 Does your company use or intend to use non-airline, general aviation to support business operations? Examples include air charter and air cargo.

Answered: 40 Skipped: 6



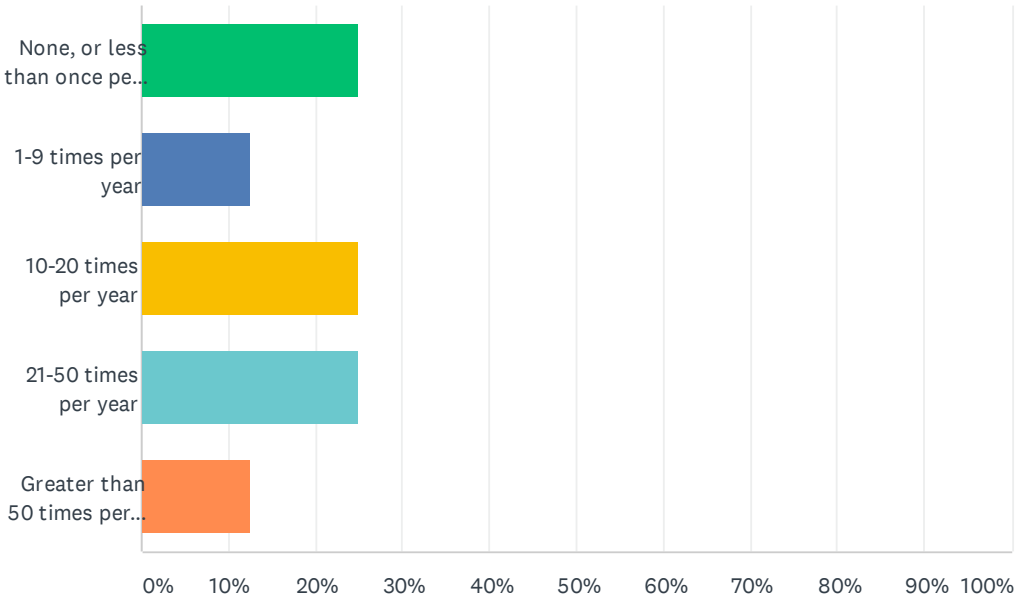
ANSWER CHOICES	RESPONSES	
Yes	22.50%	9
No, and why not?	77.50%	31
TOTAL		40

#	NO, AND WHY NOT?	DATE
1	We are a small private general aviation airport, that occasionally serves small business aircraft, and regularly serves skydiving operations.	12/3/2018 11:13 AM
2	We use commercial airlines for people travel and commercial carriers for shipment.	11/19/2018 5:07 PM
3	No need	11/14/2018 3:25 PM
4	It is not a necessary part of our operations.	11/12/2018 7:23 PM
5	N/A	11/12/2018 1:47 PM
6	we are an automotive shop	11/12/2018 1:44 PM
7	MedFlight used to transport critical patients to other hospitals.	11/12/2018 11:39 AM
8	No Need	11/12/2018 10:37 AM
9	Community Banking, no airport required for current customers to bank with us.	11/12/2018 9:56 AM
10	Nothing to comment on	11/12/2018 8:37 AM
11	Not part of our business plan or model.	11/12/2018 8:18 AM
12	No need	11/11/2018 8:31 AM
13	dont need it	11/10/2018 10:57 AM
14	I do not need that type of shipping	11/9/2018 5:46 PM
15	No need for these services	11/9/2018 2:22 PM
16	We don't have clients that need to get here by plane nor do we produce a product that needs to be sent by plane.	11/9/2018 11:30 AM
17	Though we have occasionally had skiers use the airport to visit Cascade Mountain we do not	11/9/2018 11:24 AM

	use specifically use it for our purposes.	
18	our business doesn't have a need for this service	11/9/2018 11:21 AM
19	We would love to see commercial flights at our airport. The Airport is not used enough. Airplanes and Flying is a cost that is above most Portage residents heads. If a Program could be created to give access to Airplanes, ultralights, helicopters to the people of Portage, that would cause a lot more use of the Airport. 1 of our members are a pilot and another member is learning how to fly via EAA or Portage. IOOF, support the EAA programs of free ground school for the community.	11/9/2018 10:55 AM
20	Our business doesn't involve any type of aviation.	11/9/2018 10:42 AM
21	N/A	11/9/2018 10:35 AM
22	Indirectly impact UW Health Clinic with respect to our patients - the local airport has often been used as for Medflight purposes, when they have been unable to land at the hospital. Ambulance has transported patients to the airport to get them to the helicopter. Though these patients would originate from the hospital, they could still be patients with a UW Primary or Specialty Physician in Portage.	11/9/2018 9:30 AM
23	Not needed.	11/9/2018 9:11 AM
24	our clients fly out of Madison or Milw or Chicago airport	11/9/2018 8:52 AM
25	I do not have any clients or suppliers that require the need.	11/9/2018 8:50 AM
26	not applicable	11/9/2018 8:48 AM
27	I have all deliveries made by UPS, Fed-X or the postal services.	11/9/2018 8:43 AM
28	This isn't something our business has a need for.	11/9/2018 8:05 AM
29	We are professional service company so we do not need it	11/9/2018 8:01 AM
30	We do not but there are businesses that come to the area that use it.	11/9/2018 7:39 AM
31	The owner of our company flies into the airport on business visits.	11/9/2018 7:36 AM

Q6 On average, how many annual business trips does your company make or intend to make using general aviation?

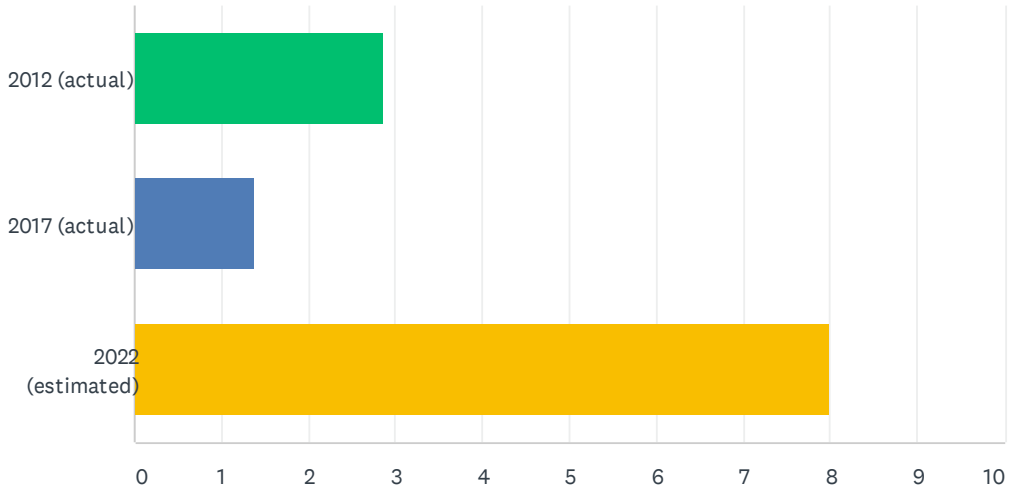
Answered: 8 Skipped: 38



ANSWER CHOICES	RESPONSES	
None, or less than once per year	25.00%	2
1-9 times per year	12.50%	1
10-20 times per year	25.00%	2
21-50 times per year	25.00%	2
Greater than 50 times per year	12.50%	1
TOTAL		8

Q7 How many average monthly takeoffs and landings does your business perform for general aviation at Portage area airports?

Answered: 8 Skipped: 38



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
2012 (actual)	3	23	8
2017 (actual)	1	11	8
2022 (estimated)	8	64	8
Total Respondents: 8			

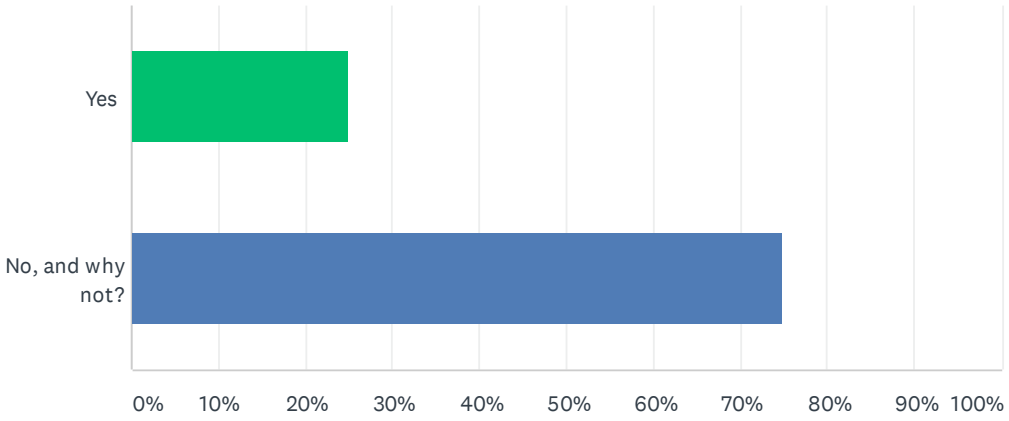
#	2012 (ACTUAL)	DATE
1	0	2/14/2019 7:25 PM
2	0	11/14/2018 10:18 AM
3	10	11/13/2018 6:13 PM
4	10	11/12/2018 10:45 AM
5	0	11/11/2018 8:47 PM
6	0	11/9/2018 2:33 PM
7	2	11/8/2018 11:42 AM
8	1	11/8/2018 10:32 AM
#	2017 (ACTUAL)	DATE
1	0	2/14/2019 7:25 PM
2	5	11/14/2018 10:18 AM
3	0	11/13/2018 6:13 PM
4	0	11/12/2018 10:45 AM
5	0	11/11/2018 8:47 PM
6	0	11/9/2018 2:33 PM

7	4	11/8/2018 11:42 AM
8	2	11/8/2018 10:32 AM

#	2022 (ESTIMATED)	DATE
1	0	2/14/2019 7:25 PM
2	10	11/14/2018 10:18 AM
3	0	11/13/2018 6:13 PM
4	0	11/12/2018 10:45 AM
5	0	11/11/2018 8:47 PM
6	0	11/9/2018 2:33 PM
7	50	11/8/2018 11:42 AM
8	4	11/8/2018 10:32 AM

Q8 Does your company use or intend to use the Portage Municipal Airport for general aviation activities?

Answered: 8 Skipped: 38

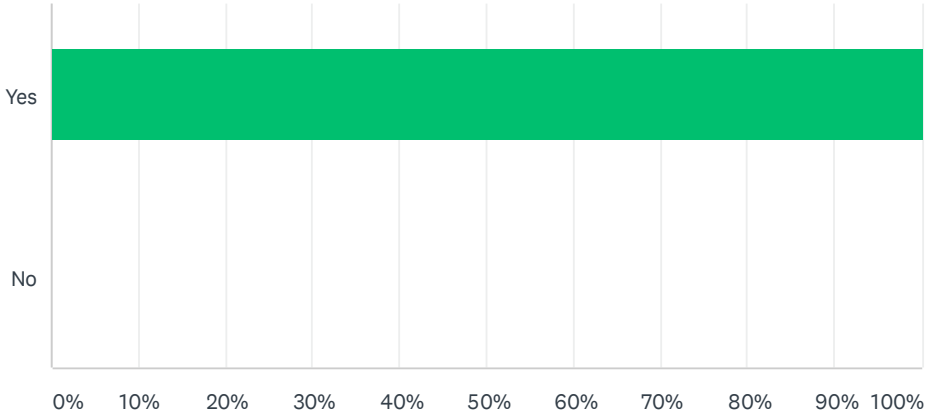


ANSWER CHOICES	RESPONSES	
Yes	25.00%	2
No, and why not?	75.00%	6
TOTAL		8

#	NO, AND WHY NOT?	DATE
1	Runway to short	2/14/2019 7:25 PM
2	Runway is too short for our type of aircraft.	11/14/2018 10:18 AM
3	The runway is too short.	11/12/2018 10:45 AM
4	We do not travel for club business	11/11/2018 8:47 PM
5	runway is too short for our jets	11/9/2018 2:33 PM
6	Runway is not long enough. We are in the process of acquiring a jet and we'll have to keep it at the Baraboo airport because of the runway length.	11/8/2018 11:42 AM

Q9 Does your company use or intend to use an airport other than the Portage Municipal Airport to support local general aviation activities?

Answered: 8 Skipped: 38

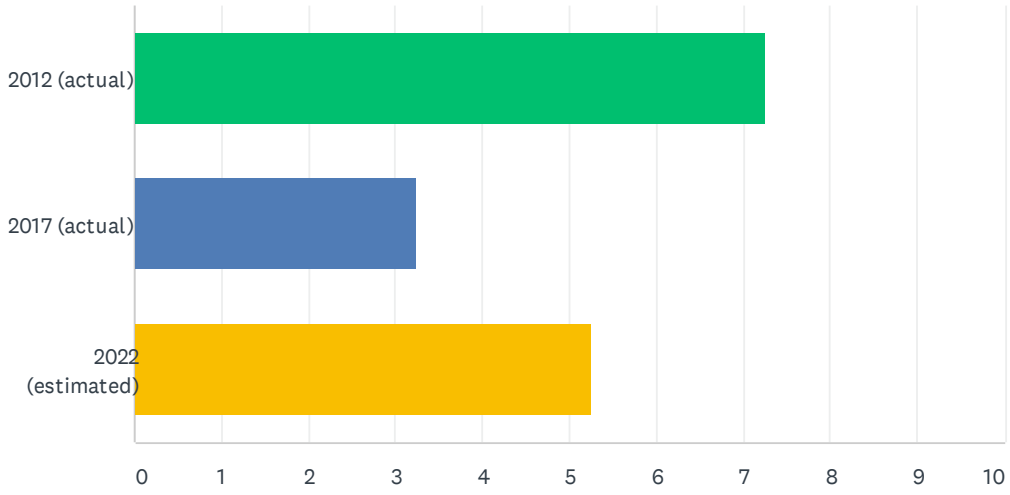


ANSWER CHOICES	RESPONSES	
Yes	100.00%	8
No	0.00%	0
TOTAL		8

#	IF YES, WHICH AIRPORT DO YOU USE?	DATE
1	Baraboo- Dells or Central Wis	2/14/2019 7:25 PM
2	Baraboo/Dells and Madison WI	11/14/2018 10:18 AM
3	Baraboo and Madison	11/12/2018 10:45 AM
4	if Portage cannot be used, they would use Baraboo.	11/11/2018 8:47 PM
5	Baraboo-Dells, Madison	11/9/2018 2:33 PM
6	Baraboo, WI DLL	11/8/2018 11:42 AM
7	Baraboo/Dells	11/8/2018 10:32 AM

Q10 What percentage of your operations are or will be performed at the Portage Municipal Airport?

Answered: 8 Skipped: 38



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
2012 (actual)	7	58	8
2017 (actual)	3	26	8
2022 (estimated)	5	42	8
Total Respondents: 8			

#	2012 (ACTUAL)	DATE
1	0	2/14/2019 7:25 PM
2	0	11/14/2018 10:18 AM
3	12	11/13/2018 6:13 PM
4	25	11/12/2018 10:45 AM
5	0	11/11/2018 8:47 PM
6	0	11/9/2018 2:33 PM
7	1	11/8/2018 11:42 AM
8	20	11/8/2018 10:32 AM

#	2017 (ACTUAL)	DATE
1	0	2/14/2019 7:25 PM
2	0	11/14/2018 10:18 AM
3	5	11/13/2018 6:13 PM
4	0	11/12/2018 10:45 AM
5	0	11/11/2018 8:47 PM
6	0	11/9/2018 2:33 PM

7	1	11/8/2018 11:42 AM
8	20	11/8/2018 10:32 AM

#	2022 (ESTIMATED)	DATE
1	0	2/14/2019 7:25 PM
2	0	11/14/2018 10:18 AM
3	5	11/13/2018 6:13 PM
4	0	11/12/2018 10:45 AM
5	0	11/11/2018 8:47 PM
6	0	11/9/2018 2:33 PM
7	2	11/8/2018 11:42 AM
8	35	11/8/2018 10:32 AM

Q11 What aircraft types (make & model) are or will be used for your airport operations?

Answered: 8 Skipped: 38

ANSWER CHOICES	RESPONSES	
Aircraft #1	100.00%	8
Aircraft #2	75.00%	6
Aircraft #3	50.00%	4

#	AIRCRAFT #1	DATE
1	jets	2/14/2019 7:25 PM
2	Bombardier Challenger 300	11/14/2018 10:18 AM
3	Single Engine	11/13/2018 6:13 PM
4	Citation Excel	11/12/2018 10:45 AM
5	0	11/11/2018 8:47 PM
6	Cessna Citation	11/9/2018 2:33 PM
7	King Air 350I	11/8/2018 11:42 AM
8	Cessna 182	11/8/2018 10:32 AM
#	AIRCRAFT #2	DATE
1	Twin Engine	11/13/2018 6:13 PM
2	Citation Sovereign	11/12/2018 10:45 AM
3	0	11/11/2018 8:47 PM
4	Cessna Sovereign	11/9/2018 2:33 PM
5	Hawker 900 XP	11/8/2018 11:42 AM
6	Cessna 182	11/8/2018 10:32 AM
#	AIRCRAFT #3	DATE
1	If necessary Jet.	11/13/2018 6:13 PM
2	0	11/11/2018 8:47 PM
3	Cessna Encore+	11/8/2018 11:42 AM
4	Cessna 183 However looking to upgrade to a 206	11/8/2018 10:32 AM

Q12 What are your top 3 airport destinations from the Portage area?

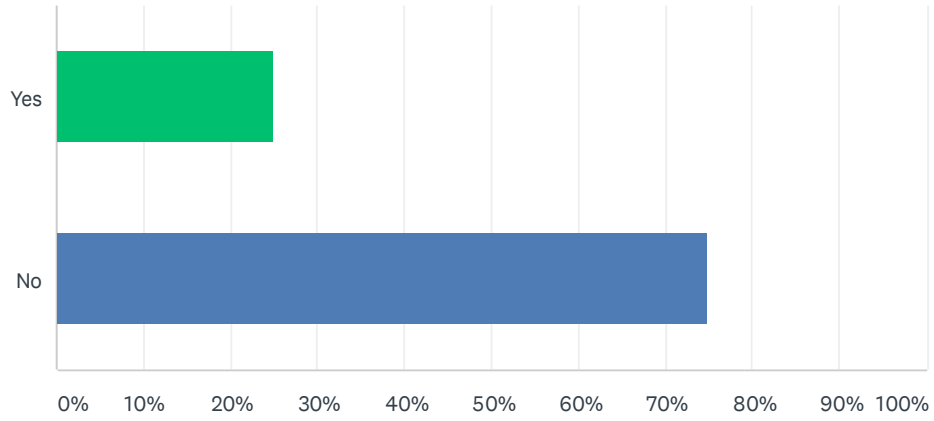
Answered: 8 Skipped: 38

ANSWER CHOICES	RESPONSES	
Destination #1	100.00%	8
Destination #2	87.50%	7
Destination #3	62.50%	5

#	DESTINATION #1	DATE
1	southen states	2/14/2019 7:25 PM
2	Madison	11/14/2018 10:18 AM
3	Various	11/13/2018 6:13 PM
4	Flying Cloud - MN	11/12/2018 10:45 AM
5	0	11/11/2018 8:47 PM
6	not used	11/9/2018 2:33 PM
7	Fort Myers, FL - Page Field	11/8/2018 11:42 AM
8	Red Wing, MN	11/8/2018 10:32 AM
#	**DESTINATION #2**	**DATE**
1	Ill	2/14/2019 7:25 PM
2	Baraboo Dells	11/14/2018 10:18 AM
3	Durant, OK	11/12/2018 10:45 AM
4	0	11/11/2018 8:47 PM
5	not used	11/9/2018 2:33 PM
6	Holland, MI	11/8/2018 11:42 AM
7	East Alton, IL	11/8/2018 10:32 AM
#	**DESTINATION #3**	**DATE**
1	Tumwater, WA	11/12/2018 10:45 AM
2	0	11/11/2018 8:47 PM
3	not used	11/9/2018 2:33 PM
4	Indianapolis, IN	11/8/2018 11:42 AM
5	Indianapolis, IN	11/8/2018 10:32 AM

Q13 Would your business be affected if it did not have access to the Portage Municipal Airport?

Answered: 8 Skipped: 38



ANSWER CHOICES	RESPONSES	
Yes	25.00%	2
No	75.00%	6
TOTAL		8

#	IF YES, PLEASE SPECIFY HOW YOUR BUSINESS WOULD BE AFFECTED:	DATE
1	We just use other are airport as we have been doing for the past 24 years	2/14/2019 7:25 PM
2	Portage needs this for Portage to attract new business to Portage.	11/13/2018 6:13 PM
3	We would like to set up our operations at the Portage, WI airport but can't due to size.	11/8/2018 11:42 AM
4	I would have to land in Baraboo and get a ride down to Portage	11/8/2018 10:32 AM

Q14 What improvements, if any, do you feel are needed at the Portage Municipal Airport to support your business activities?

Answered: 32 Skipped: 14

#	RESPONSES	DATE
1	Longer runway	2/14/2019 7:26 PM
2	There are trees on the approaches that need to be trimmed or removed.	12/3/2018 11:13 AM
3	Our plant does not use the airport at this time.	11/19/2018 5:08 PM
4	None	11/14/2018 3:26 PM
5	Our aircraft operations require a minimum of 5000 ft. of runway.	11/14/2018 10:19 AM
6	Need to lengthen runways so jets can land.	11/13/2018 6:14 PM
7	An airport relocation would open up development in this area.	11/12/2018 7:24 PM
8	N/A	11/12/2018 1:47 PM
9	none	11/12/2018 1:44 PM
10	N/A	11/12/2018 11:40 AM
11	New airport	11/12/2018 10:45 AM
12	Expansion	11/12/2018 10:37 AM
13	No improvements needed for business or personal use	11/12/2018 9:57 AM
14	None. The airport does not impact our business activities.	11/12/2018 8:19 AM
15	The airport needs a lot of improvement. However will not affect my business.	11/11/2018 8:32 AM
16	airport has no bearing on my business	11/10/2018 10:57 AM
17	NA	11/9/2018 5:46 PM
18	N/A	11/9/2018 2:23 PM
19	We do not use the airport to support our business.	11/9/2018 11:31 AM
20	I do feel that private pilots would continue to use the airport to visit Portage and perhaps our business as an alternative mode of transportation.	11/9/2018 11:26 AM
21	I have no idea	11/9/2018 11:21 AM
22	please read last comment	11/9/2018 10:55 AM
23	Not sure, haven't ever been to it.	11/9/2018 10:43 AM
24	Safety improvements. Overhead power lines are always a safety hazard for helicopters. Current airport is in a part of the city that has realized growth. Would be nice to be able to relocate the airport to an area that would accomodate future growth. Future growth of the Industrial Park could mean an increased need for smaller company jets. Baraboo airport seems to get more of this type of business due to longer runways and the ability to accomodate other types of aircraft?? This is not related to my current business, but adding this in as a resident of Portage.	11/9/2018 9:43 AM
25	none	11/9/2018 8:52 AM
26	None for my business. But I think that if Portage was to ever be a viable airport like in Wautoma, it would need to be able to take on private jets. If you haven't seen Wautoma's airport, I highly recommend checking it out.	11/9/2018 8:51 AM

27	Not applicable. I do not depend on the airport to support my business in any way.	11/9/2018 8:45 AM
28	Our business doesn't use the airport.	11/9/2018 8:05 AM
29	bigger to accommodate bigger company aircraft	11/9/2018 7:41 AM
30	Availability of jet fuel.	11/9/2018 7:37 AM
31	6000+ foot runway. If a new airport was to be built we would move our operations to Portage!!	11/8/2018 11:43 AM
32	local weather (AWOS)	11/8/2018 10:35 AM

Q15 Please provide any feedback for the City of Portage to consider in the airport master plan study.

Answered: 21 Skipped: 25

#	RESPONSES	DATE
1	Portages' airport is adequate for our small general aviation aircraft. We would presume that heavier corporate aircraft may have other needs.	12/3/2018 11:14 AM
2	At one point (15 - 20 years ago) our previous owners had a corporate jet that used the airport. We have not had a plane for the last 15 years.	11/19/2018 5:09 PM
3	When I was a District Manager for Kmart, I would fly on our corporate jet which was a King Air jet. The current runway was barely long enough to accommodate this jet. In addition, one time when we were landing, we had to pull up and land again because of deer on the runway. For these 2 reasons, after that, I had to go to the Baraboo airport to meet the jet. So, from a corporate standpoint, the length of the runway and the potential for wildlife were major concerns.	11/14/2018 3:32 PM
4	Get something that will attract companies to come here. You already have the highways to get the finish good out of Portage.	11/13/2018 6:18 PM
5	The existing airport is essentially boxed in. An airport relocation would expand capabilities for businesses that utilize the airport services. The existing area could be developed into commercial/industrial property.	11/12/2018 7:29 PM
6	the city of portage has study this many times. and started bank in 1972 and can never came up with a plan.	11/12/2018 1:47 PM
7	The existing airport is inadequate. New location with a new airport would allow larger aircraft that need more runway to land.	11/12/2018 10:46 AM
8	None	11/12/2018 9:57 AM
9	Is there a cost associated with maintaining this for the tax payers?	11/12/2018 8:38 AM
10	Still a good idea for other businesses, attracting new businesses, improving the area, and generating new tax income from new hangers and business use.	11/11/2018 8:48 PM
11	We have been asked to hold/cater events in town. Unfortunately Portage does not have many venues that can accommodate large events. We have discussed the use of an airport hanger for such events but portage hangers aren't big enough to hold such events. Would be nice to see the multiple use as we have attended functions in hangers in other cities and it has proven to be a great venue spot.	11/11/2018 8:37 AM
12	I have none	11/9/2018 5:46 PM
13	I do not have any further comments to add.	11/9/2018 11:31 AM
14	if by making improvements, it means future growth, jobs and financial gain for our community, by all means, we need to consider all options.	11/9/2018 11:22 AM
15	Please see 2 comments ago.	11/9/2018 10:56 AM
16	Added in previous comments.	11/9/2018 9:44 AM
17	Do not move it out to Ft Winnibago like they wanted to do 30 years ago that is where I live	11/9/2018 8:53 AM
18	Please see response in Q6.	11/9/2018 8:51 AM
19	I think it is very important to companies who depend and utilize the airport. Shutting it down is making a statement and not a good one. It's saying we do not value your business and will do nothing to accomodate	11/9/2018 8:50 AM
20	Currently there are not hangers available to rent. The addition of new hangers to support airport	11/9/2018 7:39 AM

	use and growth.	
21	Thank you for keeping the airport open and available for our use.	11/8/2018 10:36 AM

APPENDIX D

AIRPORT PROPERTY DOCUMENTATION

PORTAGE MUNICIPAL AIRPORT

AIRPORT MASTER PLAN – PHASE 1

TKDA

CITY OF PORTAGE
115 West Pleasant Street
Portage, Wisconsin 53901
Telephone: (608) 742-2176 • Fax: (608) 742-8623

"Where the North Begins"

MEMORANDUM

To: Airport Commission
From: Aaron J. Jahncke, P.E., Director of Public Works/City Engineer
Subject: Cooper Survey
Date: June 22, 2017

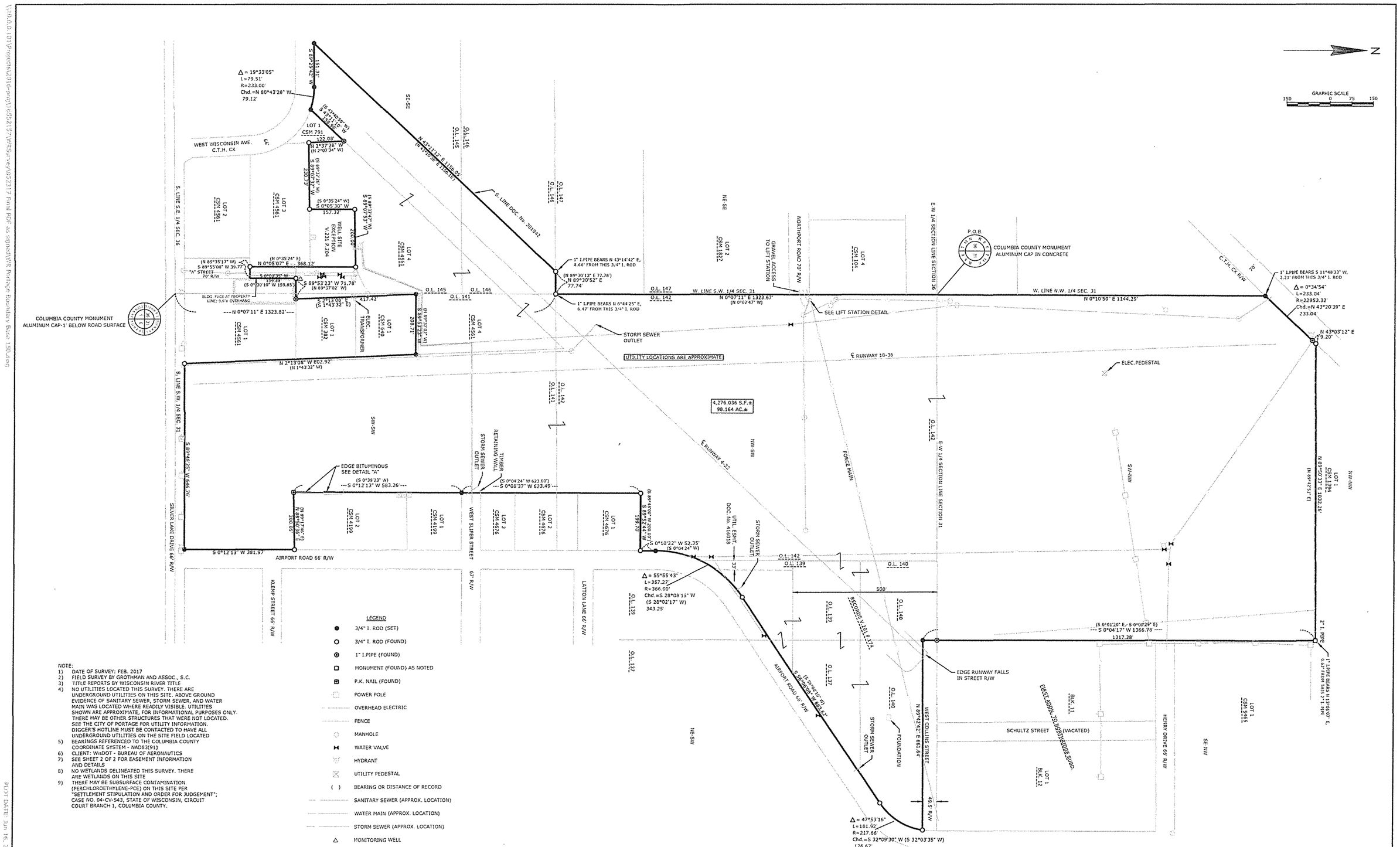
Background:
Attached to the memo are the final survey, quit claim deed, and 3 title report reviews. The final survey contains the entire airport property as was recommended by the Airport Commission this spring to include two additional parcels three and four. The quit claim deed transfers the property including city parcels three and four from the City to the City on behalf of the municipal airport. The three title reports show inconsistencies with the property in terms of easements but after meeting with Diann Danielson there is nothing of serious concern with any of our grant assurances. In the future the Airport Commission, Planning Commission and Common Council will have to determination in regards to the easements.

Fiscal Note:
Not Applicable

Recommendation:
It is the recommendation of staff that the Airport Commission recommends the survey and quit claim deed to Planning Commission. If the Planning Commission approves both the quit claim deed and survey it will go to Common Council for final approval prior to being recorded.

Aaron J. Jahncke
Director of Public Works/ City Engineer

Attachment
Survey
Quit Claim Deed
Title report and grant assurance



NOTE:
1) DATE OF SURVEY: FEB. 2017
2) FIELD SURVEY BY GROTHMAN AND ASSOC., S.C.
3) TITLE REPORTS BY WISCONSIN RIVER TITLE
4) NO UTILITIES LOCATED THIS SURVEY. THERE ARE UNDERGROUND UTILITIES ON THIS SITE. ABOVE GROUND EVIDENCE OF SANITARY SEWER, STORM SEWER, AND WATER MAIN WAS LOCATED WHERE READILY VISIBLE. UTILITIES SHOWN ARE APPROXIMATE, FOR INFORMATIONAL PURPOSES ONLY. THERE MAY BE OTHER STRUCTURES THAT WERE NOT LOCATED. SEE THE CITY OF PORTAGE FOR UTILITY INFORMATION. DIGGER'S HOTLINE MUST BE CONTACTED TO HAVE ALL UNDERGROUND UTILITIES ON THE SITE FIELD LOCATED
5) BEARINGS REFERENCED TO THE COLUMBIA COUNTY COORDINATE SYSTEM - NAD83(91)
6) CLIENT: WisDOT - BUREAU OF AERONAUTICS
7) SEE SHEET 2 OF 2 FOR EASEMENT INFORMATION AND DETAILS
8) NO WETLANDS DELINEATED THIS SURVEY. THERE ARE WETLANDS ON THIS SITE
9) THERE MAY BE SUBSURFACE CONTAMINATION (PERCHLOROETHYLENE-PCE) ON THIS SITE PER "SETTLEMENT STIPULATION AND ORDER FOR JUDGEMENT"; CASE NO. 04-CV-543, STATE OF WISCONSIN, CIRCUIT COURT BRANCH 1, COLUMBIA COUNTY.

NO.	BY	DATE	REVISIONS

CEC PROJECT NO. 16552157
DRAWN BY WR
ISSUE DATE
PROJECT MANAGER BV
CHECKED BY JN
APPROVED BY BV

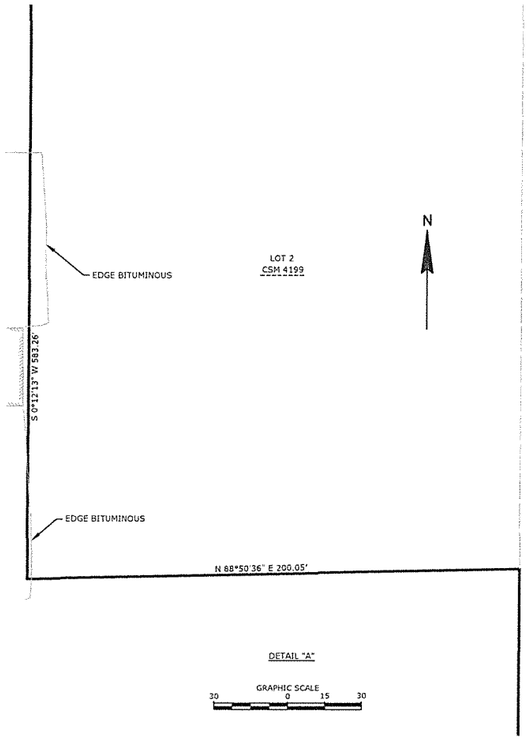
COOPER ENGINEERING
2600 COLLEGE DRIVE, P.O. BOX 230
RICE LAKE, WISCONSIN 54868-0230
TELEPHONE (715) 234-7008
FAX (715) 234-1025

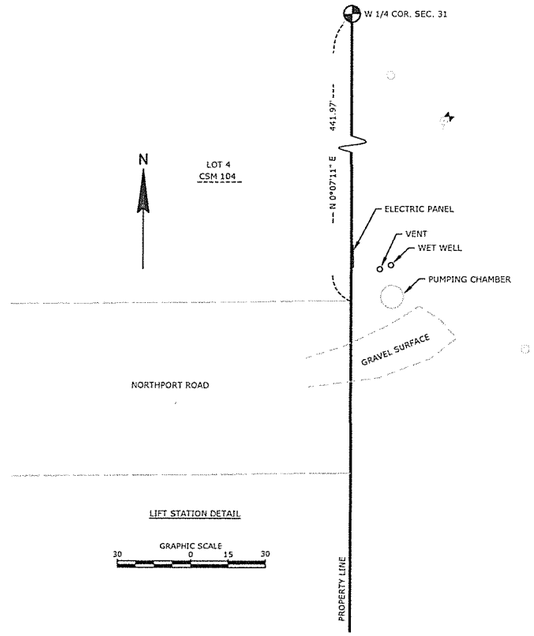
PORTAGE MUNICIPAL AIRPORT - C47

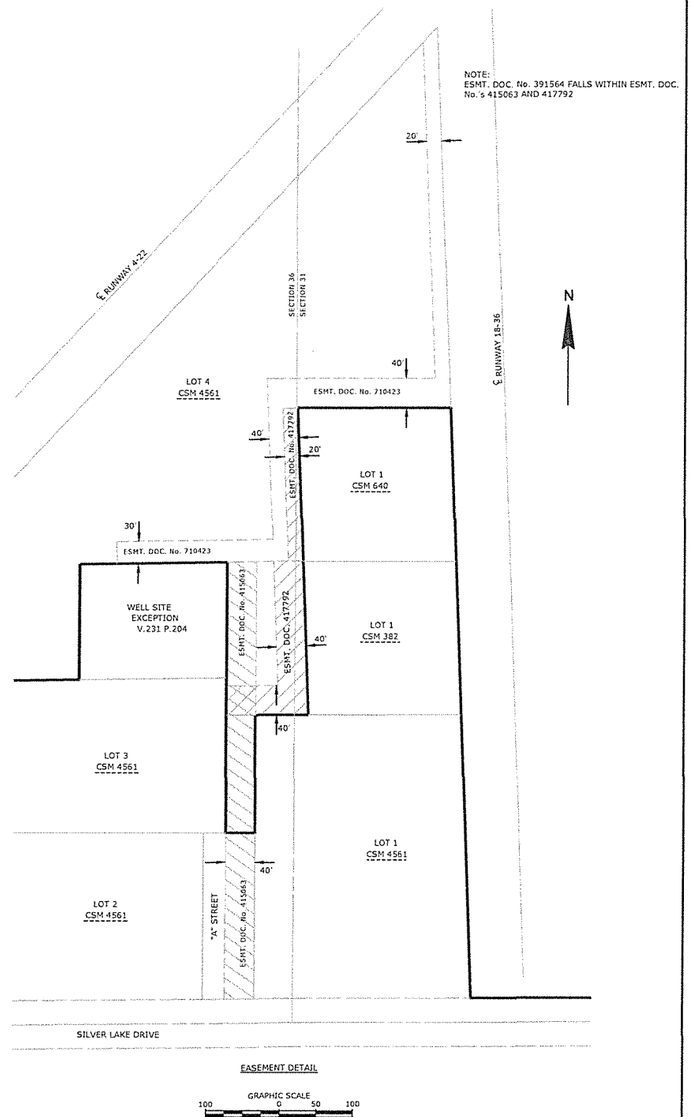
PORTAGE, WISCONSIN
MAP OF BOUNDARY SURVEY

5/23/17
SHEET 1 OF 2

\\10.0.10\Projects\2016\16552157\WIS\Survey\052317 Final PDF As Submitted\C Portage Boundary Base 150.dwg
PLOT DATE: Jun 16, 2017 - 07:20am







LEGAL DESCRIPTION

A parcel of land located in part of Outlots 140, 139, 137, 142, 141, 145, and 146, Assessor's Subdivision of Lands in the City of Portage, located in part of the SE-SE Section 36, T13N-R8E, and part of the SW-NW, NW-SW, SW-SW, and NE-SW, Section 31, T13N-R9E, City of Portage, Columbia County, Wisconsin, and more particularly described as follows:
Commencing at the west quarter corner of said Section 31, which is the Point of Beginning (P.O.B.);
Thence N 0°10'50" E along the west line of said SW-NW, 1144.29 feet to the southeasterly right of way of C.T.H. CX;
Thence along said right of way along the arc of a curve deflecting northerly that has a central angle of 0°34'54", a radius of 22953.32 feet, and a chord of 233.04 feet that bears N 43°20'39" E, 233.04 feet;
Thence N 43°03'12" E and continuing along said right of way, 9.20 feet to the north line of said SW-NW;
Thence N 89°50'33" E along said north line, 1032.26 feet to the northeast corner of said SW-NW;
Thence S 0°04'17" W along the east lines of said SW-NW and NW-SW, 1366.78 feet to the southwest corner of West Collins Street;
Thence N 89°42'42" E along the south right of way of West Collins Street, 661.64 feet to the westerly right of way of Airport Road;
Thence along said right of way along the arc of a curve deflecting northerly that has a central angle of 47°53'16", a radius of 217.66 feet, and a chord of 176.67 feet that bears S 32°09'30" W, 181.92 feet;
Thence S 56°06'08" W and continuing along said right of way, 863.62 feet;
Thence continuing along said right of way along the arc of a curve deflecting southerly that has a central angle of 55°55'43", a radius of 366.00 feet, and a chord of 343.25 feet that bears S 28°08'15" W, 357.27 feet;
Thence S 0°10'22" W and continuing along said right of way, 52.35 feet to the northeast corner of C.S.M. 4676;
Thence S 89°52'44" W along the north line of said C.S.M., 199.70 feet to the northwest corner of said C.S.M.;
Thence S 0°08'37" W along the west line of said C.S.M., and along the west right of way of West Slifer Street, 623.49 feet to the northwest corner of C.S.M. 4199;
Thence S 0°12'13" W along the west line of said C.S.M., 583.26 feet to the southwest corner of said C.S.M.;
Thence N 88°50'36" E along the south line of said C.S.M., 200.05 feet to the west right of way of Airport Road;
Thence S 0°12'13" W along said right of way, 381.97 feet to the north right of way of Silver Lake Drive;
Thence S 89°48'25" W along said right of way, 646.76 feet to the east line of Lot 1, C.S.M. 4561;
Thence N 2°13'08" W along said east line, and along the east lines of C.S.M. 382 and C.S.M. 640, 802.92 feet to the northeast corner of said C.S.M. 640;
Thence S 89°53'23" W along the north line of said C.S.M, 208.71 feet to the northwest corner of said C.S.M.;
Thence S 2°13'08" E along the west line of said C.S.M., and along the west line of C.S.M. 382, 417.42 feet to the southwest corner of said C.S.M. 382;
Thence S 89°53'23" W along the north line of Lot 1, C.S.M. 4561, 71.78 feet to the northwest corner of said Lot 1;
Thence S 0°00'35" W along the west line of said Lot 1, 159.88 feet;
Thence S 89°55'08" W along the south line of Lot 4, C.S.M. 4561, 39.77 feet to the southeast corner of Lot 3, C.S.M. 4561;
Thence N 0°05'07" E along the east line of said Lot 3, and along the east line of Records V.231 P.204, 368.12 feet to the northeast corner of said Records V.231 P.204;
Thence S 89°07'53" W along the north line of said Records V.231 P.204, 200.00 feet to the northwest corner of said Records V.231 P.204;
Thence S 0°05'30" W along the west line of said Records V.231 P.204, 157.32 feet to the north line of Lot 3, C.S.M. 4561;
Thence S 89°07'32" W along the north line of said Lot 3, 230.73 feet to the northwest corner of said Lot 3;
Thence N 2°37'28" W along the west line of Lot 4, C.S.M. 4561, 122.08 feet to the northerly line of said Lot 4;
Thence S 43°11'10" W along the northerly line of C.S.M. 791, 158.98 feet to the northerly right of way of C.T.H. CX;
Thence along said right of way along the arc of a curve deflecting southerly that has a central angle of 19°33'05", a radius of 233.00 feet, and a chord of 79.12 feet that bears N 80°43'28" W, 79.51 feet;
Thence S 89°29'42" W and continuing along said right of way, 151.31 feet to the southerly line of Document No. 301842;
Thence N 43°11'12" E along said southerly line, 1156.05 feet to the south line of Outlot 147;
Thence N 89°30'52" E along said south line, 77.74 feet to the southeast corner of said Outlot 147;
Thence N 0°07'11" E along the west line of said NW-SW of Section 31, 1323.67 feet to the P.O.B.

Said parcel contains 4,276,036 square feet (98.164 acres), more or less.

Said parcel subject to all easements, restrictions, and reservations of record.

I HEREBY CERTIFY THAT THIS SURVEY WAS PREPARED UNDER MY SUPERVISION, THAT IT COMPLIES WITH THE REQUIREMENTS OF CHAPTER AE-7 OF THE WISCONSIN ADMINISTRATIVE CODE, THAT IT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT I AM A WISCONSIN PROFESSIONAL LAND SURVEYOR.

SIGNED Wayne M. Rado S-1900

DATE

NO.	BY	DATE	REVISIONS

CEC PROJECT NO. 16552157
DRAWN BY WR
ISSUE DATE
PROJECT MANAGER BV
CHECKED BY JN
APPROVED BY BV

COOPER ENGINEERING
2600 COLLEGE DRIVE, P.O. BOX 230
RICE LAKE, WISCONSIN 54868-0230
TELEPHONE (715) 234-7008
FAX (715) 234-1025

PORTAGE MUNICIPAL AIRPORT - C47

PORTAGE, WISCONSIN

MAP OF BOUNDARY SURVEY

5/23/17

SHEET 2 OF 2

\\10.0.101\Projects\2016-proj\16552157\WRSurvey\052317 Final PDF as signed\WR Portage Boundary Base 150.dwg
PLOT DATE: Jun 16, 2017 - 07:26am

QUIT CLAIM DEED ***Preliminary 6/16/17

Wisconsin Department of Transportation - Aeronautics
Exempt from fee: s.77.25(12) Wis. Stats.
BOA 10/2012

THIS DEED, made by the City of Portage, **GRANTOR**, quit claims the property described below to the City of Portage on behalf of its Portage Municipal Airport, **GRANTEE**, for the sum of 1 dollar ($1.00).

This is not homestead property.

Property Description:

A parcel of land located in part of Outlots 140, 139, 137, 142, 141, 145, and 146, Assessor's Subdivision of Lands in the City of Portage, located in part of the SE-SE Section 36, T13N-R8E, and part of the SW-NW, NW-SW, SW-SW, and NE-SW, Section 31, T13N-R9E, City of Portage, Columbia County, Wisconsin, and more particularly described as follows:
Commencing at the west quarter corner of said Section 31, which is the Point of Beginning (P.O.B.);
Thence N 0°10'50" E along the west line of said SW-NW, 1144.29 feet to the southeasterly right of way of C.T.H. CX;
Thence along said right of way along the arc of a curve deflecting northerly that has a central angle of 0°34'54", a radius of 22953.32 feet, and a chord of 233.04 feet that bears N 43°20'39" E, 233.04 feet;
Thence N 43°03'12" E and continuing along said right of way, 9.20 feet to the north line of said SW-NW;
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corner of West Collins Street;
Thence N 89°42'42" E along the south right of way of West Collins Street, 661.64 feet to the westerly right of way of Airport Road;
Thence along said right of way along the arc of a curve deflecting northerly that has a central angle of 47°53'16", a radius of 217.66 feet, and a chord of 176.67 feet that bears S 32°09'30" W, 181.92 feet;
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Thence continuing along said right of way along the arc of a curve deflecting southerly that has a central angle of 55°55'43", a radius of 366.00 feet, and a chord of 343.25 feet that bears S 28°08'15" W, 357.27 feet;
Thence S 0°10'22" W and continuing along said right of way, 52.35 feet to the northeast corner of C.S.M. 4676;
Thence S 89°52'44" W along the north line of said C.S.M., 199.70 feet to the northwest corner of said C.S.M.;
Thence S 0°08'37" W along the west line of said C.S.M., and along the west right of way of West Slifer Street, 623.49 feet to the northwest corner of C.S.M. 4199;
Thence S 0°12'13" W along the west line of said C.S.M., 583.26 feet to the southwest corner of said C.S.M.;
Thence N 88°50'36" E along the south line of said C.S.M., 200.05 feet to the west right of way of Airport Road;
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Thence S 89°07'32" W along the north line of said Lot 3, 230.73 feet to the northwest corner of said Lot 3;
Thence N 2°37'28" W along the west line of Lot 4, C.S.M. 4561, 122.08 feet to the northerly line of said Lot 4;
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Thence S 89°29'42" W and continuing along said right of way, 151.31 feet to the southerly line of Document No. 301842;
Thence N 43°11'12" E along said southerly line, 1156.05 feet to the south line of Outlot 147;

This space is reserved for recording data

Return to:

Cooper Engineering Co., Inc.
2600 College Drive, PO Box 230
Rice Lake, WI 54868

Parcel Identification Number/Tax Key Number
11271-2709, 11271-2517.11, 11271-2514, 11271-2512.30, 11271-2517.05, 11271-2517.A, 11271-2525.04, 11271-2523.1

Airport Portage Municipal Airport
Project Sponsor

This instrument was drafted by:
Cooper Engineering Co., Inc./Wayne Rado

Parcel No. Parcel #1

Thence N 89°30'52" E along said south line, 77.74 feet to the southeast corner of said Outlot 147;
Thence N 0°07'11" E along the west line of said NW-SW of Section 31, 1323.67 feet to the P.O.B.

This document describes property comprising the Portage Municipal Airport. The airport owner is obligated to preserve airport property in accordance with state and federal grant assurances. Obligated airport property interests may not be sold or used for non-aeronautical purposes without prior written release approval by WisDOT Bureau of Aeronautics and the Federal Aviation Administration.

Dated this _____ day of June, 2017.

CITY OF PORTAGE

BY:_____
* **RICK DODD,** Mayor

BY: _____
* **MARIE A. MOE,** City Clerk

ACKNOWLEDGMENT

STATE OF WISCONSIN)
(ss
COUNTY OF COLUMBIA)

Personally came before me this _____ day of June, 2017, the above named Rick Dodd, Mayor and Marie A. Moe, City Clerk of the above named municipal corporation, to me known to be persons who executed the foregoing instrument, and to me known to be such Mayor and City Clerk of said municipal corporation, and acknowledge that they executed the foregoing instrument as such officers as the deed of said corporation, by its authority.

_____
signature
type or print name _____
Notary Public, Columbia County, WI
My commission is permanent. (If not, state expiration date: _____, _____.)

*Names of persons signing in any capacity should be typed or printed below their signatures.

Grant Assurance vs. Title Report Review

Portage Municipal Airport (C47), Portage, WI

June 5, 2017

Wisconsin River Title Parcel Reference #: 216123189

Wayne Rado, PLS/Brad Volker, PE

1) Parcel Footprint – refer to Attachment 1
2) Grant Assurance Items of Interest:
   a) State of Wisconsin, Circuit Court Branch 1, Columbia County, Case No. 04-CV-543, "Settlement Stipulation and Order for Judgement" and "Judgment" filed 11/8/2005.
      i) State of Wisconsin, Plaintiff v. Portage Airport Property, LLC, and Gerald E. Mael, Defendants
      ii) Approximate area affected: Lots 2, 3, and 4, C.S.M. #4536 – refer to Attachment 1
      iii) Summary/Comments: Plaintiff brought this civil enforcement action against defendants alleging violations of Wisconsin's hazardous substance spills law as regards the locating and monitoring of a subsurface perchloroethylene ("PCE") plume. There are several monitoring wells in the vicinity.
      iv) Recommended action: Review this case with Sponsor. Sponsor may wish to determine status of enforcement action. FAA will not participate in clean-up costs and expects sponsors to acquire "clean land".
   b) Right of way Easement, V.231 P.204, Doc. #415063 recorded 5/18/81
      i) Grantor: Robert A. Mael; Grantee: City of Portage
      ii) Approximate footprint of easement – refer to Attachment 2
      iii) Summary/Comments: This easement was created for the installation of water main to/from a well site, and possibly for the installation of other utility lines.
      iv) Recommended action: Review this easement (and existing utility locations) with Sponsor.
   c) Ingress/egress Easement, V.236 P.277, Doc. #417792 recorded 11/2/81
      i) Grantor: Robert A. Mael; Grantee: Fall River Foundry Company
      ii) Approximate footprint of easement – refer to Attachment 3
      iii) Summary/Comments: This easement was created for the installation of utility services and ingress/egress to the lands described in V.236 P.277

iv) Recommended action: Review this easement (and existing utility locations) with Sponsor.

d) Utility Easement Agreement, Document #710423 recorded 5/19/04

i) Grantor: Portage Airport Property, LLC; Grantee: City of Portage

ii) Approximate footprint of easement – refer to Attachment 4

iii) Summary/Comments: This easement was created for the installation of water main, storm sewer, and ingress/egress across the owner's property

iv) Recommended action: Review this easement (and existing utility locations) with Sponsor

e) Warranty deed (with life estate reserved), Document #745263 recorded 3/29/06

i) Grantor: Portage Airport Property, LLC; Grantee: City of Portage

ii) Approximate footprint of life estate: Lot 3 C.S.M. 4536; refer to Attachment 1

iii) Summary/Comments: Life Estate to Lot 3 reserved for the duration of the lives of both Gerald E. and Joyce Mael. Document #745263 also references Columbia County Case No. 04-CV-543 (referenced above in item 2 a)

iv) Recommended action: Review details of Life Estate and Case No. 04-CV-543 with Sponsor.

f) Easement, V.185 P.120, Document #391564, recorded 12/6/77

i) Grantors: Robert A. Mael and Norman O. Sauey Jr.; Grantee: Wisconsin Power and Light Company

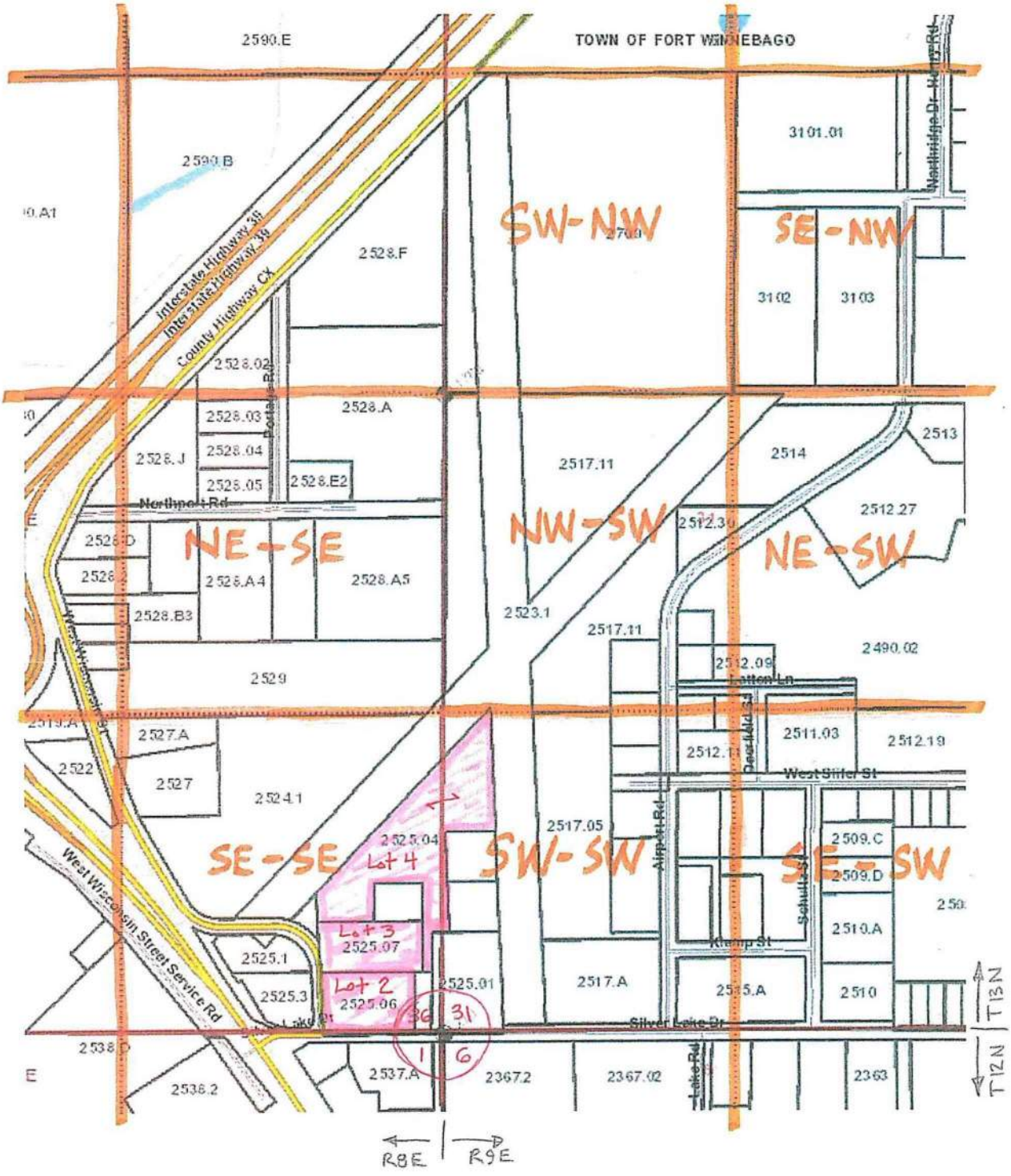
ii) Approximate footprint of easement – refer to Attachments 1 and 2

iii) Summary/Comments: This easement was created for the installation of underground electrical utilities and above-ground equipment as necessary, and falls within Document #415063 and Document #417792 (referenced above in item 2 b) and 2 c))

iv) Recommended action: Review this easement (and existing utility locations) with Sponsor

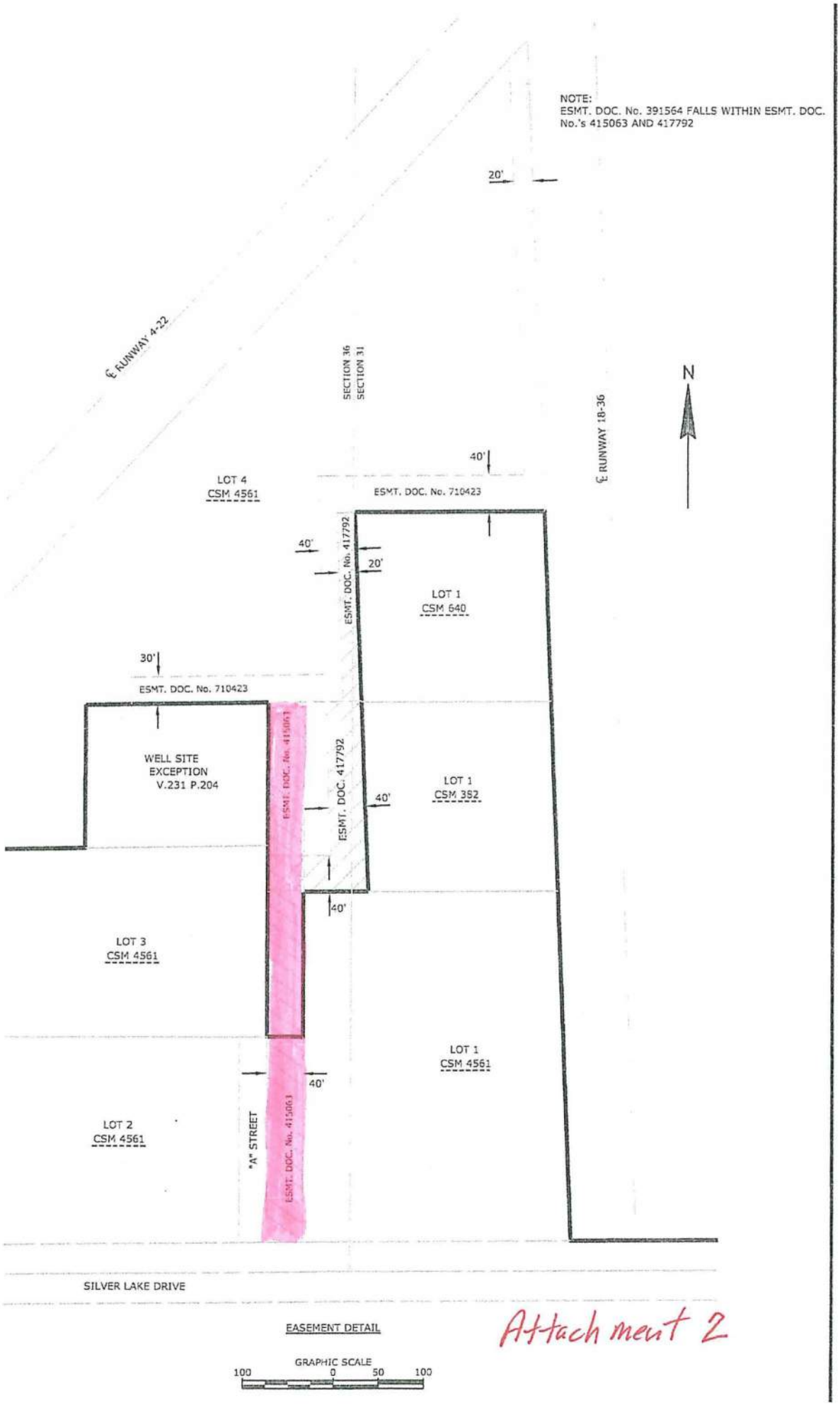
3) Title Report attached to the end of this packet for reference

4) End of Reveiw

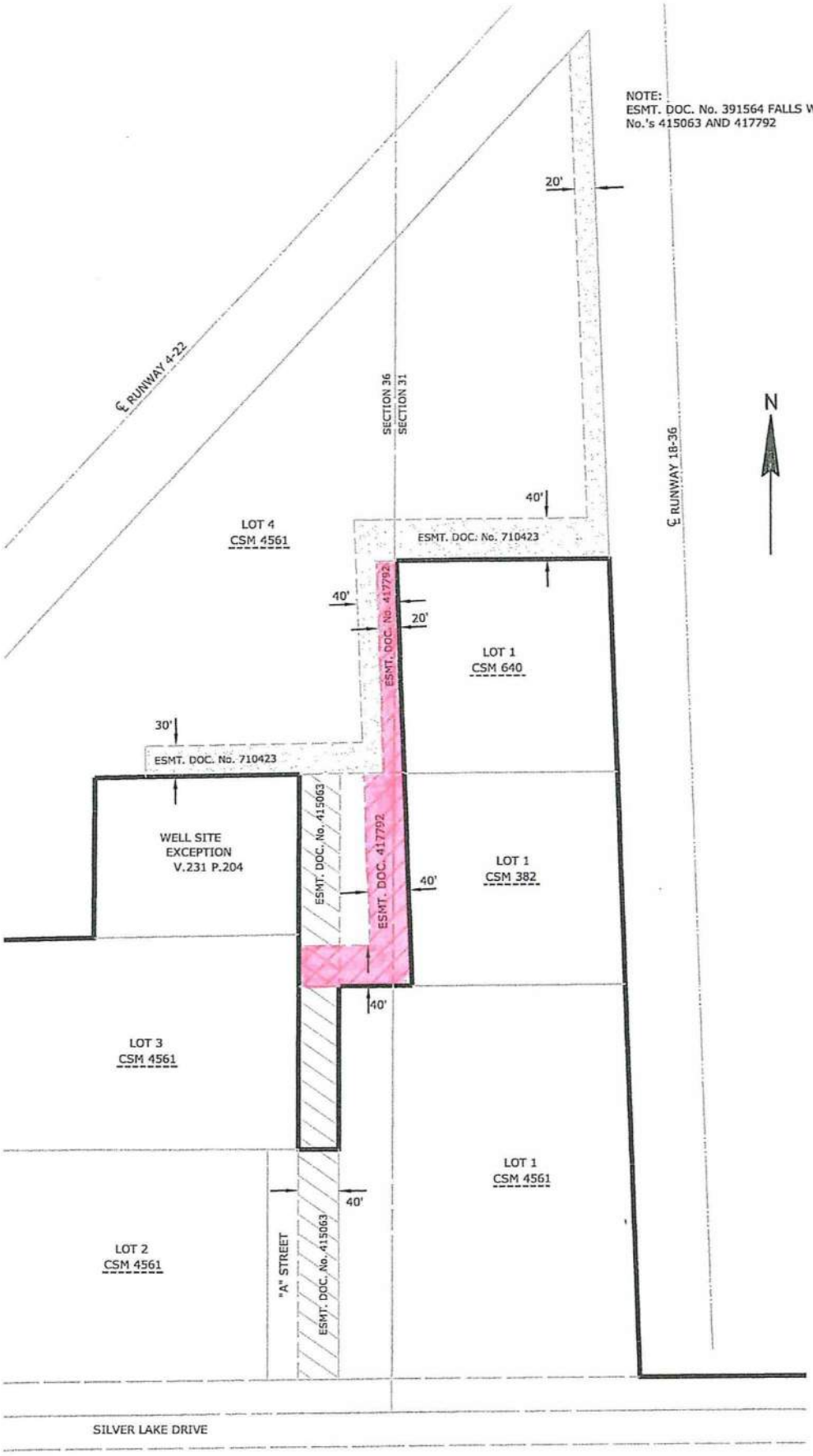


216123189

Attachment 1



Attachment 2

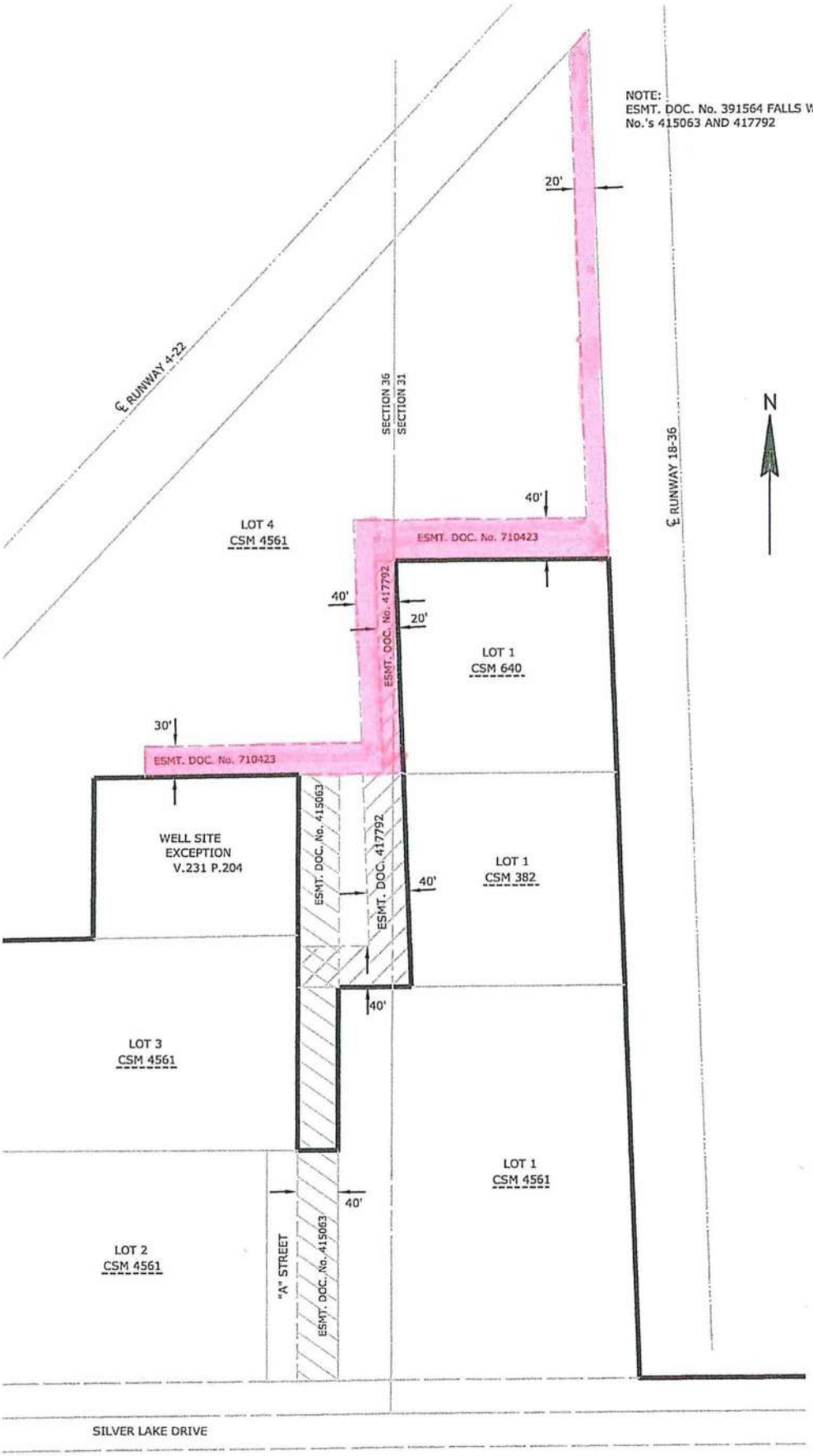


EASEMENT DETAIL

GRAPHIC SCALE

100 0 50 100

Attachment 3



EASEMENT DETAIL

GRAPHIC SCALE

100 0 50 100

Attachment 4

WISCONSIN RIVER TITLE CONSULTANTS LLC

60 YEAR REPORT OF TITLE

Cooper Engineering
2600 College Dr.
Rice Lake, WI 54868
Attn:

LEGAL DESCRIPTION:
Lots Two (2), Three (3) and Four (4), Certified Survey Map No. 4561, recorded in Volume 32 of Certified Survey Maps, Page 46, as Document No. 747079, City of Portage, Columbia County, Wisconsin.

We have searched the Register of Deeds records relative to the captioned real estate and the grantee in the most recent recorded conveyance is:
City of Portage

Since the recording of said conveyance, the following mortgages have been recorded:
None

UNPAID MONEY JUDGMENTS / TAX LIENS / CONSTRUCTION LIEN CLAIMS FOR THE LAST TEN YEARS:
None

MISCELLANEOUS:
Easement/Restrictions terms and conditions as recorded in Vol. 180 of Records, page 242, as #388933.

Easement/Restrictions terms and conditions as recorded in Vol. 231 of Records, page 204, as #415063.

Easement/Restrictions terms and conditions as recorded in Vol. 236 of Records, page 277, as #417792.

Utility Easement Agreement terms and conditions as recorded in Document No. 710423.

Life Estate terms and conditions as recorded in Document No. 745263.

All items as referenced on Certified Survey Map Numbers 2807; 4536 and 4561.

TAX PARCEL NO.:
11271-2525.07
11271-2525.04
11271-2525.06

REAL ESTATE TAXES:
TAX EXEMPT

NOTE: THIS REPORT DOES NOT CONTAIN INFORMATION RELATIVE TO EASEMENTS OR RESTRICTIONS THAT MAY BE OF RECORD.

"THIS REPORT IS FOR INFORMATIONAL PURPOSES ONLY. THE LIABILITY OF WISCONSIN RIVER TITLE CONSULTANTS, LLC (HEREINAFTER "THE COMPANY") IN ISSUING THIS REPORT IS LIMITED TO A MAXIMUM AMOUNT OF $1,000.00 SUCH LIABILITY IS FOR REASONABLE CARE IN MAKING THIS SEARCH. THIS REPORT IS NOT AN ABSTRACT OF TITLE OR A TITLE INSURANCE COMMITMENT OR POLICY AND SHOULD NOT BE RELIED UPON IN PLACE OF SUCH. IT IS NOT THE INTENTION OF THE COMPANY TO PROVIDE ANY TYPE OF EXPRESS OR IMPLIED WARRANTY, GUARANTY, OR INDEMNITY WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED IN THE REPORT. IF THIS REPORT IS TO BE USED BY THE CUSTOMER AS THE SEARCH REQUIRED IN ORDER FOR THE CUSTOMER TO ISSUE A TITLE INSURANCE COMMITMENT OR POLICY, OR IF THE INFORMATION CONTAINED IN THIS REPORT IS RESOLD, THE CUSTOMER DOES SO AT THEIR OWN RISK. IN ORDER TO OBTAIN INFORMATION FROM THE COMPANY WHICH WILL CARRY THE FULL LIABILITY OF A TITLE INSURANCE COMMITMENT OR POLICY, THE COMPANY WILL ISSUE, IF REQUESTED, A COMMITMENT OF TITLE INSURANCE AND WILL CHARGE A FEE IN COMPLIANCE WITH RATES FILED WITH THE APPROPRIATE STATE OFFICES."

FILE NO.: **216123189**

EFFECTIVE DATE: **January 20, 2017 at 7:44 AM**

Wisconsin River Title Consultants, LLC

3114

Document Number

STATE BAR OF WISCONSIN FORM 1 - 2000

WARRANTY DEED

7452633

DOC # 745263
REGISTER OF DEEDS
COLUMBIA COUNTY

RECORDED ON:
03/29/2006 10:43:22AM
PAGES: 14

LISA WALKER
REGISTER OF DEEDS
REC FEE: 37.00
NEW TRANS FEE: 309.00
Exempt #:

This Deed, made between Portage Airport Property, LLC, a Wisconsin limited liability company, Grantor, and City of Portage, a Wisconsin municipal corporation, Grantee.

Grantor, for a valuable consideration, conveys to Grantee the following described real estate in Columbia County, State of Wisconsin (the "Property"):

LOTS 2, 3, AND 4 OF CERTIFIED SURVEY MAP NO. 4536 RECORDED IN VOLUME 32 OF SURVEYS AT PAGE 21 AS DOCUMENT NO. 745105, CITY OF PORTAGE, COLUMBIA COUNTY, WISCONSIN.

GRANTOR RESERVES TO ITSELF A LIFE ESTATE TO LOT 3 ABOVE FOR THE DURATION OF THE LIVES OF BOTH GERALD E. MAEL AND JOYCE MAEL, WHICH INTEREST SHALL TERMINATE UPON THE DEATH OF THE BOTH OF THEM OR THE SURVIVOR THEREOF, OR AS OTHERWISE SET FORTH IN ATTACHED EXHIBIT A. FURTHER, GRANTOR'S AND GRANTEE'S INTERESTS SHALL BE SUBJECT TO THE TERMS AND CONDITIONS SET FORTH IN ATTACHED EXHIBIT A.

Alan G.B. Kim, Jr TCI
Anderson & Kent, S.C.
1 N. Pinckney St., Ste 200
Madison, WI 53703

Part of 271-2525.4
Parcel Identification Number (PIN)
This is not homestead property.
~~(is)~~ (is not)

Together with all appurtenant rights, title and interests.

Grantor warrants that the title to the Property is good, indefeasible in fee simple and free and clear of all liens, judgments, mortgages and other encumbrances except: for real estate taxes levied in and prior to the year of closing, disclosed leases, municipal and zoning ordinances and agreements entered under them, recorded easements for the distribution of utility and municipal services, and recorded building and use restrictions and covenants.

Dated this 28th day of March, 2006.

Portage Airport Property, LLC

Gerald E. Mael

Gerald E. Mael, Member

AUTHENTICATION

Signature(s) Gerald E. Mael
authenticated this 28th day of March, 2006.

Carl A. Sinderbrand

* Carl A Sinderbrand

1018593

TITLE: MEMBER STATE BAR OF WISCONSIN
(If not, _____
authorized by § 706.06, Wis. Stats.)

THIS INSTRUMENT WAS DRAFTED BY
Gregory D. Murray, Anderson & Kent, S.C.

(Signatures may be authenticated or acknowledged. Both are not necessary.)

*Names of persons signing in any capacity should be typed or printed below their signatures

Anderson & Kent, S.C. 1 N. Pinckney St., Madison, WI 53703-2868 Phone: (608) 246-8500 Fax: (608) 246-8511

INFORMATION PROFESSIONALS COMPANY FOND DU LAC, WI 800-655-2021

EXHIBIT A TO WARRANTY DEED DESCRIBING LIFE ESTATE ON LOT 3

The Grantor's and Grantee's interests are subject to the following terms and conditions. Unless stated otherwise, "Grantors" shall collectively mean Portage Airport Property, LLC ("PAP"), Gerald E. Mael, and Joyce Mael:

a. During the period of the Life Estate, Grantors, jointly and individually, shall be responsible for the maintenance and repair of the building and any other structures that they place on Lot 3, as well as general maintenance of the surrounding grounds within Lot 3; provided that Grantors shall not be required to repair the building except to the extent necessary to protect human health and safety.

b. During the period of the Life Estate, Grantors shall be responsible and pay for all utilities and any personal property taxes associated with their use or lease of Lot 3 and shall maintain liability and casualty insurance on Lot 3 and the structures upon it in the amount of at least $1,000,000, either directly or as a requirement of a lessee in a lease. The Grantee shall be identified as an "additional insured" on such insurance policies.

c. During the period of the Life Estate, Grantors may, in their sole discretion, improve, raze or remove the existing building on Lot 3, but it shall not have the right to add to or replace the building with another building without the written consent of Grantee. During the period of the Life Estate, PAP may transfer its interest in Lot No. 3 to either Gerald E. Mael or Joyce Mael, or both of them, but shall not be entitled to transfer that interest to any other person or entity without the written consent of the City.

d. During the period of the Life Estate, PAP or the Maels, if PAP transfers its interest to one or both of them, may enter into leases relating to the use of Lot No. 3 or the building thereon, subject to the following terms:

(i) Upon the expiration of the Life Estate, all lessor rights and obligations under any such lease shall vest in the Grantee. Any such lease shall contain a provision setting out this requirement;

(ii) Any such lease shall be valid for a period of ten (10) years after the expiration of the Life Estate. Any such lease shall contain a provision setting out this requirement;

(iii) All such leases are subject to the Grantee's pre-approval for the sole purpose of determining if the planned use will likely expose the City to liability for hazardous substance discharges, other than petroleum products or products used to clean or condition motorized vehicles or the containerized storage of materials for use elsewhere. Such approval shall not be unreasonably withheld;

(iv) The Grantee shall have a reasonable right to inspect the building on Lot 3, upon reasonable notice to PAP, the Maels and any tenant; and

(v) All such leases shall require the lessee of Lot 3 to promptly remove all of its fixtures, furniture, equipment and other personal property at lease end.

e. At the termination of the Life Estate, and subject to any lease in effect at that time, Grantors shall ensure that all of their fixtures, furniture, equipment, and other property is promptly removed from Lot 3, unless otherwise agreed upon by Grantee.

f. The Life Estate is subject to the City's acceptance of all present leases on Lot 3 or any portion thereof, the acceptance of which the City will not unreasonably refuse or unduly delay.

g. If PAP or Gerald Mael does not comply with the State of Wisconsin's directives under their attached settlement agreement with the State of Wisconsin in Columbia County Case Nos. 04-CV-543/05-CV-26 and, as a result, the State directs Grantee in writing to undertake environmental activities, this Life Estate shall terminate and all rents due or to be due under any lease of Lot 3 shall be forfeited by Grantors to Grantee.

STATE OF WISCONSIN CIRCUIT COURT BRANCH 1 COLUMBIA COUNTY

STATE OF WISCONSIN,

Plaintiff,

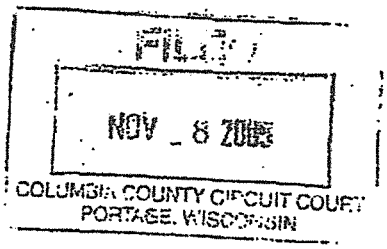
v. Case No. 04-CV-543

PORTAGE AIRPORT PROPERTY, LLC,

and

GERALD E. MAEL,

Defendants.



SETTLEMENT STIPULATION AND ORDER FOR JUDGMENT

STIPULATION

Plaintiff State of Wisconsin brought this civil enforcement action against defendants Portage Airport Property, LLC, and its member Gerald E. Mael (jointly and severally referred to here as "Portage Airport Property") alleging violations of Wisconsin's hazardous substance spills law, as particularly alleged in the complaint beginning the case, and seeking injunctive relief and forfeitures, with associated statutory surcharges, costs, and expenses. The parties now wish to settle the case by agreement. They, therefore, enter this settlement stipulation for judgment.

IT IS HEREBY STIPULATED, between the parties, the State, by its attorneys, Attorney General Peggy A. Lautenschlager and Assistant Attorney General Philip Peterson,

and Portage Airport Property, by their attorneys, Wickwire Gavin, P.C., and Attorney Carl A. Sinderbrand, that this case may be fully and finally settled on its merits, with prejudice, on the following terms and conditions:

1. To comply with Wis. Stat. § 292.11 and all the applicable administrative rules promulgated thereunder, Portage Airport Property shall complete each of the following requirements, as set forth below and as required by law, concerning the "Portage Airport Property site" at 1125 Silver Lake Drive, Portage, Wisconsin, as that site is more specifically described in numbered paragraph 4 of the complaint that began this case:

(a) Through its environmental consultant, Portage Airport Property shall fully and without delay complete two more rounds of quarterly sampling of all the existing monitoring wells at and near the Portage Airport Property site and shall fully and timely submit all those sampling results to DNR. After that, based on those and earlier sampling results, Portage Airport Property, through its environmental consultant, shall promptly propose the location and depths for installing any additional monitoring wells needed to define the perchloroethylene ("PCE") plume. Portage Airport Property, through its environmental consultant, shall then promptly install the additional monitoring wells, except that it need not install the additional monitoring wells then if DNR agrees to its deferring the installation until after further quarterly monitoring is completed and except that Portage Airport Property need not install additional monitoring wells if the existing monitoring wells are sufficient to determine the nature, degree, and extent of the PCE plume.

By its environmental consultant, Portage Airport Property shall complete the monitoring and sampling required under this subparagraph (a) in accordance with Wis. Admin. Code ch. NR 716 and shall do so on the schedules approved by DNR.

(b) Whenever Portage Airport Property receives site investigation results concerning the Portage Airport Property site or its surrounding area, Portage Airport Property, through its consultant, shall promptly submit those results to DNR and shall consult with DNR to determine whether any additional site investigation or change in monitoring frequency is needed. If based on the information before it or if after consulting with Portage Airport Property and its consultant DNR reasonably determines that additional investigation is needed to meet the requirements of Wis. Stat. § 292.11 or any administrative rule promulgated under it, Portage Airport Property, through its consultant, shall promptly prepare and file with DNR any necessary workplan modification or supplementation for the site investigation and shall fully and timely comply with each such modification or supplementation, as approved by DNR, and shall do so on the schedule approved or established by DNR. Portage Airport Property may be required to investigate outside the Portage Airport Property site in accordance with Wis. Admin. Code § NR 716.11(4), provided that permission is granted by the owner thereof without cost for access thereto to Portage Airport Property. The preceding sentence, however, shall not prevent Portage Airport Property from being required to pay the

investigation costs, any requisite permit fees, and restoration costs required for investigating outside the Portage Airport Property site.

(c) Within 90 days after the Portage Airport Property site investigation is completed and all required information is received, including but not limited to required information that under the law may be made available as a public document to Portage Airport Property regarding the operation of the City of Portage Well No. 6, Portage Airport Property, through its consultant, shall submit to DNR a final site investigation report, along with a discussion of remedial options, as required by Wis. Admin. Code § NR 716.15. The final site investigation report shall include a map identifying all previous and all current soil sample collection and groundwater monitoring and piezometer locations and any other data and information required by Wis. Admin. Code § NR 716.15.

(d) In accordance with the final site investigation report submitted under subparagraph 1(c), as approved or modified by DNR, and on the schedule approved or established by DNR, Portage Airport Property, acting through its consultant, shall take those actions necessary to comply with Wis. Stat. § 292.11(3) and Wis. Admin Code chs. NR 718 to 726. The parties understand that such actions may include monitoring and reliance on natural attenuation to the extent and under the circumstances that it is allowed by law.

(e) Portage Airport Property shall take all those actions necessary to obtain case closure of the Portage Airport Property site under Wis. Admin. Code ch. NR 726.

2. In the manner and to the full extent authorized by law, Portage Airport Property shall have the right to challenge or contest any requirement imposed by DNR under subparagraphs 1(a) to (e) of this stipulation, including but not limited to contesting whether a DNR-imposed requirement is required in order to comply with Wis. Stat. § 292.11 or any administrative rule promulgated under it. In the manner and to the full extent authorized by law, the Court in this action will retain jurisdiction to determine such dispute, irrespective of the form of the DNR-imposed requirement.

3. Nothing in this stipulated judgment shall diminish DNR's authority to act, whether directly or indirectly and whether on or near the Portage Airport Property site, to deal with an emergency situation under its authority as provided by law.

4. Judgment shall be entered in favor of the State of Wisconsin and against Portage Airport Property in the amount of $20,000. This amount is made up of forfeitures, statutory surcharges, and costs as set forth in numbered paragraph 5 below and attorneys fees and expenses as set forth in numbered paragraph 7 below.

5. Portage Airport Property shall pay a total of $15,000 as follows: forfeitures of $10,946.33 under Wis. Stat. § 292.99(1), a 25 percent penalty surcharge of $2,736.58 under Wis. Stat. § 814.75(18), a 10 percent environmental surcharge of $1,094.63 under Wis. Stat. § 814.75(12), $25 in court costs under Wis. Stat. § 814.63(1), an $8 crime laboratories and drug law enforcement surcharge under Wis. Stat. § 814.75(3), a $68

court support services surcharge under Wis. Stat. § 814.75(2), a one percent jail surcharge of $109.46 under Wis. Stat. § 814.75(14), and a $12 justice information system surcharge under Wis. Stat. § 814.75(15).

6. Portage Airport Property shall pay the $15,000 amount required under numbered paragraph 5 in 12 quarterly installments of $1,250 each. An installment is due and payable by the following dates: January 1, 2006; April 1, 2006; July 1, 2006; October 1, 2006; January 1, 2007; April 1, 2007; July 1, 2007; October 1, 2007; January 1, 2008; April 1, 2008; July 1, 2008; and October 1, 2008. Each $1,250 installment payment shall be made by check payable to the Columbia County Clerk of Circuit Court and delivered by mail or in person to the Clerk of that Circuit Court along with a cover letter, identifying this case by its name and case number. That delivery shall be made to the following address: Ms. Susan Raimer, Clerk of Circuit Court, Columbia County Courthouse, 400 DeWitt Street, P.O. Box 587, Portage, WI 53901-2132. Also a photocopy of each cover letter and check shall simultaneously be mailed as proof of payment to Assistant Attorney General Philip Peterson, Environmental Protection Unit, Wisconsin Department of Justice, P.O. Box 7857, Madison, WI 53707-7857.

7. In addition, as permitted under Wis. Stat. § 292.99(2), Portage Airport Property shall by July 1, 2008, pay $5,000 in attorneys fees and expenses by check made payable to the State of Wisconsin and sent to Assistant Attorney General Philip Peterson,

Environmental Protection Unit, Wisconsin Department of Justice, P.O. Box 7857, Madison, WI 53707-7857.

8. Entry and satisfaction in full of the judgment based on this stipulation shall fully resolve Portage Airport Property's liability (including that of its principals, members, employees, agents, and any other person who may be liable for the conduct of Portage Airport Property) for all violations alleged in the State's complaint.

9. Except as between the State, Portage Airport Property, LLC, and Gerald E. Mael, nothing contained in this stipulation or judgment shall be construed as an admission in any administrative or judicial proceeding or in any mediation now pending or hereafter commenced. This stipulation and judgment is a voluntary settlement of disputed claims and, except as between the State, Portage Airport Property, LLC, and Gerald E. Mael, shall not be admissible in any other proceeding or mediation, including but not limited to claims by the City of Portage against Portage Airport Property, LLC, Gerald E. Mael, and Joyce Mael.

10. This stipulation, as approved by the Court and incorporated into its final judgment, shall apply to and be binding on the parties and their successors and assigns.

11. Under applicable claim preclusion or issue preclusion principles, during the time that Portage Airport Property is carrying out its obligations under this stipulated judgment, the full and timely performance of its obligations under this judgment shall demonstrate that Portage Airport Property is meeting its obligations to deal with the violations alleged in the complaint that began this case.

12. The accompanying judgment incorporating the terms of this stipulation in its entirety may be entered without further notice to any party.

Dated this 2nd day of November 2005.

PEGGY A. LAUTENSCHLAGER
Attorney General

PHILIP PETERSON
Assistant Attorney General
State Bar #1013295
Attorneys for Plaintiff, State of Wisconsin

Wisconsin Department of Justice
Post Office Box 7857
Madison, Wisconsin 53707-7857
(608) 267-2061

Dated this 31st day of October 2005.

WICKWIRE GAVIN, P.C.

BY: _____
CARL A. SINDERBRAND
Attorney at Law
State Bar #1011074
Attorneys for Defendants, Portage Airport Property, LLC, and Gerald E. Mael

22 East Mifflin Street, Suite 800
Madison, Wisconsin 53701-1683
(608) 257-5335

ORDER FOR JUDGMENT

The terms of the above stipulation in *State v. Portage Airport Property, LLC, et al.*, are approved by the Court, and the clerk is directed to enter judgment accordingly, this 8 day of Nov 2005.

BY THE COURT:

DANIEL S. GEORGE
Columbia County Circuit Court Judge

STATE OF WISCONSIN CIRCUIT COURT COLUMBIA COUNTY
BRANCH 1

STATE OF WISCONSIN,
17 West Main Street
Post Office Box 7857
Madison, Wisconsin 53707-7857,

Plaintiff,

v. Case No. 04-CV-543

PORTAGE AIRPORT PROPERTY, LLC,
a Wisconsin limited liability company,
N8060 Weyh Road
Portage, Wisconsin 53901,

and

GERALD E. MAEL,
N8060 Weyh Road
Portage, Wisconsin 53901,

Defendants.

FILED
NOV _ 2005
COLUMBIA COUNTY CIRCUIT COURT
PORTAGE, WISCONSIN

JUDGMENT

1. Plaintiff State of Wisconsin is a sovereign state of the United States with its principal offices in the State Capitol in Madison, Wisconsin.

2. Defendant Portage Airport Property, LLC, is a Wisconsin limited liability company organized to do business in Wisconsin. Its organizer, member, and registered agent is Gerald E. Mael, N8060 Weyh Road, Portage, Wisconsin 53901.

3. Defendant Gerald E. Mael is an adult resident of Columbia County residing at N8060 Weyh Road, Portage, Wisconsin 53901. Mael is a member of and is the

registered agent for defendant Portage Airport Property, LLC. He is responsible for overall Portage Airport Property, LLC, operations.

4. Portage Airport Property, LLC, owns the real property at 1125 Silver Lake Drive, City of Portage, Columbia County, Wisconsin. That property is located in the SW 1/4 of the SW 1/4 of Section 31, Township 13 North, Range 9 East, and located in the SE 1/4 of the SE 1/4 of Section 36, Township 13 North, Range 8 East.

5. The settlement stipulation of the parties is incorporated into this judgment in its entirety. According to the terms of the stipulation, judgment for injunctive relief and for forfeitures, with the associated statutory surcharges, costs, attorney's fees, and expenses totaling $20,000, is hereby entered. Forfeitures of $10,946.33 under Wis. Stat. § 292.99(1), a 25 percent penalty surcharge of $2,736.58 under Wis. Stat. § 814.75(18), a 10 percent environmental surcharge of $1,094.63 under Wis. Stat. § 814.75(12), $25 in court costs under Wis. Stat. § 814.63(1), an $8 crime laboratories and drug law enforcement surcharge under Wis. Stat. § 814.75(3), a $68 court support services surcharge under Wis. Stat. § 814.75(2), a one percent jail surcharge of $109.46 under Wis. Stat. § 814.75(14), a $12 justice information system surcharge under Wis. Stat. § 814.75(15), and $5,000 in attorneys fees and expenses under Wis. Stat. § 292.99(2).

Dated this 8th day of November 2005

BY THE COURT:

Susan K. Richter
Columbia County Clerk of Circuit Court

DOCUMENT NO

388933

VOL 180 PAGE 242

STATE BAR OF WISCONSIN FORM 1
QUIT CLAIM DEED
THIS SPACE RESERVED FOR RECORDING DATA

BY THIS DEED Robert A. Mael, Single

Grantor

quitclaims to Norman O. Sauey, Jr.

Grantee for a valuable consideration

the following described real estate in Columbia County, State of Wisconsin:

part of Outlot 181 of the Assessors Subdivision
f the City of Portage designated as "Lot 1,"
nd more particularly described, on "Schedule A"
ttached hereto and made a part hereof; and
rants to grantee a non-exclusive easement for
ccess to said Lot 1 and the location of utility
ervices as described on "Schedule B" also attached
reto and made a part hereof.

STATE OF WISCONSIN)
COLUMBIA COUNTY) ss

Received for record this 23 day of
August A.D. 19 77 at 11:40 A.M.
Mae Bell Reg. of Deeds

RETURN TO
Rogers & Owens
Portage, Wis.

Tax Key #
This is not homestead property

TRANSFER
$ 1.00
FEE

Executed at Portage, Wisconsin this 19th day of August, 19 77.

SIGNED AND SEALED IN PRESENCE OF

Robert A. Mael (SEAL)

Robert A. Mael, Single

(SEAL)

(SEAL)

(SEAL)

Signatures of Robert A. Mael, Single

authenticated this 19th day of August, 19 77.

Bruce J. Rogers

Bruce J. Rogers

Title: Member State Bar of Wisconsin ~~of Wisconsin~~

STATE OF WISCONSIN
County. } ss.

Personally came before me, this day of , 19 ,
the above named

to me known to be the person who executed the foregoing instrument and acknowledged the same.

This instrument was drafted by

ROGERS & OWENS

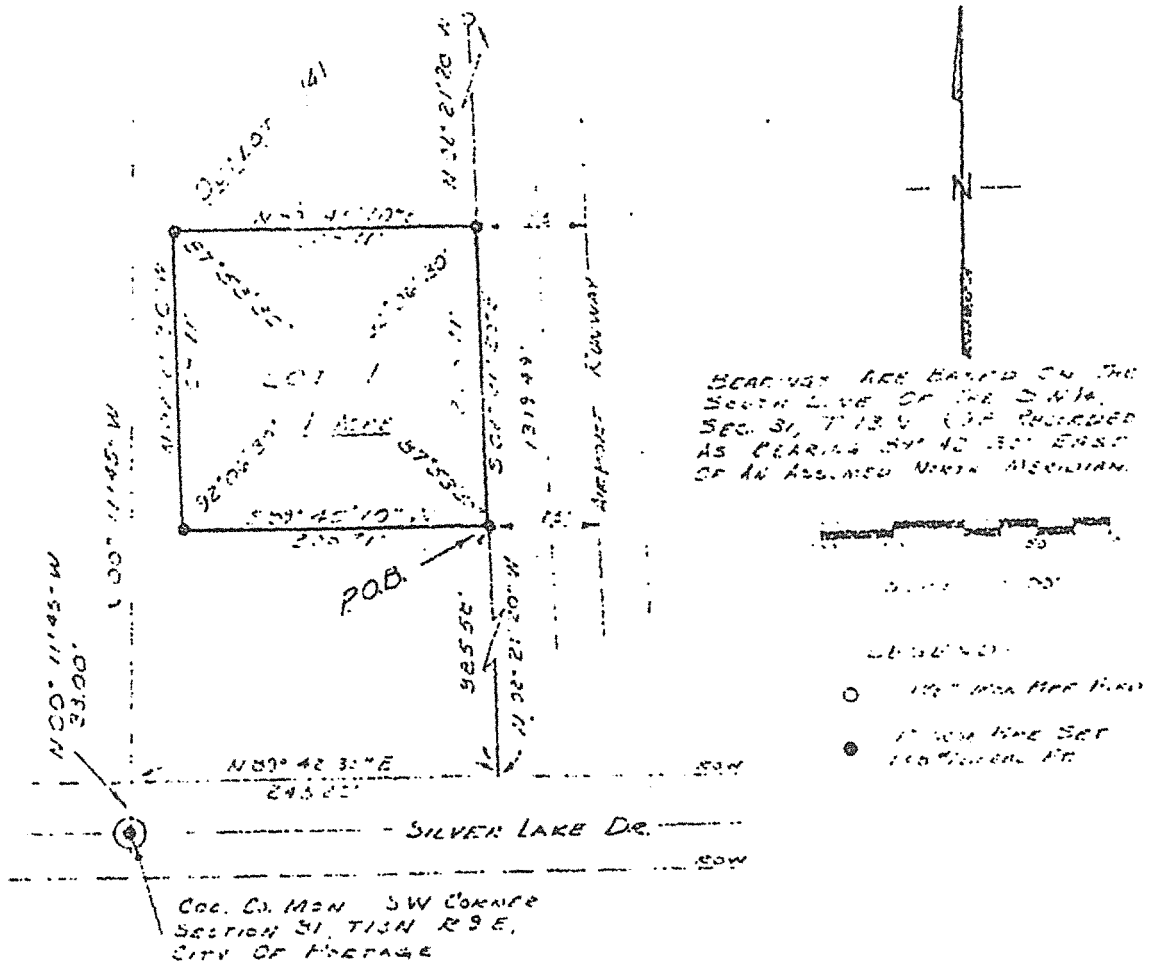
Notary Public County, Wis.

The use of witnesses is optional.

My Commission (Expires) (Is)

Names of persons signing in any capacity should be typed or printed below their signatures.

QUIT CLAIM



SURVEYOR'S CERTIFICATE

I, John O. Harel, Registered Land Surveyor, hereby certify that under the direction of Norm Saney of Portage Industries, Inc., I have surveyed, divided and mapped a part of Outlot 14, of the Assessor's Subdivision of the City of Portage, located in the Southwest ¼ of the Southwest ¼ of Section 31, Town 13 North, Range 9 East, Columbia County, Wisconsin more particularly described as follows:

Commencing at the Southwest corner of Section 31, Town 13 North, Range 9 East; thence North 00° 11' 45" West, 33.00 feet along the west line of Section 31; thence North 89° 48' 30" East, 243.20 feet along the northerly right-of-way line of Silver Lake Drive; thence North 0° 21' 20" West, 385.58 feet to the point of beginning of this description; thence South 89° 45' 10" West, 208.71 feet; thence North 02° 21' 20" West, 208.71 feet; thence North 89° 45' 10" East, 208.71; thence South 02° 21' 20" East, 208.71 feet parallel to and 75 feet west of the centerline of the Airport runway, to the point of beginning, containing 1 acre more or less.

I do further certify that this survey is correct to the best of my knowledge and belief.

John O. Harel
Registered Land Surveyor
Dated: July 18, 1977

"SCHEDULE A"

GENERAL ENGINEERING COMPANY INC
PORTAGE WISCONSIN

RECEIVED
JUL 21 1977

VOL 180 PAGE 243

"SCHEDULE B"

A non-exclusive easement for access by any means to and from Silver Lake Drive and Lot One (Lot 1) as described on "Schedule A" of the deed to which this is attached, and for the location of such utilities as grantee may desire on two parcels of land located in the SW¼ of the SW¼ of Section 31, Township 13 North, Range 9 East and in the NE¼ of the SE¼ of Section 36 of Township 13 North, Range 8 East, Columbia County, Wisconsin described as follows:

Parcel No. A: A parallelogram forty feet (40') wide the South line of which is on the North right of way line of Silver Lake Drive in the City of Portage, the East line of which is on the West edge of the Mael Airways Building and on a line which is the extension North and South thereof, the North line of which is on the North line extended Easterly of the cement block warehouse owned by Robert A. Mael and occupied by Portage Industries Inc. under lease and the west line of which is parallel to the East line thereof and forty feet (40') distant therefrom;

Parcel No. B: Commencing at the Northwest corner of the above described Parcel No. A; thence in a North-Northeasterly direction to the Northwest corner of the above described Lot One (Lot 1); thence Southerly along the westerly line of said Lot One (Lot 1) to a point forty feet (40') from the said North-Northeasterly line (measured at right angles thereto); thence South-Southwesterly and parallel with the said North-Northeasterly line and forty feet (40') distant therefrom to a point where said line intersects the East line of Parcel A;

Use of Parcels A & B For Utilities: The Easterly Fifteen Feet (15') of said Easement may be used for the location of such utility services as may be desired by any party having the use as owner of said easement;

Temporary shortcut: Grantor will give grantee a letter granting permission to drive across grantors land lying between said Parcel B and Lot One (Lot 1) as a shortcut until such time as grantor by letter notifies grantee that the permission is withdrawn.

Scope of Interest: The ownership and use of said Lot One (Lot 1) and of the non-exclusive easement shall be for the benefit of the grantee and his lessees, invitees, heirs, personal representatives, successors and assigns.

VOL. 231 PAGE 204

H C Miller Company

DOCUMENT NO. 115063

STATE BAR OF WISCONSIN—FORM 1
WARRANTY DEED
THIS SPACE RESERVED FOR RECORDING DATA

STATE OF WISCONSIN } ss
COLUMBIA COUNTY }

Received for record this 18 day of May A.D. 1981 at 1:30 P.M.

Marian Robinson Reg. of Deeds

RETURN TO

THIS DEED, made between Robert A. Mael, a single man

Grantor

and the City of Portage, a Wisconsin municipal corporation located in Columbia County, Wisconsin

Grantee,

Witnesseth, That the said Grantor, for a valuable consideration $1.00 O.V.C.

conveys to Grantee the following described real estate in Columbia County, State of Wisconsin: Commencing at the Southwest corner of Section 31, Township 13 North, Range 9 East; thence North 00° 11' 45" West, 33 feet along the west line of Section 31; thence North 89° 42' 30" East, 243.20 feet along the northerly right-of-way line of Silver Lake Drive; thence North 02° 21' 20" West, 594.29 feet to a point; thence South 89° 45' 10" West, 311.47 feet to the point of beginning of this description; thence South 89° 45' 10" West, 200 feet to a point; thence South 0° 02' 02" East, 157.32 feet to a point approximately 51 feet north of an existing building; thence North 89° 44' 48" East, 200 feet to a point; thence North 0° 02' 00" West, 157.30 feet to the point of beginning, containing 0.72 acres more or less. Also a right-of-way over the following described lands: Commencing at the Southwest corner of Section 31, Township 13 North, Range 9 East; thence North 00° 11' 45" West, 33 feet along the west line of Section 31; thence South 89° 42' 30" West, 92.37 feet along the northerly right-of-way line of Silver Lake Drive to the point of beginning of this description, thence North 0° 02' 00" West, 594.15 feet to a point which is the point of beginning of Description 2, thence North 89° 45' 10" East, 40.0 feet to a point; thence South 0° 02' 00" East, 594.12 feet to a point along the northerly right-of-way line of Silver Lake Drive; thence South 89° 42' 30" West, 40.0 feet along the northerly right-of-way line of Silver Lake Drive to the point of beginning, containing 0.55 acres more or less. SEE REVERSE SIDE

Tax Key No.

This is not homestead property.
(is not)

Together with all and singular the hereditaments and appurtenances thereunto belonging:
And Robert A. Mael, a single man

FEE $2 EXEMPT

warrants that the title is good, indefeasible in fee simple and free and clear of encumbrances except NONE.

and will warrant and defend the same.

Dated this 13th day of May, 1981.

(SEAL) Robert A Mael (SEAL)

* Robert A. Mael

(SEAL) (SEAL)

* *

AUTHENTICATION

Signatures authenticated this 13th day of May, 1981

Francis W. Murphy

* Francis W. Murphy - Attorney

TITLE: MEMBER STATE BAR OF WISCONSIN

(If not, authorized by § 706.06, Wis. Stats.)

This instrument was drafted by

Francis W. Murphy
234½ West Wisconsin Street
Portage, Wisconsin 53901

(Signatures may be authenticated or acknowledged. Both are not necessary.)

ACKNOWLEDGMENT

STATE OF WISCONSIN } ss.
County.

Personally came before me, this day of the above named

to me known to be the person who executed the foregoing instrument and acknowledged the same.

*
Notary Public County, Wis.
My Commission is permanent. (If not, state expiration date: , 19 .)

*Names of persons signing in any capacity must be typed or printed below their signatures.

These lands and the easement is donated to the City of Portage with the understanding that the lands conveyed for well purposes for the City of Portage, be known as the Mael Well Property. In the event that the road surface is disturbed by the placement of pipes and/or lines for water services, the grantee must restore such road to its former condition. It should also be understood that there be no assessment to the existing property on either side of the easement area, for the installation of service lines to and from the well site, since these services are for the benefit of the City of Portage. It is also understood that the easement grant gives the City the right to use the utility transmission lines for the extension of electrical services to the site.

Grantor

Grantee

RECHECKED

STATE OF WISCONSIN } ss
COLUMBIA COUNTY

Received for record the 18 day of May A.D. 19 81 at 1:30 o'clock P M. and recorded in Vol 231 of Records Page 204.

Marian Robinson
Register of Deeds

Chge 3rd 115063
Mael
City of Portage

VOL 231 PAGE 205

City Clerk

DOCUMENT NO. 417792

STATE BAR OF WISCONSIN—FORM 1
WARRANTY DEED
THIS SPACE RESERVED FOR RECORDING DATA

STATE OF WISCONSIN } ss
COLUMBIA COUNTY

Received for record this 2 day of November A.D. 1981 at 10:45 A.M.

Marian Robinson Reg. of Deeds

RETURN TO

Tax Key No. _____

THIS DEED, made between Robert A. Mael

Grantor

and Fall River Foundry Company,

Grantee,

Witnesseth, That the said Grantor, for a valuable consideration of Ten Thousand and no/100 Dollars conveys to Grantee the following described real estate in Columbia County, State of Wisconsin:

A part of Outlot 141 of the Assessor's Subdivision of the City of Portage more particularly described as follows:

Commencing at the Southwest corner of Section 31, Town 13 North, Range 9 East; thence North 00°11'45" West, 33.00 feet along the west line of Section 31; thence North 89°42'30" East, 243.20 feet along the northerly right-of-way line of Silver Lake Drive; thence North 02°21'20"West, 594.29 feet to the point of beginning of this description; thence South 89°45'10" West, 208.71 feet; thence North 02°21'20" West, 208.71 feet; thence North 89°45'10" East, 208.71 feet; thence South 02°21'20" East, 208.71 feet parallel to and 75 feet west of the centerline of the Airport runway, to the point of beginning, Columbia County, Wisconsin.

TRANSFER
$ 30.00
FEE

Together with a non-exclusive easement for access to and egress from the above described premises as set forth in Exhibit A, annexed hereto and made a part hereof.

This is not homestead property.
(is) (is not)

Together with all and singular the hereditaments and appurtenances thereunto belonging;
And Grantor
warrants that the title is good, indefeasible in fee simple and free and clear of encumbrances except easements of record and zoning and use restrictions applicable to the premises

and will warrant and defend the same.

Dated this 29th day of October, 19 81.

_____ (SEAL)
* _____

_____ (SEAL)
* _____

Robert A. Mael (SEAL)
* Robert A. Mael

_____ (SEAL)
* _____

AUTHENTICATION

Signatures authenticated this 29th day of October, 1981

Bruce T. Rogers
* Bruce T. Rogers
TITLE: MEMBER STATE BAR OF WISCONSIN
(If not, _____
authorized by § 706.06, Wis. Stats.)

This instrument was drafted by

Rogers & Owens

Portage, WI 53901

(Signatures may be authenticated or acknowledged. Both are not necessary.)

ACKNOWLEDGMENT

STATE OF WISCONSIN } ss.
_____ County.

Personally came before me, this _____ day of _____ the above named _____

to me known to be the person ___ who executed the foregoing instrument and acknowledged the same.

* _____
Notary Public _____ County, Wis.
My Commission is permanent. (If not, state expiration date: _____, 19___.)

*Names of persons signing in any capacity must be typed or printed below their signatures.

FURNISHED BY COLUMBIA COUNTY TITLE
217 Dewitt Street
Portage, Wisconsin
Tel. 742-5552
Dane County Title Company

WARRANTY DEED—STATE BAR OF WISCONSIN, FORM NO. 1—1977

VOL 256 PAGE 277

EXHIBIT A

A non-exclusive easement for location of utility services to, and access to and egress from, the lands described in the deed to which this Exhibit is attached over the following described lands, located in Outlots 145 and 141 of the Assessor's Subdivision of the City of Portage to-wit:

Parcel A: A paralleogram 40 feet wide, the South line of which is on the North right of way line of Silver Lake Drive in the City of Portage, the East line of which is on the West edge of the Mael Airways Building and on a line which is the extension thereof Northerly to the North line which North line is on a line extended from the Northeast corner of the cement block warehouse owned by Robert A. Mael and occupied by Portage Industries Inc. under lease, to the Southwest corner of the lot described in Schedule A of deed Recorded in the Office of the Columbia County Register of Deeds in Volume 180 of Records, Page 242, and the West line of which is parallel to, and 40 feet distant from, the above described East line;

Parcel B: Commencing at the Northwest corner of the above described Parcel A; thence Easterly on the North line of said Parcel A and such line extended to the Southwest corner of the Lot described in Schedule A of deed recorded in the Columbia County Register of Deeds Office in Volume 180 of Records, Page 242; thence Northerly along the Westerly line of the aforesiad lot described in said Schedule A to the Northwest corner thereof; thence Westerly 40 feet parallel to the line first above described in this parcel and being the Southerly line thereof; thence Southerly and parallel to the West line of the lot described in the aforesaid Schedule A to a point 40 feet Northerly from the Southerly line of this parcel; thence Westerly, parallel to said Southerly line and 40 feet distant therefrom, to the intersection with the Westerly line of Parcel A above described extended Northerly; thence Southerly along said extended Westerly line of Parcel A 40 feet to the point of beginning.

Parcel C: Commencing at the Northwest corner of Lot 1 as described on Schedule A of that deed recorded in the Office of the Register of Deeds for Columbia County, Wisconsin, in Volume 180 of Records, Page 242, which is also the Southwest corner of lands described in the deed to which this Exhibit is attached, thence North 02°21'20" West 208.71 feet; thence South 89°45'10" West 20 feet; thence South 02°21'20" East 208.71 feet, more or less to the North line of Parcel B above described; thence Easterly along said North line to the point of beginning.

Use of Parcels A, B and C for Utilities: The Westerly 15 feet of Parcel A, a strip of land 15 feet in width along the Southerly and Easterly lines of Parcel B, and the Easterly 15 feet of Parcel C may be used for the location of such utility services as may be desired by any party having the use as an owner of such easement.

Scope of Interest: The ownership and use of the land to which this Exhibit is attached and of the non-exclusive easement granted shall be for the benefit of grantee, grantee's lessees, invitees, successors and assigns.

74

710423 | UTILITY EASEMENT AGREEMENT

STATE OF WISCONSIN } ss
COLUMBIA COUNTY
RECEIVED FOR RECORD

MAY 19 2004

Reg of Deeds at 10:55AM

Recording Area

Name and Return Address
Marie Moe, Clerk
City of Portage
115 West Pleasant Street
Portage, WI 53901

Parcel No.
(P)11-271-2525.4

This AGREEMENT, made this 10th day of May, 2004, between Portage Airport Property, LLC, OWNER, whose address is N8060 Weyh Road, Portage, WI 53901, and The City of Portage, CITY, whose address is 115 West Pleasant Street, Portage, WI 53901 is for purposes associated with the construction, operation and maintenance of a municipal watermain and storm sewer across the OWNER's property.

WITNESSETH:

For the sum of Six Thousand Dollars ($6,000.00), receipt of which is hereby acknowledged, and other good and valuable consideration, OWNER hereby grants the following easement to the CITY:

1. Grant of Permanent Easement. OWNER hereby grants the CITY a permanent easement through the following-described property:

See attached Exhibit A

2. Purpose of Permanent Easement. The permanent easement is granted for the purpose of construction, operation and maintenance of underground watermain and storm sewer and all appurtenances together with the right of ingress and egress across the lands included within the limits of the easement. The CITY consents to follow all access requirements and procedures as stipulated by the OWNER.

3. General Obligations of the Parties.

A. The CITY shall be responsible for all of the costs associated with the construction of the watermain and storm sewer across the OWNER's property in conformance with the construction plans prepared by Vierbicher Associates, Inc. and approved by the OWNER. The CITY shall have an obligation to restore the property as closely as possible to its original grade or elevation. The OWNER acknowledges that over time, the trenches used for the installation of these utilities may settle and OWNER understands that it will be the CITY's obligation to fill the trench if this occurs.

C. The CITY shall be responsible for restoring the areas disturbed by construction with topsoil, seeding, fertilizer and mulch at the CITY's expense.

D. The CITY shall have the obligation to maintain the improvements, which are the subject of this easement. The OWNER shall be liable only for damages caused to the improvements which are a result of the acts, omissions or negligence of the OWNER or are chargeable to the OWNER, its agents or assigns.

E. The CITY shall be responsible for removing and replacing permanent and non-permanent structures, trees and vegetation on the property, which hinder the construction, operation and maintenance of the watermain and storm sewer. Such removal and replacement shall be done at the CITY's expense. The construction, operation and maintenance of the underground utility shall be carried out so as to minimize any damage to the existing vegetation on the property.

F. OWNER consents to the removal of all trees and vegetation necessary for the construction and installation of the watermain and storm sewer. OWNER also consents to the future clearing of vegetation within the limits of this easement to accommodate the continued operation of the watermain and storm sewer.

G. The OWNER shall not construct any buildings or any above or below ground structures that would hinder the operation or maintenance of the watermain or storm sewer within the limits of this easement. Paved, graveled, or landscaped surface improvements are considered acceptable.

H. The CITY shall mow grass on the portion of the OWNER's property located to the northeast and west of the Well #6 parcel until the CITY no longer maintains operation of the adjacent airport.

4. Binding Effect. This AGREEMENT shall be binding upon the parties hereto, their heirs, successors and assign.

5. Assignability. OWNER hereby authorizes the CITY to assign this document in any manner necessary to effectuate the purpose of the easement.

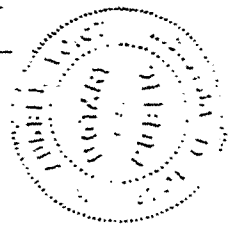
Portage Airport Property, LLC. – OWNER
Gerald Mael- President

City of Portage – CITY
Jeff Grothman – Mayor

STATE OF WISCONSIN)
(SS
COUNTY OF COLUMBIA)

Personally came before me this 10th day of May, 2004, the above-named Gerald Mael and Jeff Grothman, to me known to be the persons who executed the foregoing instrument in the indicated capacity and acknowledged the same.

W. ANDREW VOIGT
Notary Public, State of Wisconsin
My Commission is permanent



This instrument was drafted by:
Miller and Miller, LLC
PO Box 200
Portage, WI 53901-0200
Telephone (608) 742-858

UTILITY EASEMENT
BOUNDARY DESCRIPTION
PORTAGE AIRPORT, LLC TO CITY OF PORTAGE

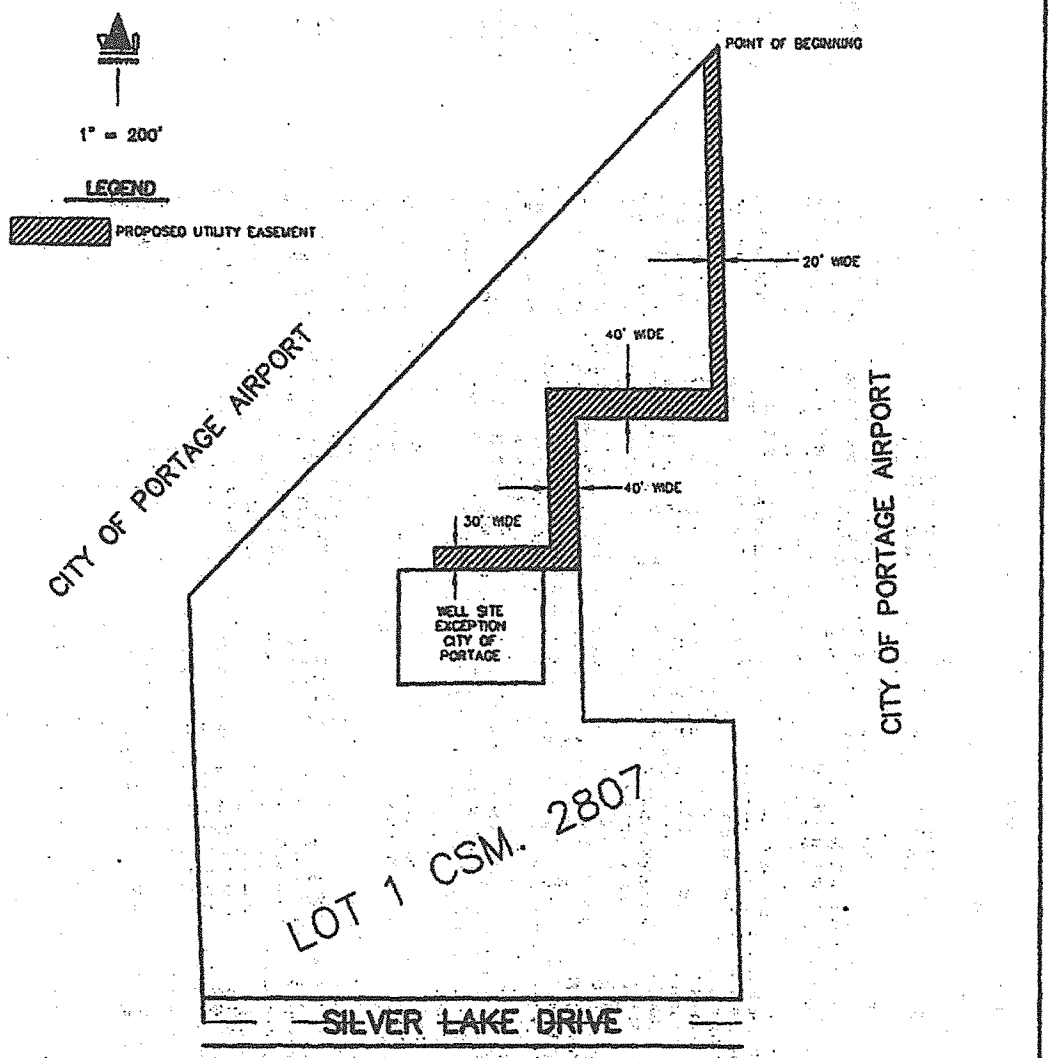
A parcel located in the Southeast Quarter of the Southeast Quarter of Section 36, Town 13 North, Range 8 East, and the Southwest Quarter of the Southwest Quarter and the Northwest Quarter of the Southwest Quarter of Section 31, Town 13 North, Range 9 East, being a portion of Lot 1, Columbia County Certified Survey Map No. 2807, City of Portage, Columbia County, Wisconsin, bound by the following described line; Commencing at the Northeast corner of Lot 1, Columbia County Certified Survey Map No. 2807, being the Point of Beginning; Thence S01°43'32"E, 516.11 feet along the easterly line of Lot 1, Columbia County Certified Survey Map No. 2807; Thence N89°37'02"W, 208.71 feet along the easterly line of Lot 1, Columbia County Certified Survey Map No. 2807; Thence S01°43'32"E, 208.64 feet along the easterly line of Lot 1, Columbia County Certified Survey Map No. 2807; Thence N89°37'02"W, 50.00 feet to the northeast corner of the Well Site Exception City of Portage; Thence S89°37'47"W, 150.06 feet along the north line of the Well Site Exception City of Portage; Thence N01°43'32"W, 30.01 feet; Thence N89°37'47"E, 160.04 feet; Thence N01°43'32"W, 218.53 feet; Thence S89°37'02"E, 228.70 feet; Thence N01°43'32"W, 455.63 feet to the northerly line of Lot 1, Columbia County Certified Survey Map No. 2807; Thence N43°40'59"E, 28.08 feet along the northerly line of Lot 1, Columbia County Certified Survey Map No. 2807 to the Point of Beginning. Said easement boundary contains 0.74 acres more or less.

SHEET 3 OF 3

77

UTILITY EASEMENT SKETCH

PORTAGE AIRPORT PROPERTY, LLC TO CITY OF PORTAGE



APRIL 30, 2004
PREPARED BY

VIERBICHER ASSOCIATES, INC
ARCHITECTURE - ENGINEERING - SURVEYING
400 VIKING DRIVE
P.O. BOX 379
REEDSBURG, WISCONSIN
608-524-6488

SHEET 2 OF 3

J:\Project\Portage 016019478 Well 9\3_Eng Wel 9\dwg\easement_csm2807.dwg

CERTIFICATE OF COUNTY REGISTER OF DEEDS

Received for this 14th day of Oct 1997, at 3:40 o'clock P.m. & recorded in Volume 19 of Certified Survey Maps of Columbia County, Page 17

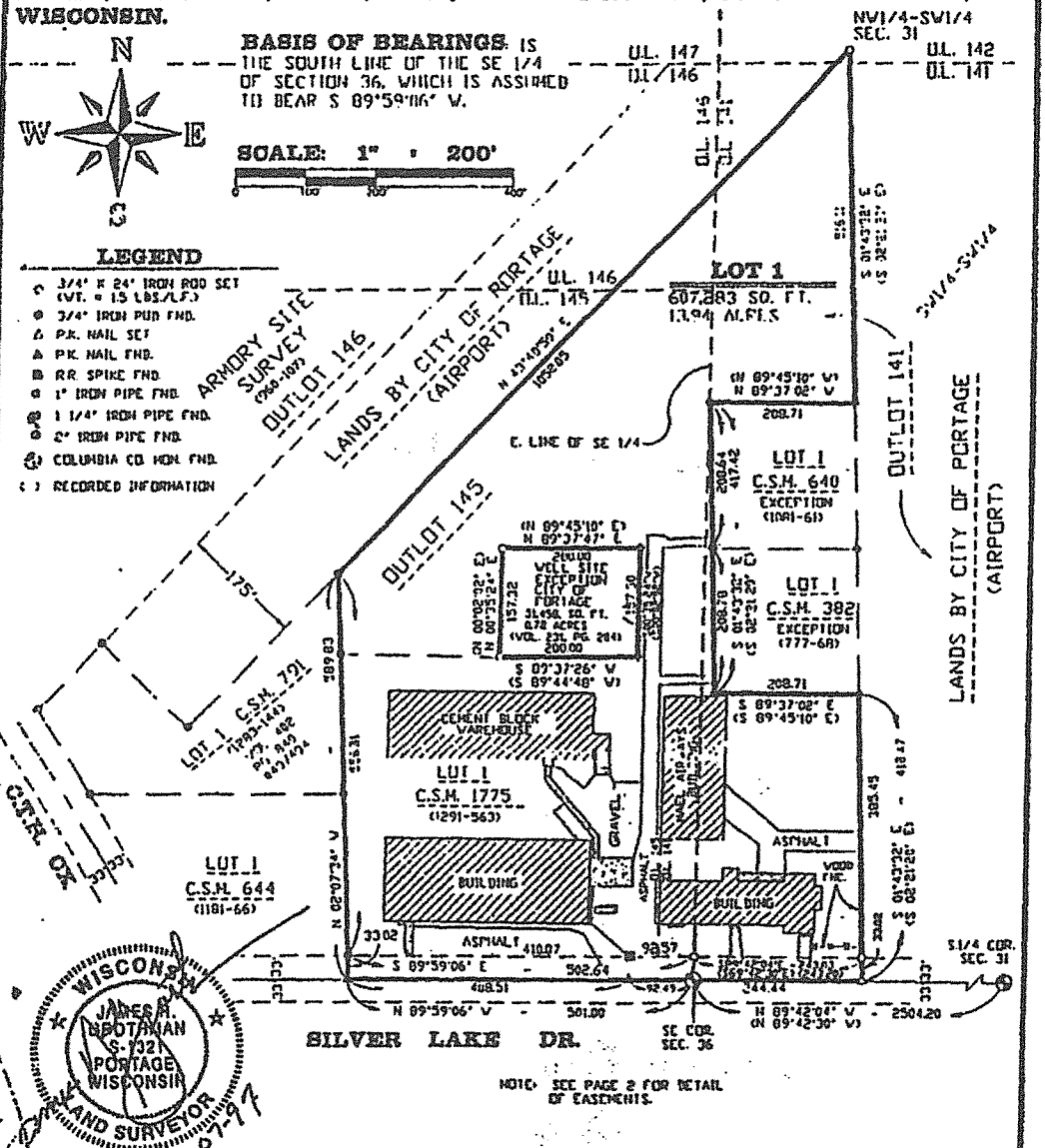
DOCUMENT NO. 575182

Penny Oddou
Columbia County Register of Deeds

COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. 2807

GENERAL LOCATION

BEING LOT 1, C.S.M. 1775, AND A PART OF OUTLOTS 141, 142, 145 AND 146 ASSESSOR'S SUBDIVISION, LOCATED IN THE SE 1/4 OF THE SE 1/4, SECTION 36, T.13 N., R.8 E., AND THE SW 1/4 OF THE SW 1/4, AND THE NW 1/4 OF THE SW 1/4, SECTION 31, T.13 N., R.9 E., CITY OF PORTAGE, COLUMBIA COUNTY, WISCONSIN.



NOTE: SEE PAGE 2 FOR DETAIL OF EASEMENTS.

#2525

As prepared by:
GROTHMAN & ASSOCIATES, S.C.
LAND SURVEYORS
Phone (608) 742-7788
Fax (608) 742-6434
PO BOX 373 PORTAGE, WI 53901

SURVEYOR
JAMES R. GROTHMAN
625 E. SLIFER ST.
PORTAGE, WI 53901

CLIENT/OWNER
ROBERT MAEL ESTATE
SILVER LAKE DRIVE
PORTAGE, WI 53901

DRAFTED BY: D.ABLEMAN — CHECKED BY: J.R.G. — PAGE 1 OF 3 — F.B.E. NO. 797-397

CERTIFICATE OF COUNTY REGISTER OF DEEDS

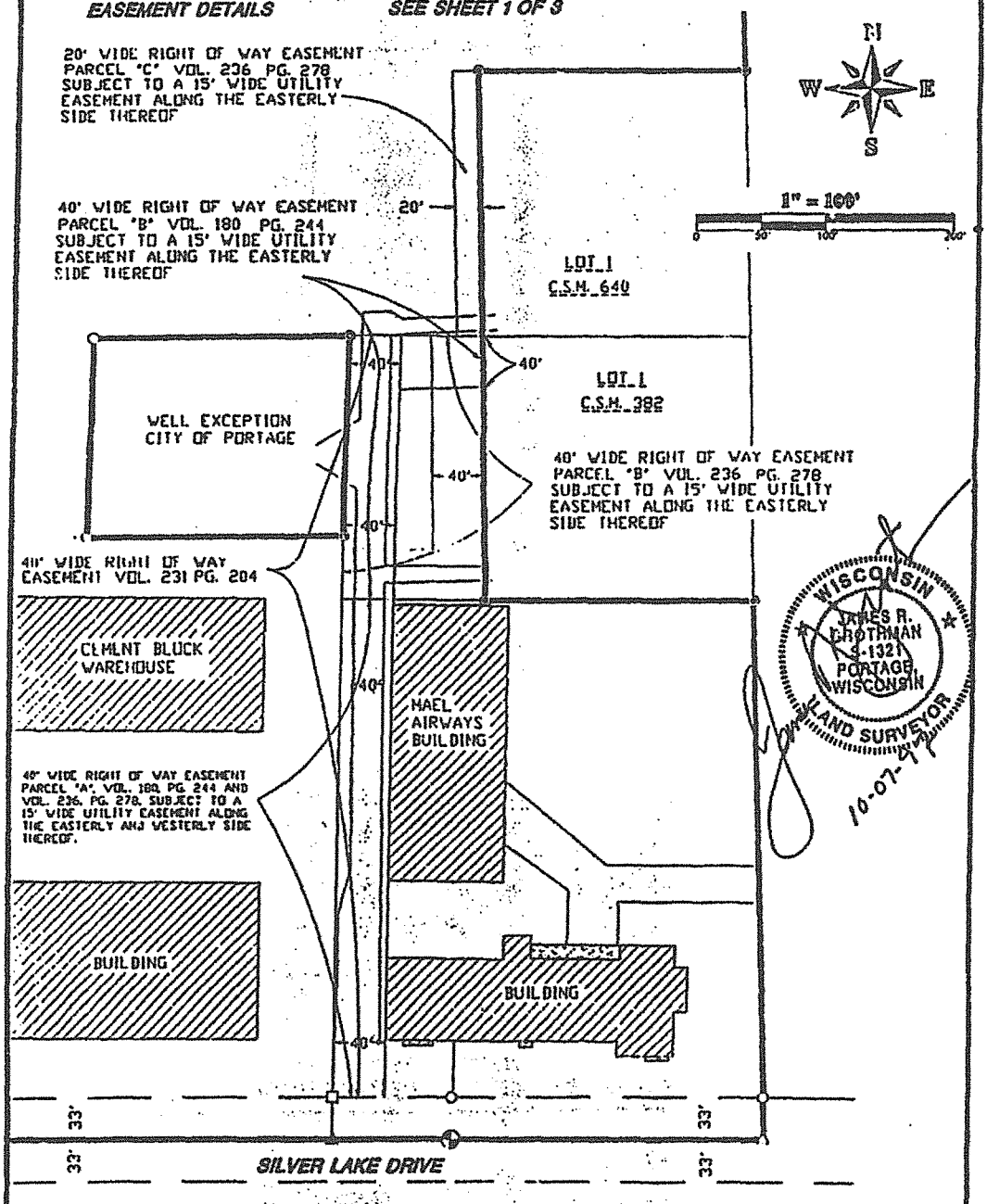
Received for this ____ day of ____ 1997, at ____ o'clock ____ .m. & recorded in Volume: ____ of Certified Survey Maps of Columbia County, Page ____

DOCUMENT NO. _____ Columbia County Register of Deeds

COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. _____

GENERAL LOCATION
SEE SHEET 1 OF 3

EASEMENT DETAILS



As prepared by:

GROTHMAN & ASSOCIATES, S.C.
LAND SURVEYORS

Phone (608) 742-7788
Fax (608) 742-0434
PO BOX 373 PORTAGE, WI 53901

SURVEYOR
JAMES R. GROTHMAN
625 E SLIFER ST.
PORTAGE, WI 53901

CLIENT/OWNER
ROBERT MAEL ESTATE
SILVER LAKE DRIVE
PORTAGE, WI 53901

DRAFTED BY: DABLEMAN PAGE 2 OF 3
CHECKED BY: JRG FILE NO 797-192

Form No. 1-1-A

Stock No. 26273

SURVEYOR'S CERTIFICATE

I, JAMES R. GROTHMAN, Registered Land Surveyor, do hereby certify that by the order of Robert Mael Estate, I have surveyed, monumented, mapped and divided Lot 1, Certified Survey Map, No. 1775 and a part of Outlots 141, 142, 145, and 146 of the Assessor's Subdivision all located in the Southeast Quarter of the Southeast Quarter of Section 36, Town 13 North, Range 8 East the Southwest Quarter of the Southwest Quarter and the Northwest Quarter of the Southwest Quarter of Section 31, Town 13 North, Range 9 East, City of Portage, Columbia County, Wisconsin, described as follows:

Beginning at the southeast corner of said Section 36, said point being in the center line of Silver Lake Drive; thence North 89°59'06" West along the center line of said Silver Lake Drive, 501.00 feet; thence North 02°07'34" West along the east line of Lot 1, Certified Survey Map, No. 644, the east line of Certified Survey Map, No. 791 and the west line of Lot 1, Certified Survey Map, No. 1775, 589.83 feet to the northeast corner of said Lot 1, Certified Survey Map, No. 791; thence North 43°40'59" East along the southwest lands owned by City of Portage 1,052.05 feet; thence South 01°43'32" East along the west line of said lands owned by the City of Portage to the northeast corner of Lot 1, Certified Survey Map, No. 640, 616.11 feet; thence North 89°37'02" West along the north line of said Lot 1, Certified Survey Map, No. 640, 208.71 feet; thence South 01°43'32" East along the west line of said Lot 1, Certified Survey Map, No. 640 and the west line of Lot 1, Certified Survey Map, No. 382, 417.42 feet; thence South 89°37'02" East along the south line of said Lot 1, Certified Survey Map, No. 382, 208.71 feet; thence South 01°43'32" East along the west line of said lands owned by said City of Portage to the center line of said Silver Lake Drive, 416.47 feet; thence North 89°42'04" West along said center line of Silver Lake Drive, 244.44 feet to the point of beginning. Containing 607,283 square feet, (13.94 acres), more or less. And being subject to Silver Lake Drive right-of-way along the southerly side thereof and easements of record if any.

I DO FURTHER CERTIFY that this is a true and correct representation of the boundaries of the land surveyed and that I have fully complied with the Provisions of Chapter 236.34 of the Wisconsin State Statutes and the City of Portage Subdivision Ordinance in surveying and mapping the same to the best of my knowledge and belief.

JAMES R. GROTHMAN
Registered Land Surveyor, No. 1321
Dated: October 7, 1997

WISCONSIN
JAMES R. GROTHMAN
S-1321
PORTAGE, WISCONSIN
LAND SURVEYOR

5/3

745105

As prepared by:
GROTHMAN & ASSOCIATES, S.C.
LAND SURVEYORS
PO BOX 373 PORTAGE, WI 53901
Phone Portage (608) 742-7788
Phone Sauk (608) 644-8877
Fax (608) 742-0434
e-mail surveying@grothman.com

SEAL:

WISCONSIN
JAMES R. GROTHMAN
S-1321
PORTAGE
WISCONSIN
LAND SURVEYOR
1-30-06

G & A FILE NO. 106-26
DRAFTED BY: D. ABLEMAN
CHECKED BY: J.R.G.
PROJ. 797-392
DWG. 10626 SHEET 1 OF 3

DOC # 745105
REGISTER OF DEEDS
COLUMBIA COUNTY

RECORDED ON:
03/24/2006 12:44:39PM
PAGES: 3

LISA WALKER
REGISTER OF DEEDS
REC FEE: 15.00
Exempt #:

COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. 4536

Volume 32, Page 21

GENERAL LOCATION

BEING ALL OF LOT 1 C.S.M. 2807, ALL OF LOT 1 C.S.M. 1776, AND A PART OF OUTLOTS 141, 142, 145 AND 146 ASSESSOR'S SUBDIVISION, LOCATED IN THE SE 1/4 OF THE SE 1/4, SECTION 36, T.13 N, R.8 E, AND THE SW 1/4 OF THE SW 1/4, AND THE NW 1/4 OF THE SW 1/4, SECTION 31, T.13 N, R.9 E, CITY OF PORTAGE, COLUMBIA COUNTY, WISCONSIN. - 13.94 ACRES
TAX PARCEL NUMBER: 2525.4

BASIS OF BEARINGS: IS THE SOUTH LINE OF THE SE 1/4 OF SECTION 36, WHICH IS ASSUMED TO BEAR S 89°59'06" W.

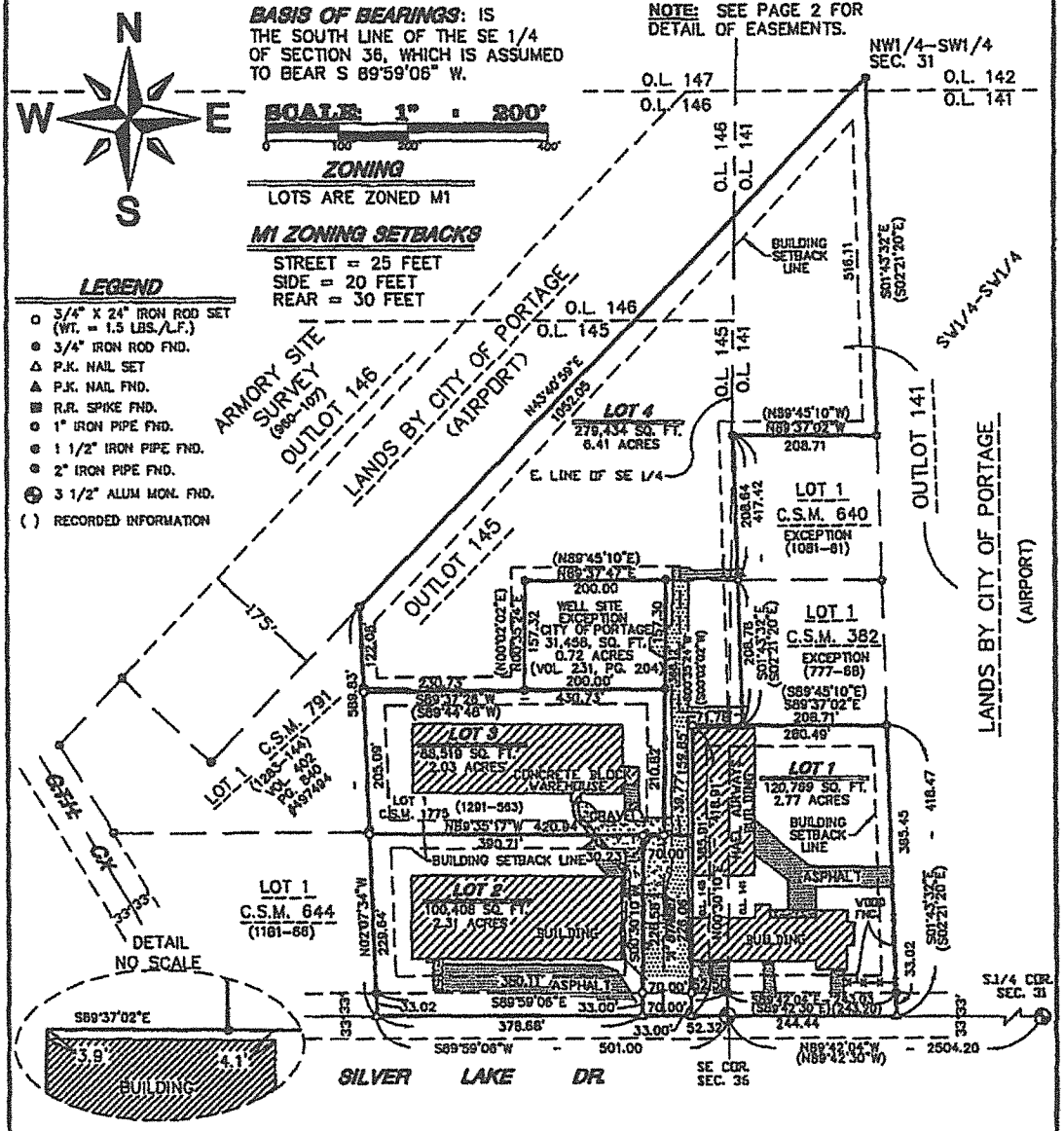
NOTE: SEE PAGE 2 FOR DETAIL OF EASEMENTS.

SCALE: 1" = 200'

ZONING
LOTS ARE ZONED M1

M1 ZONING SETBACKS
STREET = 25 FEET
SIDE = 20 FEET
REAR = 30 FEET

LEGEND
- 3/4" X 24" IRON ROD SET (WT. = 1.5 LBS./L.F.)
- 3/4" IRON ROD FND.
- P.K. NAIL SET
- P.K. NAIL FND.
- R.R. SPIKE FND.
- 1" IRON PIPE FND.
- 1 1/2" IRON PIPE FND.
- 2" IRON PIPE FND.
- 3 1/2" ALUM MON. FND.
- ( ) RECORDED INFORMATION



OWNER:	CLIENT:
PORTAGE AIRPORT PROPERTY, LLC. N8060 WEYH ROAD PORTAGE, WI 53901	CITY OF PORTAGE 115 W. PLEASANT STREET PORTAGE, WI 53901

As prepared by:
GROTHMAN & ASSOCIATES, S.C.
LAND SURVEYORS
PO BOX 373 PORTAGE, WI 53901
Phone Portage (608) 742-7788
Phone Sauk (608) 644-8877
Fax (608) 742-0434
e-mail surveying@grothman.com
G&A

SEAL:

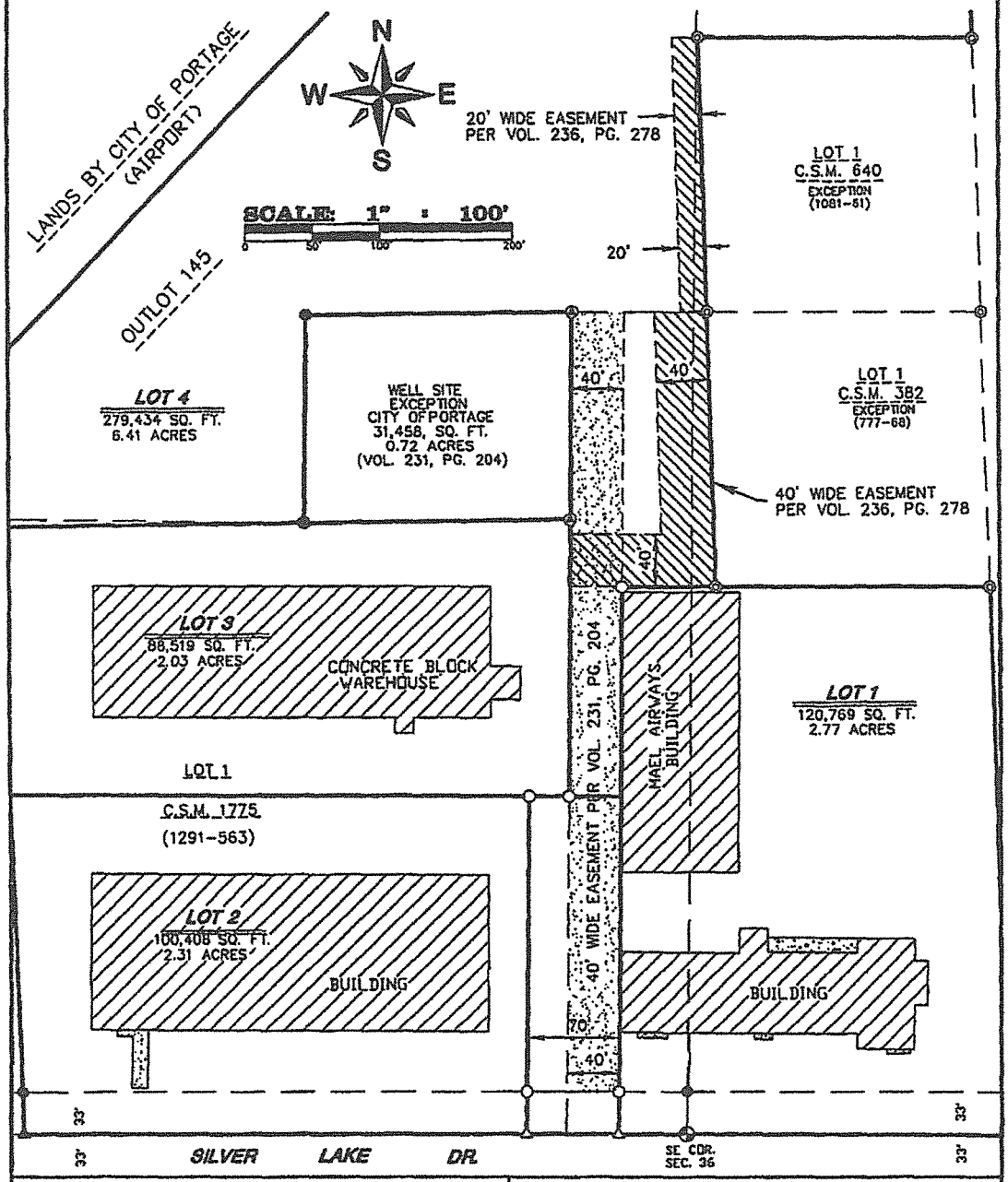
WISCONSIN
JAMES R. GROTHMAN
S-1321
PORTAGE
WISCONSIN
LAND SURVEYOR
1-30-06

G & A FILE NO. 106-26
DRAFTED BY: D. ABLEMAN
CHECKED BY: J.R.G.
PROJ. 999-999
DWG. 10626 SHEET 2 OF 3

COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. _____

GENERAL LOCATION
SEE PAGE 1 OF 3

Volume_____, Page_____



OWNER:	CLIENT:
PORTAGE AIRPORT PROPERTY, LLC. N8060 WEYH ROAD PORTAGE, WI 53901	CITY OF PORTAGE 115 W. PLEASANT STREET PORTAGE, WI 53901

SURVEYOR'S CERTIFICATE

I, **JAMES R. GROTHMAN,** Registered Land Surveyor, do hereby certify that by the order of City of Portage, I have surveyed, monumented, mapped and divided Lot 1, Certified Survey Map, No. 2807, all of Lot 1, Certified Survey Map, No. 1775 and a part of Outlots 141, 142, 145, and 146 of the Assessor's Subdivision all located in the Southeast Quarter of the Southeast Quarter of Section 36, Town 13 North, Range 8 East the Southwest Quarter of the Southwest Quarter and the Northwest Quarter of the Southwest Quarter of Section 31, Town 13 North, Range 9 East, City of Portage, Columbia County, Wisconsin, described as follows:

Beginning at the southeast corner of said Section 36, said point being in the center line of Silver Lake Drive;
thence South 89°59'06" West along the center line of said Silver Lake Drive, 501.00 feet;
thence North 02°07'34" West along the east line of Lot 1, Certified Survey Map, No. 644, the east line of Certified Survey Map, No. 791 and the west line of Lot 1, Certified Survey Map, No. 1775, 589.83 feet to the northeast corner of said Lot 1, Certified Survey Map, No. 791;
thence North 43°40'59" East along the southwest lands owned by City of Portage 1,052.05 feet;
thence South 01°43'32" East along the west line of said lands owned by the City of Portage to the northeast corner of Lot 1, Certified Survey Map, No. 640, 516.11 feet;
thence North 89°37'02" West along the north line of said Lot 1, Certified Survey Map, No. 640, 208.71 feet;
thence South 01°43'32" East along the west line of said Lot 1, Certified Survey Map, No. 640 and the west line of Lot 1, Certified Survey Map, No. 382, 417.42 feet;
thence South 89°37'02" East along the south line of said Lot 1, Certified Survey Map, No,. 382, 208.71 feet;
thence South 01°43'32" East along the west line of said lands owned by said City of Portage to the center line of said Silver Lake Drive, 418.47 feet;
thence North 89°42'04" West along said center line of Silver Lake Drive, 244.44 feet to the point of beginning.
Containing 607,283 square feet, (13.94 acres), more or less. And being subject to Silver Lake Drive right-of-way along the southerly side thereof and easements of record if any.

I DO FURTHER CERTIFY that this is a true and correct representation of the boundaries of the land surveyed and that I have fully complied with the Provisions of Chapter 236.34 of the Wisconsin State Statutes and the City of Portage Subdivision Ordinance in surveying and mapping the same to the best of my knowledge and belief.

WISCONSIN
JAMES R. GROTHMAN S-1321 PORTAGE WISCONSIN
LAND SURVEYOR

JAMES R. GROTHMAN
Registered Land Surveyor, No. 1321
Dated: January 30, 2006
File No. 105-26

COMMON COUNCIL RESOLUTION

RESOLVED that the Certified Survey Map and the lands as dedicated on such map in the City of Portage, Columbia County, Wisconsin is hereby approved and accepted by the Common Council.

Jeff G. Grothman, Mayor — Date: 03/09/06

I HEREBY certify that the foregoing is a copy of a Resolution adopted by the Common Council of the City of Portage, Wisconsin, this 9th day of March, 2006.

Sharon A. Pyrek, Deputy Clerk — Date: 03/09/06

13

747079

As prepared by:
GROTHMAN & ASSOCIATES, S.C.
LAND SURVEYORS
PO BOX 373 PORTAGE, WI 53901
Phone Portage (608) 742-7788
Phone Sauk (608) 644-8877
Fax (608) 742-0434
e-mail surveying@grothman.com
G&A

SEAL:

WISCONSIN
JAMES R. GROTHMAN
S-1321
PORTAGE
WISCONSIN
LAND SURVEYOR
4-24-06

G & A FILE NO. 106-26
DRAFTED BY: D. ABLEMAN
CHECKED BY: J.R.G.
PROJ. 797-392
DWG. 10626A SHEET 1 OF 3

DOC # 747079
REGISTER OF DEEDS
COLUMBIA COUNTY

RECORDED ON:
05/02/2006 12:51:51PM
PAGES: 3

LISA WALKER
REGISTER OF DEEDS

REC FEE: 15.00
Exempt #:

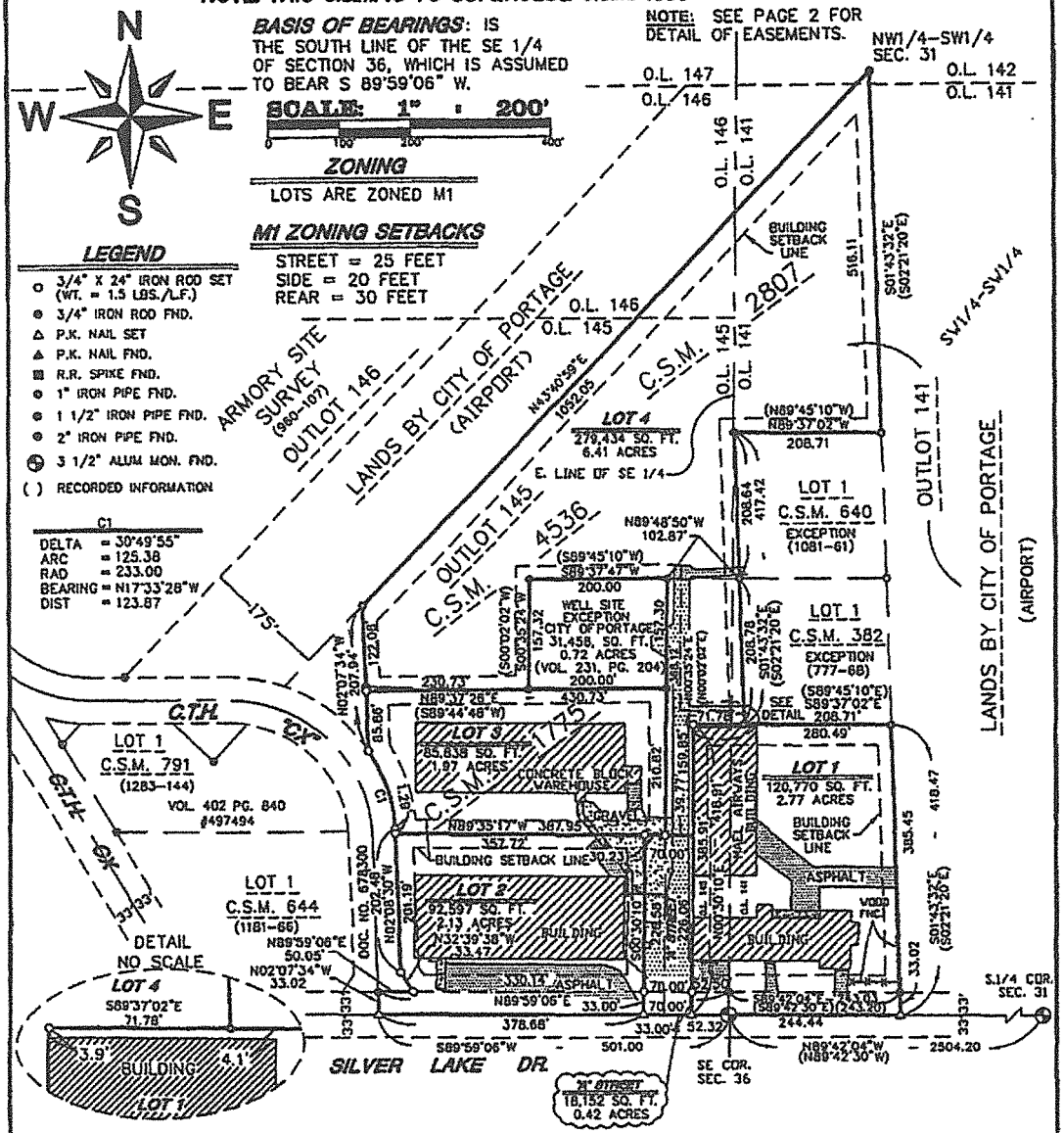
COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. 4561

Volume 32 Page 46

GENERAL LOCATION

BEING PART OF LOT 1, C.S.M. 1776, LOT 1, C.S.M. 2807 AND C.S.M. 4536, AND A PART OF OUTLOTS 141, 142, 145 AND 146 ASSESSOR'S SUBDIVISION, LOCATED IN THE SE 1/4 OF THE SE 1/4, SECTION 36, T.13 N, R.8 E, AND THE SW 1/4 OF THE SW 1/4, AND THE NW 1/4 OF THE SW 1/4, SECTION 31, T.13 N, R.9 E, CITY OF PORTAGE, COLUMBIA COUNTY, WISCONSIN. CONTAINING: 596,792 SQ. FT. – 13.70 ACRES

NOTE: THIS C.S.M. IS TO SUPERCEDE C.S.M. 4536



OWNER:	CLIENT:
PORTAGE AIRPORT PROPERTY, LLC. N8060 WEYH ROAD PORTAGE, WI 53901	CITY OF PORTAGE 115 W. PLEASANT STREET PORTAGE, WI 53901

As prepared by:
GROTHMAN & ASSOCIATES, S.C.
LAND SURVEYORS
PO BOX 373 PORTAGE, WI 53901
Phone Portage (608) 742-7788
Phone Sauk (608) 644-8877
Fax (608) 742-0434
e-mail surveying@grothman.com
G&A

SEAL:

WISCONSIN
JAMES R. GROTHMAN
S-1321
PORTAGE
WISCONSIN
LAND SURVEYOR

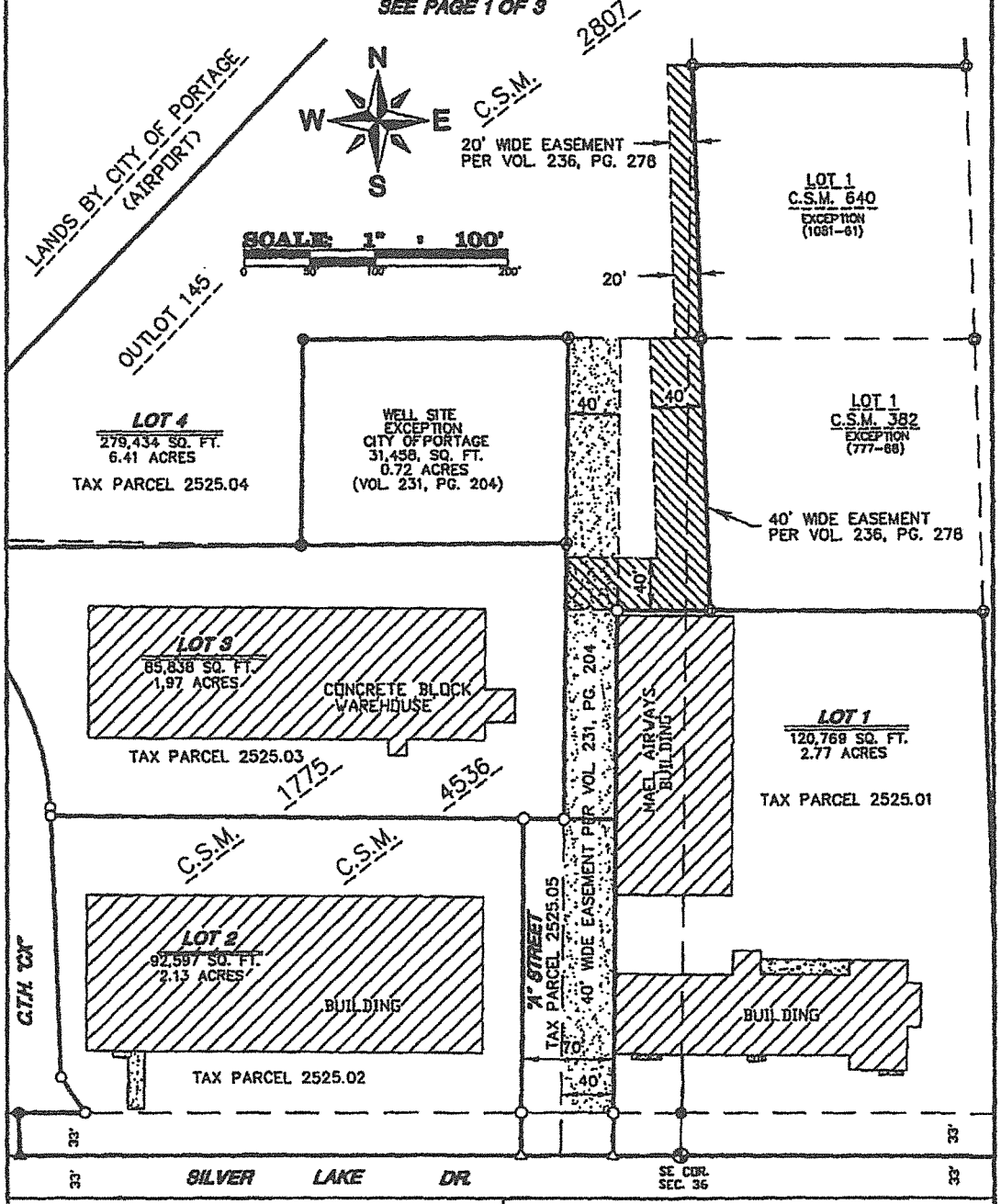
4-21-06

G & A FILE NO. 108-96
DRAFTED BY: D. ABLEMAN
CHECKED BY: J.R.G.
PROJ. 797-392
DWG. 10626A SHEET 2 OF 3

COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. _____

GENERAL LOCATION
SEE PAGE 1 OF 3

Volume_____, Page_____



OWNER:	CLIENT:
PORTAGE AIRPORT PROPERTY, LLC. N8060 WEYH ROAD PORTAGE, WI 53901	CITY OF PORTAGE 115 W. PLEASANT STREET PORTAGE, WI 53901

SURVEYOR'S CERTIFICATE

I, **JAMES R. GROTHMAN**, Registered Land Surveyor, do hereby certify that by the order of City of Portage, I have surveyed, monumented, mapped and divided a part of Lot 1, Certified Survey Map, No. 1775, Lot 1, Certified Survey Map, No. 2807 and Certified Survey Map, No. 4536 and a part of Outlots 141, 142, 145, and 146 of the Assessor's Subdivision all located in the Southeast Quarter of the Southeast Quarter of Section 36, Town 13 North, Range 8 East the Southwest Quarter of the Southwest Quarter and the Northwest Quarter of the Southwest Quarter of Section 31, Town 13 North, Range 9 East, City of Portage, Columbia County, Wisconsin, described as follows:

Beginning at the southeast corner of said Section 36, said point being in the center line of Silver Lake Drive; thence South 89°59'06" West along the center line of said Silver Lake Drive, 501.00 feet;
thence North 02°07'34" West along the east line of Lot 1, Certified Survey Map, No. 644 and the west line of Certified Survey Map, No. 1775, 33.02 feet to a point on the northerly right-of-way line of Silver Lake Drive;
thence North 89°59'06" East along said northerly right-of-way line of Silver Lake Drive, 50.05 feet to the point of intersection of the northerly right-of-way line of Silver Lake Drive with the easterly right-of-way line of County Trunk Highway CX;
thence North 32°39'38" West along the easterly right-of-way line of County Trunk Highway CX, 33.47 feet;
thence North 02°08'30" West along said easterly right-of-way line of County Trunk Highway CX, 202.48 feet;
thence Northwesterly along a 233.00 foot radius curve to the left in said easterly right-of-way line of County Trunk Highway CX having a central angle of 30°49'55" and whose long chord bears North 17°33'28" West, 123.87 feet to a point on the east line of Lot 1, Certified Survey Map, No. 791 and the west line of Certified Survey Map, No. 1775;
thence North 02°07'34" West along said east line of Lot 1, Certified Survey Map, No. 791, 207.94 feet to the northeast corner of said Lot 1, Certifiad Survey Map, No. 791;
thence North 43°40'59" East along the southeast line of lands owned by City of Portage 1,052.05 feet;
thence South 01°43'32" East along the west line of said lands owned by the City of Portage and the east line of Certified Survey Map, No. 2807, 516.11 feet to the northeast corner of Lot 1, Certified Survey Map, No. 640;
thence North 89°37'02" West along the north line of said Lot 1, Certified Survey Map, No. 640, 208.71 feet;
thence South 01°43'32" East along the west line of said Lot 1, Certified Survey Map, No. 640, 208.64 feet to the southwest corner of said Lot 1, Certified Survey Map, No. 640;
thence North 89°48'50" West, 102.87 feet to the northeast corner of lands described and recorded in Volume 231, page 204;
thence South 89°37'47" West along said north line of lands described and recorded in Volume 231, page 204, 200.00 feet to the northwest corner thereof;
thence South 00°35'24" West along the west line of lands described and recorded in Volume 231, page 204, 157.32 feet to the southwest corner thereof;
thence North 89°37'26" East along the south line of lands described and recorded in Volume 231, page 204, 200.00 feet to the southeast corner of thereof;
thence North 00°35'24" East along the east line of lands described and recorded in Volume 231, page 204, 157.30 feet to the northeast corner thereof;
thence South 89°48'50" East, 102.87 feet to the northwest corner of Lot 1, Certified Survey Map, No. 382;
thence South 01°43'32" East along the west line of said Lot 1, Certified Survey Map, No. 382, 208.78 feet to the southwest corner of said Lot 1;
thence South 89°37'02" East along the south line of said Lot 1, Certified Survey Map, No,. 382, 208.71 feet;
thence South 01°43'32" East along the west line of said lands owned by the City of Portage and the east line of Lot 1, Certified Survey Map, No. 2807, 418.47 feet to the center line of said Silver Lake Drive;
thence North 89°42'04" West along said center line of Silver Lake Drive, 244.44 feet to the point of beginning. Containing 596,792 square feet, (13.70 acres), more or less. And being subject to Silver Lake Drive right-of-way along the southerly side thereof and servitudes and easements of use or record if any.

I **DO FURTHER CERTIFY** that this is a true and correct representation of the boundaries of the land surveyed and that I have fully complied with the Provisions of Chapter 236.34 of the Wisconsin State Statutes and the City of Portage Subdivision Ordinance in surveying and mapping the same to the best of my knowledge and belief.

WISCONSIN
JAMES R. GROTHMAN S-1321 PORTAGE WISCONSIN
LAND SURVEYOR

JAMES R. GROTHMAN
Registered Land Surveyor, No. 1321
Dated: April 21, 2006
File No. 106-26

COMMON COUNCIL RESOLUTION

RESOLVED that the Certified Survey Map and the lands as dedicated on such map in the City of Portage, Columbia County, Wisconsin is hereby approved and accepted by the Common Council.

Jeff G. Grothman, Mayor — Date: 04-28-06

I HEREBY certify that the foregoing is a copy of a Resolution adopted by the Common Council of the City of Portage, Wisconsin, this 27th day of April, 2006.

Marie A. Moe, City Clerk — Date: 04-28-06

Grant Assurance vs. Title Report Review

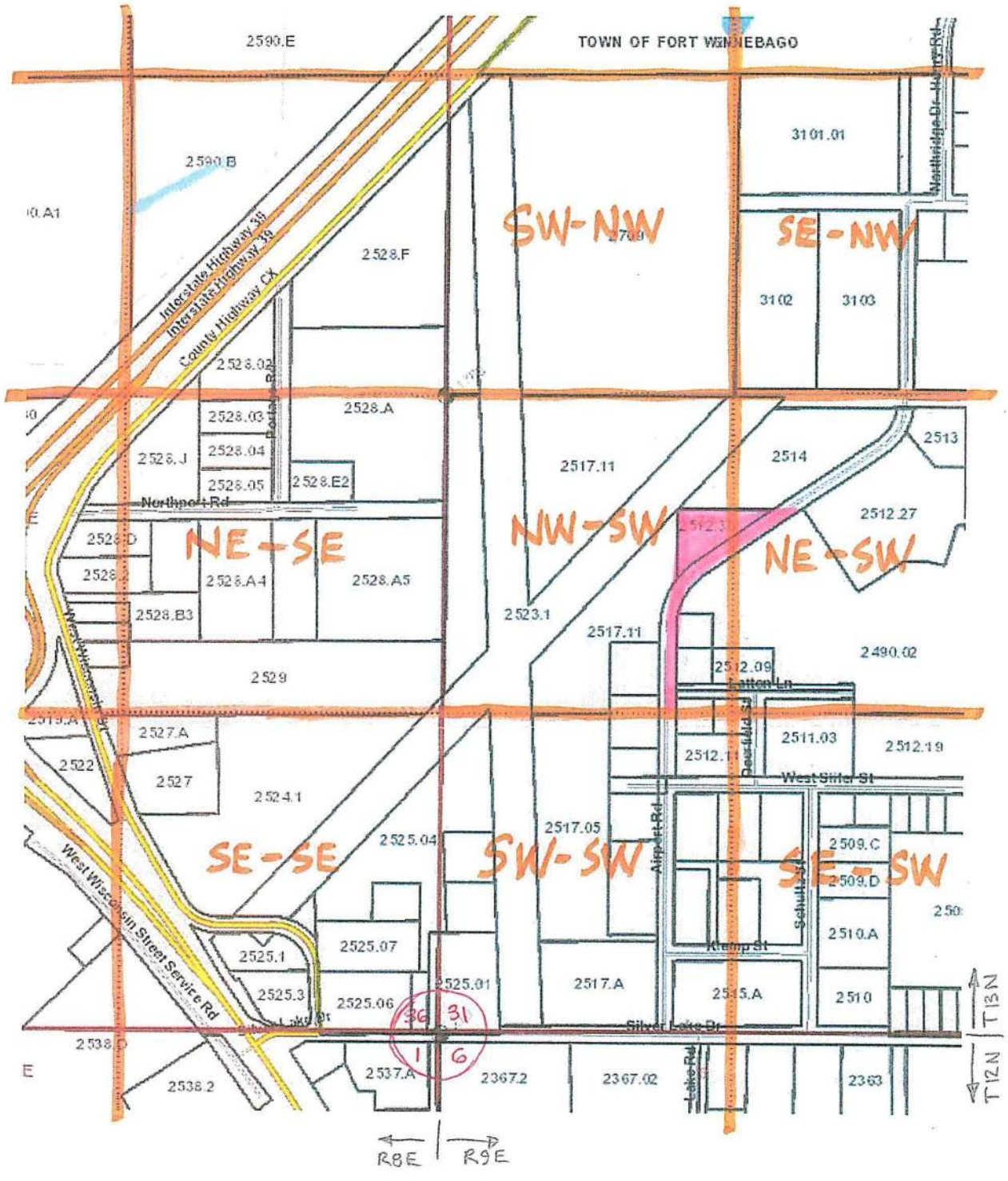
Portage Municipal Airport (C47), Portage, WI

June 5, 2017

Wisconsin River Title Parcel Reference #: 216123169

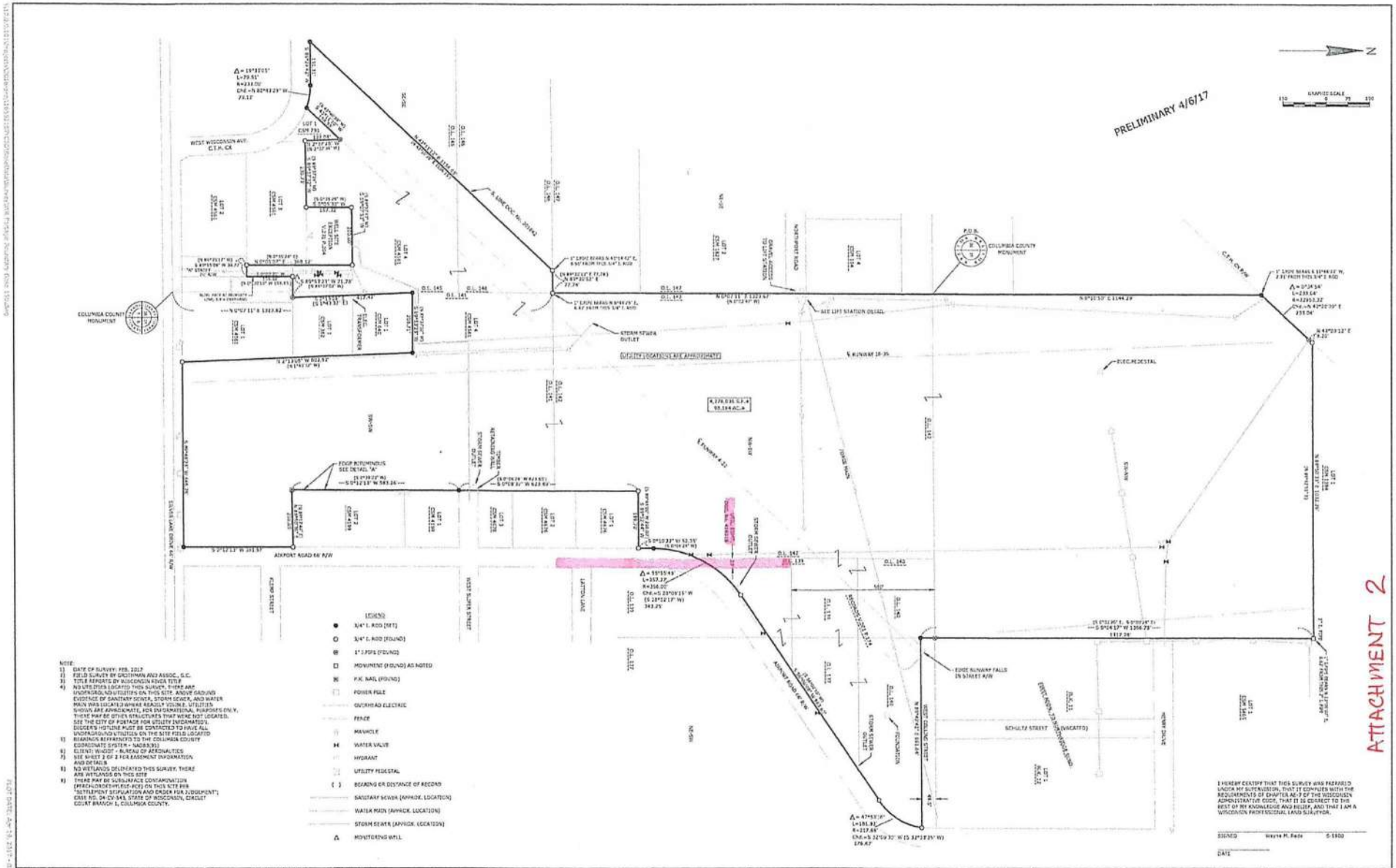
Wayne Rado, PLS/Brad Volker, PE

1) Parcel Footprint – refer to Attachment 1
2) Grant Assurance Items of Interest:
   a) Utility Easement, V.233 P.68, Doc. #416018 recorded 7/9/81
      i) Grantor: Howard Latton; Grantee: City of Portage
      ii) Approximate footprint of agreement – refer to Attachment 2
      iii) Summary/Comments: Cooper Engineering speculates that this agreement was made between Latton and the City for utility installation prior to Airport Road being constructed in this area. Water main was installed this location, but it appears to be westerly of the easement itself, on City of Portage property (see Rado 2017-surveyed water valve locations on Attachment 2). City of Portage Water Main mapping (see Attachment 3) shows the general layout of water main in addition to the water valves surveyed per Attachment 2.
      iv) Recommended action: Review this easement (and existing utility locations) with Sponsor and WisDOT-BOA.
3) Title Report attached to end of this packet for reference
4) End of Review



21G123169

Attachment 1



NO.	BY	DATE	REVISIONS

CEC PROJECT NO.	16552157
DRAWN BY	WR
ISSUE DATE	
PROJECT MANAGER	BV
CHECKED BY	JN
APPROVED BY	BV

COOPER ENGINEERING
2603 COLLEGE DRIVE, P.O. BOX 230
RICE LAKE, WISCONSIN 54868-0230
TELEPHONE (715) 234-9008
FAX (715) 234-1025

PORTAGE MUNICIPAL AIRPORT - C47

PORTAGE, WISCONSIN
MAP OF BOUNDARY SURVEY

3/31/17
SHEET 1 OF 2

ATTACHMENT 2

City of Portage Water System Map

January 19, 2017



LEGEND
Hydrant
With out Valve
With Valve
Valve Collection
Valve is On, Top Removed
Valve is Off, Top Removed
Air Release Valve
Main Valve
Water Mains (1)
Service (Cast/D.I.)
Fire Protection
Raw Water
Main, 2"
Main, 4"
Main, 6"
Main, 8"
Main, 10"
Main, 12"
Main, 14"
Main, 16"
Water Main Structure
Reservoir
Well
Cap
Booster Station
Meter and Vault
High Pressure Zone
CityLimits
RailRoad
Water

WISCONSIN RIVER TITLE CONSULTANTS LLC

REPORT OF TITLE

Cooper Engineering
2600 College Dr.
Rice Lake, WI 54868
Attn: Wayne

LEGAL DESCRIPTION:
A parcel located in part of Outlot One Hundred Thirty-nine (139) and part of Outlot One Hundred Thirty-seven (137), City of Portage Assessor's Subdivision Outlots, located in part of the North Half of the Southwest Quarter, Section 31, Township 13 North Range 9 East, City of Portage, Columbia County, Wisconsin, described as follows: Commencing at the Southwest corner of said Outlot 139; thence easterly along the South line of said Outlot, 33.00 feet; thence North along a future street right-of-way, parallel with the West line of said Outlot, 308.00 feet, more or less to the point of curvature of a 300.00 foot radius curve to the right, having a central angle of 56°00'22", and whose long chord bears North 28°00'00" East, 281.68 feet; thence Northeasterly along the arc of said 300.00 foot radius curve and said future street right-of-way, 293.21 feet to the point of tangency thereof; thence North 56° East, along said future street right-of-way, 472.00 feet more or less to a point on the South line of lands as described in Volume 201, page 174 of Deeds; thence West along said South line of lands as described in Volume 201, Page 174 of Deeds, 556.00 feet more or less to a point on the West line of said Outlot, 139.00 feet; thence South along the West line of aforesaid Outlot 139, 820.00 feet to the Southwest corner thereof and the point of beginning.

We have searched the Register of Deeds records relative to the captioned real estate and the grantee in the most recent recorded conveyance is:
City of Portage

Since the recording of said conveyance, the following mortgages have been recorded:
None

UNPAID MONEY JUDGMENTS / TAX LIENS / CONSTRUCTION LIEN CLAIMS FOR THE LAST TEN YEARS:
None

MISCELLANEOUS:
Utility Easement terms and conditions as recorded in Vol. 233 of Records, page 68, as #416018.

TAX PARCEL NO.:
11271-2512.30

REAL ESTATE TAXES:
TAX EXEMPT

NOTE: THIS REPORT DOES NOT CONTAIN INFORMATION RELATIVE TO EASEMENTS OR RESTRICTIONS THAT MAY BE OF RECORD.

"THIS REPORT IS FOR INFORMATIONAL PURPOSES ONLY. THE LIABILITY OF WISCONSIN RIVER TITLE CONSULTANTS, LLC (HEREINAFTER "THE COMPANY") IN ISSUING THIS REPORT IS LIMITED TO A MAXIMUM AMOUNT OF $1,000.00 SUCH LIABILITY IS FOR REASONABLE CARE IN MAKING THIS SEARCH. THIS REPORT IS NOT AN ABSTRACT OF TITLE OR A TITLE INSURANCE COMMITMENT OR POLICY AND SHOULD NOT BE RELIED UPON IN PLACE OF SUCH. IT IS NOT THE INTENTION OF THE COMPANY TO PROVIDE ANY TYPE OF EXPRESS OR IMPLIED WARRANTY, GUARANTY, OR INDEMNITY WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED IN THE REPORT. IF THIS REPORT IS TO BE USED BY THE CUSTOMER AS THE SEARCH REQUIRED IN ORDER FOR THE CUSTOMER TO ISSUE A TITLE INSURANCE COMMITMENT OR POLICY, OR IF THE INFORMATION CONTAINED IN THIS REPORT IS RESOLD, THE CUSTOMER DOES SO AT THEIR OWN RISK. IN ORDER TO OBTAIN INFORMATION FROM THE COMPANY WHICH WILL CARRY THE FULL LIABILITY OF A TITLE INSURANCE COMMITMENT OR POLICY, THE COMPANY WILL ISSUE, IF REQUESTED, A COMMITMENT OF TITLE INSURANCE AND WILL CHARGE A FEE IN COMPLIANCE WITH RATES FILED WITH THE APPROPRIATE STATE OFFICES."

FILE NO.: **216123169**

EFFECTIVE DATE: **January 20, 2017 at 7:44 AM**

Wisconsin River Title Consultants, LLC

Vol. 298 Page 69

314015

STATE OF WISCONSIN } ss
COLUMBIA COUNTY }

Received for record this .....9..... day of
July .....A.D. 1981...at 1:10 P. M.
Marian Robinson Reg. of Deeds

UTILITY EASEMENT

THE GRANTOR, Howard Latton, in consideration of the sum of One Dollar ($1.00), this day paid to him by THE CITY OF PORTAGE, receipt whereof is hereby acknowledged, do hereby grant, convey and warrant unto the said CITY OF PORTAGE, the grantee herein, its successor and assigns, the perpetual right of way and easement in, under and over the surface of the land hereinafter described and the right to construct, place, replace, maintain, remove and operate thereon overhead or underground water and sewer lines, said right of way being through that certain tract of land in the City of Portage, County of Columbia, and State of Wisconsin, to-wit:

"The parcel of land granted for a utility easement is in the S 1/2 of the SW 1/4 of Section 31, T13N, R9E and being a part of Outlot 139 of the City of Portage, Columbia County, Wisconsin described as follows:

Commencing at a county monument at the Southwest corner of said Section 31, Township 13 North, Range 9 East, which point is also on the centerline of Silver Lake Drive; thence North 89° 42' 30" East, 957.86 feet along the centerline of Silver Lake Drive; thence North along the Easterly line of Airport Street, 1326.00 feet to a point which is the point of beginning of this description; thence North, 820 feet more or less to the property line between the Latton and City of Portage lands; thence South 89° 42' 30" West, 33 feet to a point which is the property corner between the Latton lands to the south, the City of Portage lands to the north and the Portage Municipal Airport to the west; thence South along the westerly property line of the Latton land, 820 feet more or less to the property line between Latton and Klemp lands; thence North 89° 42' 30" East, 33 feet to the point of beginning."

THE GRANTEE herein and its successors and assigns shall have the right to do whatever may be required for the enjoyment of the rights herein granted, including the right of clearing said right of way of trees and shrubbery and of ingress and egress to and from said tract of land for the purpose of laying, maintaining, repairing, renewing, changing the size of, and restoring sewer and water lines, and appurtenances thereto and for the purpose of removing the same.

THE GRANTOR agrees that no buildings or other structures shall be erected or trees planted which will interfere with the operation, maintenance or removal of said sewer and water lines, and further agree that there

shall be no other utilities placed along such easement strips, without the written consent of the grantee.

Said Grantee shall not have the right to erect any fence or building on said lands other than the above described lines for sewer and water, and the right is hereby expressly reserved to said grantors, their successors and assigns, of every use and enjoyment of said land not inconsistent with the maintenance, operation, repair or removal of the above described water and sewer lines, and the trimming and removal of such trees or shrubs as aforesaid.

THIS AGREEMENT IS BINDING UPON THE HEIRS, SUCCESSORS AND ASSIGNS OF THE PARTIES HERETO.

Witness our hands and seals of the grantor this 7th day of July, 1981.

Howard Latton (SEAL)
Howard Latton

AUTHENTICATION

Signature authenticated this 9th day of July, 1981.

Francis W. Murphy - Attorney at Law

This instrument was drafted by:

Francis W. Murphy
Attorney at Law
Portage, WI 53901

VOL 233 PAGE 08

Grant Assurance vs. Title Report Review

Portage Municipal Airport (C47), Portage, WI

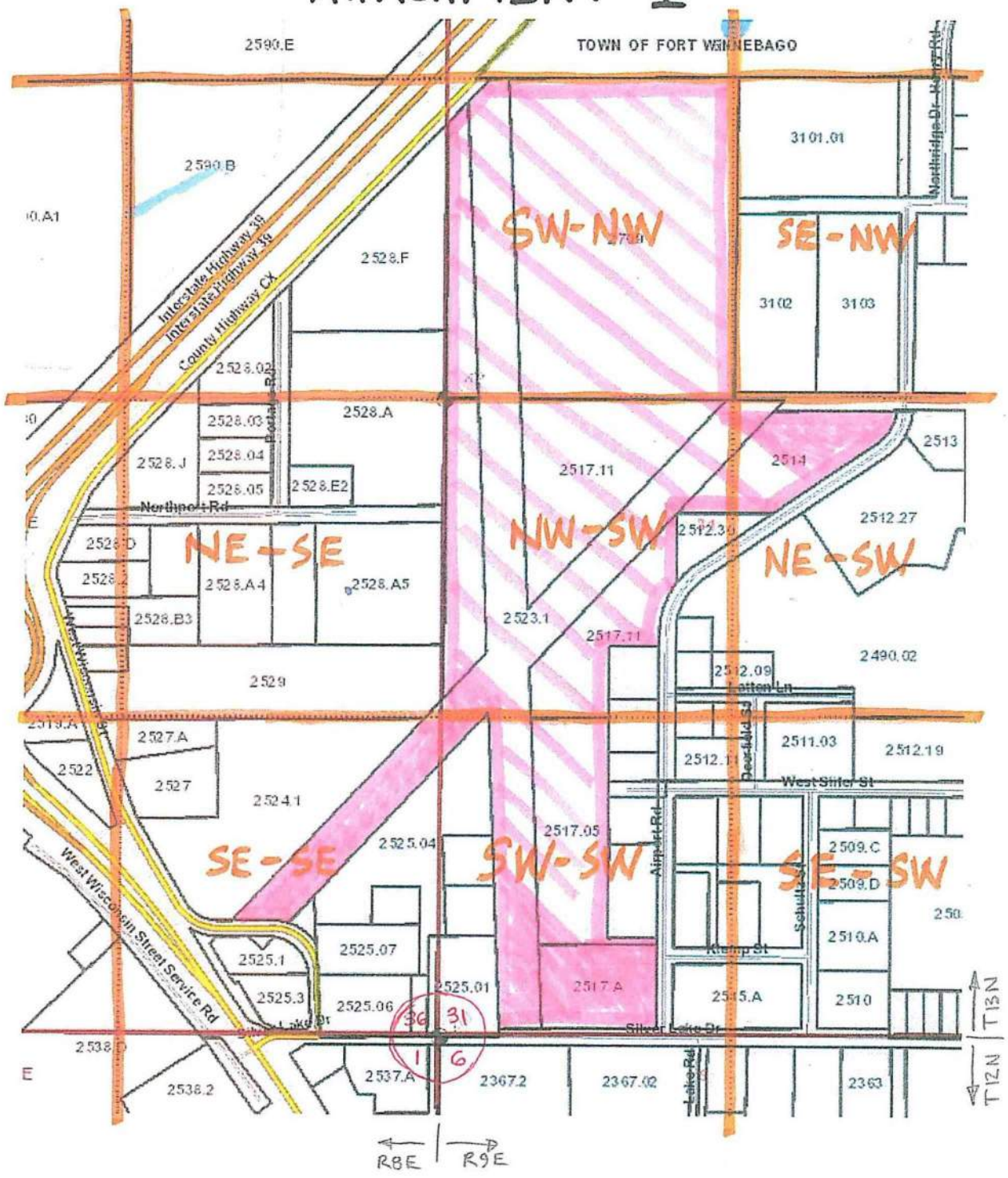
June 5, 2017

Wisconsin River Title Parcel Reference #: 216123167

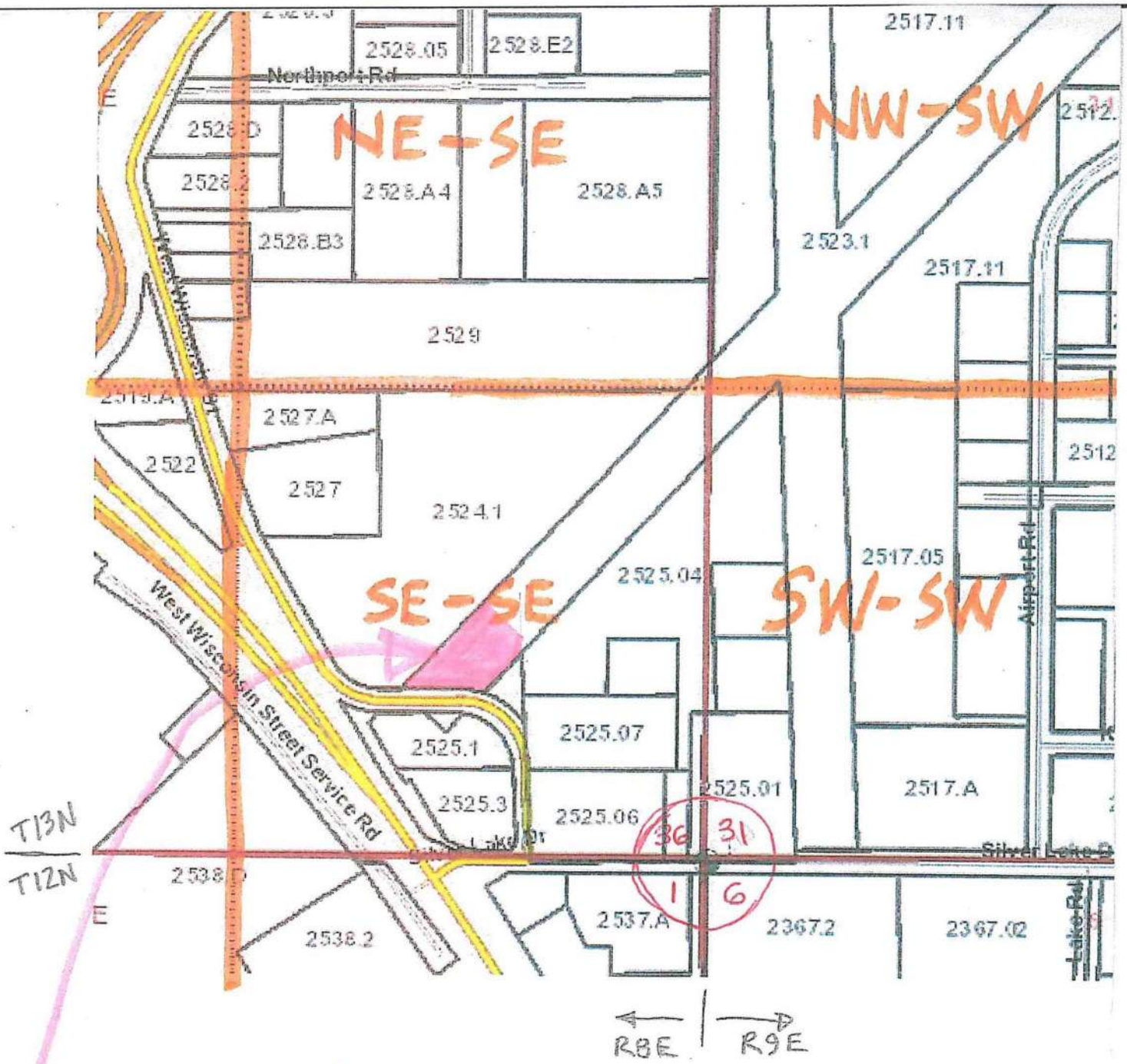
Brad Volker, PE

1) Parcel Footprint – refer to Attachment 1
2) Grant Assurance Items of Interest:
   a) Right of First Refusal Agreement, Doc. #804813 recorded 12/17/09
      i) Grantor: City of Portage; Grantee: Richard W. and Sheila K. Gyr
      ii) Approximate footprint of agreement – refer to Attachment 2
      iii) Summary/Comments: The Right of First Refusal terminates with Gyr's choice to not exercise right upon 3rd party offer (offer that the city is willing to accept), or upon death of both Gyr's. Right may not be assigned. Right may only be exercised upon sale of airport (which requires prior written FAA and/or WisDOT-BOA approval for obligated airport property). Right does not interfere with airport operations or development.
      iv) Recommended Action: City should assure that this encumbrance is allowed to lapse or is otherwise terminated. No formal action required. Review of agreement with current Sponsor representatives, however, recommended.
3) Title Report attached to the end of this packet for reference
4) End of Review

ATTACHMENT 1



216123167



Right of First Refusal 804813 Nov./Dec. 2009

ATTACHMENT 2

WISCONSIN RIVER TITLE CONSULTANTS LLC

60 YEAR REPORT OF TITLE

Cooper Engineering
2600 College Dr.
Rice Lake, WI 54868
Attn: Wayne

LEGAL DESCRIPTION:
All of the Southwest Quarter of the Northwest Quarter, Section 31, Township 13 North, Range 9 East, City of Portage, Columbia County, Wisconsin, as annexed to the City of Portage by Ordinance #560, dated January 6, 1948; and the following Outlots, or parts of Outlots, according to the Assessor's Plat of the City of Portage, Columbia County, Wisconsin; Part of Outlots 136, 137, 139 and 140 as described in Volume 201, Page 174 of Columbia County Deeds; All of Outlots 141 and 142 as described in Volume 194, Page 332 of Columbia County Deeds, except a tract described as follows: Commencing at an iron stake marking the Southwest corner of Section 31, Township 13 North, Range 9 East; thence North, along the West line of said Section, which is the West line of Outlots 141 and 142, 33 feet to the North line of Silver Lake Drive, the point of beginning of the tract to be described; thence continuing North along said Section line, 1,123.1 feet to a point; thence North 44°46' East, 270 feet to a point which is 75 feet Westerly of the centerline of the paved runway; thence South 2°19' East, a long a line which is parallel to and 75 feet from the centerline of the paved runway, 1,315.9 feet to a point on the North line of Silver Lake Drive; thence West along the North line of Silver Lake Drive, 243.2 feet to the Section line and the point of beginning. ALSO, a tract of land in Outlots 145 and 146 described as follows: Commencing at an iron stake marking the Southeast corner of section 36, Township 13 North, Range 8 East, City of Portage, Columbia County, Wisconsin; thence North along the East line of said Section which is the East line of Outlots 145 and 146, 1,156.1 feet to a point which is the point of beginning of the tract to be described; thence continuing North, along the Section line, 175.15 feet to a point; thence North 89°09' West, 71.7 feet to an iron stake marking the Northeast corner of the Armory tract; thence South 44°46' West along the Southeasterly line of Armory tract, 1,164.2 feet to a point (which point is 131 feet from an iron pin marking the South corner of armory tract); thence South 44°14' East, 175 feet to a point (which point is 120 feet North of the foundation of the present steel garage buildings and about 3 feet West of the projection of the front of said buildings); thence North 44°46' East, along a line which is parallel to and 175 feet from the Southeasterly line of Armory tract, 1,089.6 feet to a point on the Section line, which point is the point of beginning, said Outlots all being in the City of Portage Assessor's Subdivision Outlots, City of Portage, Columbia County, Wisconsin. EXCEPTING from the above referenced land, Certified Survey Map No. 889; Certified Survey Map No. 890; Certified Survey Map 4199; Certified Survey Map No. 4676 and land described in Volume 180 of Records, Page 317 as Document #388977; Volume 424 of Records, Page 66, as Document #507017 and in recorded Document #685886. EXCEPTING land described in Volume 288 of Deeds, Page 14. ALSO EXCEPTING land described in Warranty Deed recorded as Document No. 693683.

We have searched the Register of Deeds records relative to the captioned real estate and the grantee in the most recent recorded conveyance is:
City of Portage

Since the recording of said conveyance, the following mortgages have been recorded:
None

UNPAID MONEY JUDGMENTS / TAX LIENS / CONSTRUCTION LIEN CLAIMS FOR THE LAST TEN YEARS:
None

MISCELLANEOUS:
Right of First Refusal Agreement dated November 25, 2009, recorded December 17, 2009, as Document No. 804813.

TAX PARCEL NO.:
11271-2523.1
11271-2517.05
11271-2517.11
11271-2514
11271-2517.A
11271-2709

REAL ESTATE TAXES:
TAX EXEMPT

NOTE: THIS REPORT DOES NOT CONTAIN INFORMATION RELATIVE TO EASEMENTS OR RESTRICTIONS THAT MAY BE OF RECORD.

WISCONSIN RIVER TITLE CONSULTANTS LLC

"THIS REPORT IS FOR INFORMATIONAL PURPOSES ONLY. THE LIABILITY OF WISCONSIN RIVER TITLE CONSULTANTS, LLC (HEREINAFTER "THE COMPANY") IN ISSUING THIS REPORT IS LIMITED TO A MAXIMUM AMOUNT OF $1,000.00 SUCH LIABILITY IS FOR REASONABLE CARE IN MAKING THIS SEARCH. THIS REPORT IS NOT AN ABSTRACT OF TITLE OR A TITLE INSURANCE COMMITMENT OR POLICY AND SHOULD NOT BE RELIED UPON IN PLACE OF SUCH. IT IS NOT THE INTENTION OF THE COMPANY TO PROVIDE ANY TYPE OF EXPRESS OR IMPLIED WARRANTY, GUARANTY, OR INDEMNITY WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED IN THE REPORT. IF THIS REPORT IS TO BE USED BY THE CUSTOMER AS THE SEARCH REQUIRED IN ORDER FOR THE CUSTOMER TO ISSUE A TITLE INSURANCE COMMITMENT OR POLICY, OR IF THE INFORMATION CONTAINED IN THIS REPORT IS RESOLD, THE CUSTOMER DOES SO AT THEIR OWN RISK. IN ORDER TO OBTAIN INFORMATION FROM THE COMPANY WHICH WILL CARRY THE FULL LIABILITY OF A TITLE INSURANCE COMMITMENT OR POLICY, THE COMPANY WILL ISSUE, IF REQUESTED, A COMMITMENT OF TITLE INSURANCE AND WILL CHARGE A FEE IN COMPLIANCE WITH RATES FILED WITH THE APPROPRIATE STATE OFFICES."

FILE NO.: **216123167**

EFFECTIVE DATE: **January 20, 2017 at 7:44 AM**

Wisconsin River Title Consultants, LLC

Warranty Deed—To Corporation. State of Wisconsin—Form No. 2. FOYNETTE PRESS PUB. CO.

VOL 284 PAGE 239

This Indenture, Made this 17th day of October A. D. 1961,

between Robert A. Ideal, a single man

part y of the first part and

City of Portage, (a Municipal Corporation)

a duly organized and existing under and by virtue of the laws of the State of Wisconsin, located at Portage Wisconsin, party of the second part.

Witnesseth, That the said party of the first part, for and in consideration of the sum of One dollar and other good and valuable consideration

to him in hand paid by the said party of the second part, the receipt whereof is hereby confessed and acknowledged, has given, granted, bargained, sold, remised, released, aliened, conveyed and confirmed, and by these presents does give, grant, bargain, sell, remise, release, alien, convey and confirm unto the said party of the second part, its successors and assigns forever, the following described real estate situated in the County of Columbia and State of Wisconsin, to-wit:

All of the Southwest Quarter of Northwest Quarter of Section 31, Township 13 North, Range 9 East, as annexed to City of Portage by Ordinance #560 dated January 6, 1948; and the following Outlots, or parts of Outlots, according to the Assessor's Plat of the City of Portage, Wisconsin: Part of Outlots 136, 137, 139 and 140 as described in Vol. 201, page 174 of Columbia County Records; All of Outlots 141 and 142 as described in Vol. 194 page 492 of Columbia County Records, except a tract described as follows: Commencing at an iron stake marking the Southwest corner of Section 31, Township 13 North, Range 9 East, thence North, along the West line of said section which is the West line of Outlots 141 and 142, 33 feet to the North line of Silver Lake Drive, the point of beginning of the tract to be described; thence continuing North along said section line 1,123.1 feet to a point; thence North 44° 46' East, 270 feet to a point which is 75 feet Westerly of the centerline of the paved runway; thence South 2° 19' East, along a line which is parallel to and 75 feet from the centerline of the paved runway, 1,315.9 feet to a point on the North line of Silver Lake Drive; thence West along the North line of Silver Lake Drive 243.2 feet to the section line and point of beginning.

Also, a tract of land in Outlots 145 and 146 described as: Commencing at an iron stake marking the Southeast corner of Section 36, Township 13 North, Range 8 East, thence North, along the East line of said section which is the East line of Outlots 145 and 146, 1,156.1 feet to a point which is the point of beginning of the tract to be described; thence continuing North, along the section line, 175.15 feet to a point; thence North 89° 09' West, 71.7 feet to an iron stake marking the Northeast corner of the Armory tract; thence South 44° 46' West along the Southeasterly line of Armory tract, 1,164.2 feet to a point (which point is 131 feet from an iron pin marking the South corner of Armory tract); thence South 45° 14' East, 175 feet to a point (which point is 120 feet North of the foundation of the present steel garage buildings and about 3 feet West of the projection of the front of said buildings); thence North 44° 46' East along a line which is parallel to and 175 feet from the Southeasterly line of Armory tract, 1,089.6 feet to a point on the section line, which point is the point of beginning.

Containing in all, 105.9 acres more or less, as computed by scaled measurements on maps drawn from aerial survey.

And the said party of the first part will forever WARRANT AND DEFEND the above granted premises to the said party of the second part, its successors and assigns, against all and every person or persons lawfully claiming the whole or any part thereof.

In Witness Whereof, the said party of the first part has hereunto set his hand and seal this 17th day of October A. D. 19 61.

Signed and sealed in presence of

Robert A. Ideal (SEAL)

(SEAL)

(SEAL)

(SEAL)

R 10-23-61 284 Docs, 183 # 205071

Warranty Deed—To Corporation State of Wisconsin—Form No. 4. POYNETTE PRESS PUB. CO.

This Indenture, Made this 4TH day of October, A. D. 1961,

between Robert A. Mael, a single man

part y of the first part and

City of Portage, (a Municipal Corporation)

~~a corporation~~ duly organized and existing under and by virtue of the laws of the State of Wisconsin, located at Portage, Wisconsin, party of the second part.

Witnesseth, That the said party of the first part, for and in consideration of the sum of One dollar and other good and valuable consideration

to him in hand paid by the said party of the second part, the receipt whereof is hereby confessed and acknowledged, has given, granted, bargained, sold, remised, released, aliened, conveyed and confirmed, and by these presents does give, grant, bargain, sell, remise, release, alien, convey and confirm unto the said party of the second part, its successors and assigns forever, the following described real estate situated in the County of Columbia and State of Wisconsin, to-wit:

All of the Southwest Quarter of Northwest Quarter of Section 31, Township 13 North, Range 9 East, as annexed to City of Portage by Ordinance #560 dated January 6, 1948; and the following Outlots, or parts of Outlots, according to the Assessor's Plat of the City of Portage, Wisconsin: Part of Outlots 136, 137, 139 and 140 as described in Vol. 201, page 174 of Columbia County Records; All of Outlots 141 and 142 as described in Vol. 194 page 332 of Columbia County Records, except a tract described as follows: Commencing at an iron stake marking the Southwest corner of Section 31, Township 13 North, Range 9 East; thence North, along the West line of said section which is the West line of Outlots 141 and 142, 33 feet to the North line of Silver Lake Drive, the point of beginning of the tract to be described; thence continuing North along said section line 1,123.1 feet to a point; thence North 44° 46' East, 270 feet to a point which is 75 feet Westerly of the centerline of the paved runway; thence South 2° 19' East, along a line which is parallel to and 75 feet from the centerline of the paved runway, 1,315.9 feet to a point on the North line of Silver Lake Drive; thence West along the North line of Silver Lake Drive 243.2 feet to the section line and point of beginning.

Also, a tract of land in Outlots 145 and 146 described as: Commencing at an iron stake marking the Southeast corner of Section 36, Township 13 North, Range 8 East; thence North, along the East line of said section which is the East line of Outlots 145 and 146, 1,156.1 feet to a point which is the point of beginning of the tract to be described; thence continuing North, along the section line, 175.15 feet to a point; thence North 89° 09' West, 71.7 feet to an iron stake marking the Northeast corner of the Armory tract; thence South 44° 46' West along the Southeasterly line of Armory tract, 1,164.2 feet to a point (which point is 131 feet from an iron pin marking the South corner of Armory tract); thence South 44° 14' East, 175 feet to a point (which point is 120 feet North of the foundation of the present steel garage buildings and about 3 feet West of the projection of the front of said buildings); thence North 44° 46' East along a line which is parallel to and 175 feet from the Southeasterly line of Armory tract, 1,089.6 feet to a point on the section line, which point is the point of beginning.
Containing in all, 105.9 acres more or less, as computed by scaled measurements on maps drawn from aerial survey.

and that the above bargained premises in the quiet and peaceable possession of the said party of the second part, its successors and assigns, against all and every person or persons lawfully claiming the whole or any part thereof, he will forever WARRANT AND DEFEND.

In Witness Whereof, the said party of the first part has hereunto set his hand and seal this 4TH day of October, A. D. 19 61

SIGNED AND SEALED IN PRESENCE OF

James M. Daley

Jean A. Swanson

Robert A. Mael (SEAL)

(SEAL)

(SEAL)

(SEAL)

VOL 284 PAGE 184 VOL 284 PAGE 240

STATE OF WISCONSIN } ss
County of Columbia

Personally came before me, this 4TH day of October, A. D. 19 61
the above named Robert A. Mael, a single man

to me known to be the person who executed the foregoing instrument and acknowledged the same.

James M. Daley
Notary Public Columbia County, Wis.
My commission expires 3/24, A. D., 19 63

This instrument drafted by:
James M. Daley
Attorney at Law
Portage, Wisconsin

JAMES M. DALEY NOTARY PUBLIC COLUMBIA COUNTY, WIS.

INDEXED
Grantor
Grantee
RECHECKED
Grantor

305137

INDEXED
Grantor
Grantee
RECHECKED
Grantor

STATE OF WISCONSIN } ss
Columbia County, Wis.
Received for Record the 30 day of Oct A. D. 19 61
at 3:30 o'clock P.M., and recorded
in Vol 284 of Deeds page 239
Kenneth Buelow
Register.

No. 305071

WARRANTY DEED

To Mael

PRINT JUSTICE

REGISTER'S OFFICE
STATE OF WISCONSIN } ss
Columbia County
Received for Record this 23 day of
October A. D., 1961
at 2:15 o'clock P M., and recorded in
Volume 283 of Deeds, on page 183.
Kenneth Buelow
Register of Deeds
Deputy

City Clerk
City Hall
Portage, Wis.

441815

COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. 889

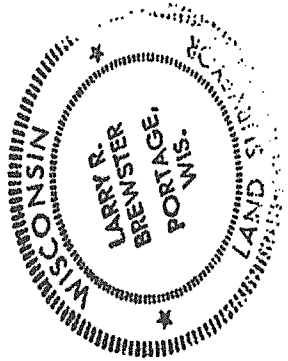
A PART OF OUTLOT 141, ASSESSOR'S SUBDIVISION OF THE CITY OF PORTAGE, LOCATED IN THE S.1/2 OF THE SW 1/4 OF SEC. 31, T 13N, R 9E, COLUMBIA COUNTY, WISCONSIN.

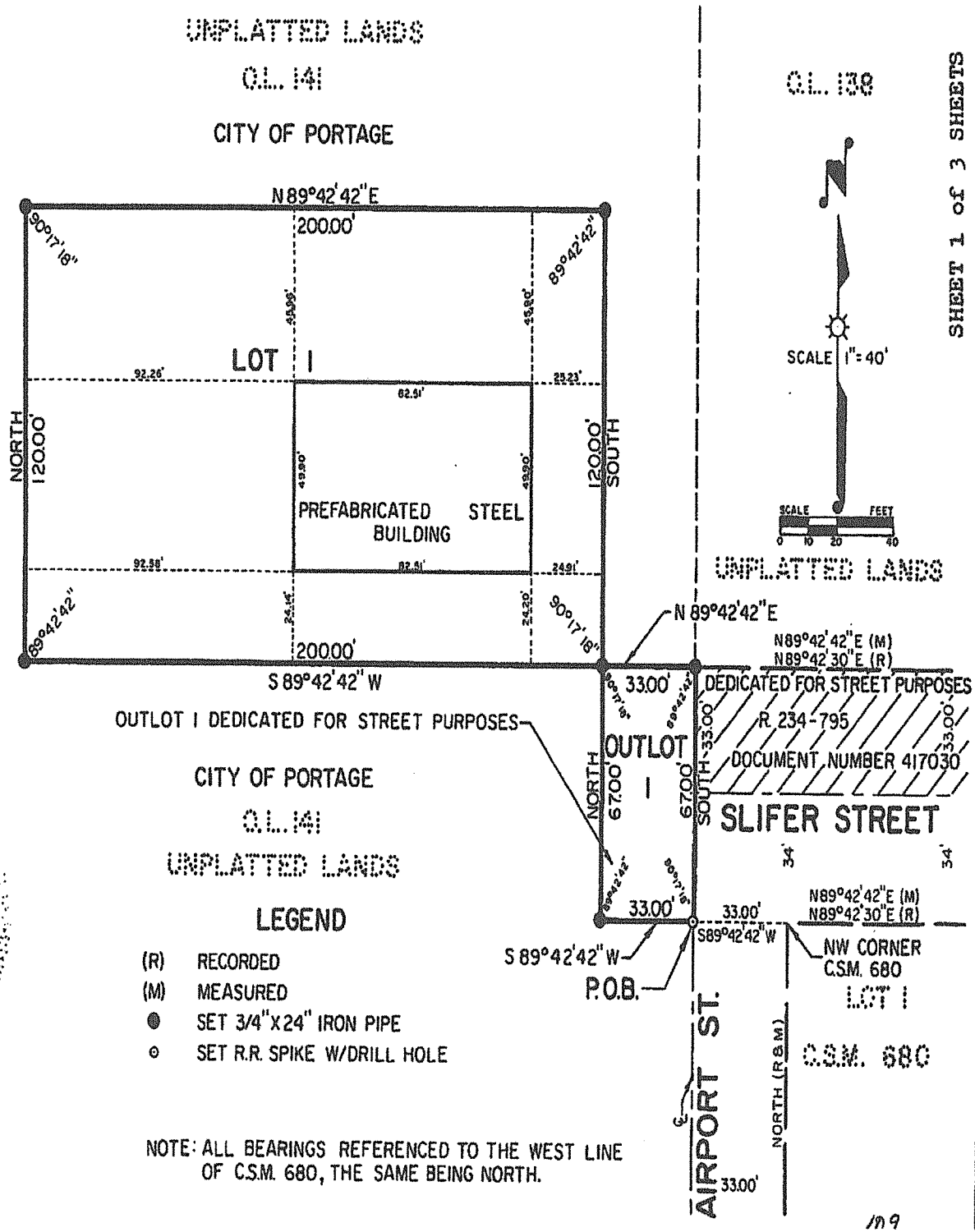
THIS INSTRUMENT DRAFTED BY BREWSTER & ASSOCIATES

SHEET 1 of 3 SHEETS

ACREAGE

LOT 1 — 0.5510 ACRES
OUTLOT 1-0.0508 ACRES
TOTAL 0.6018 ACRES





LEGEND

(R) RECORDED
(M) MEASURED
● SET 3/4"X24" IRON PIPE
⊙ SET R.R. SPIKE W/DRILL HOLE

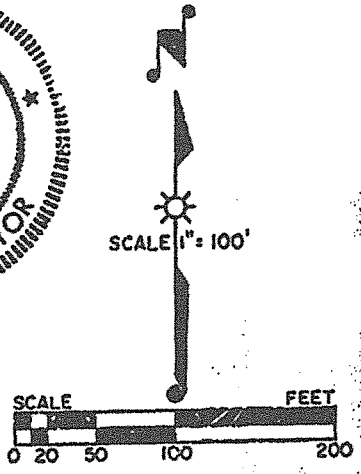
NOTE: ALL BEARINGS REFERENCED TO THE WEST LINE OF C.S.M. 680, THE SAME BEING NORTH.

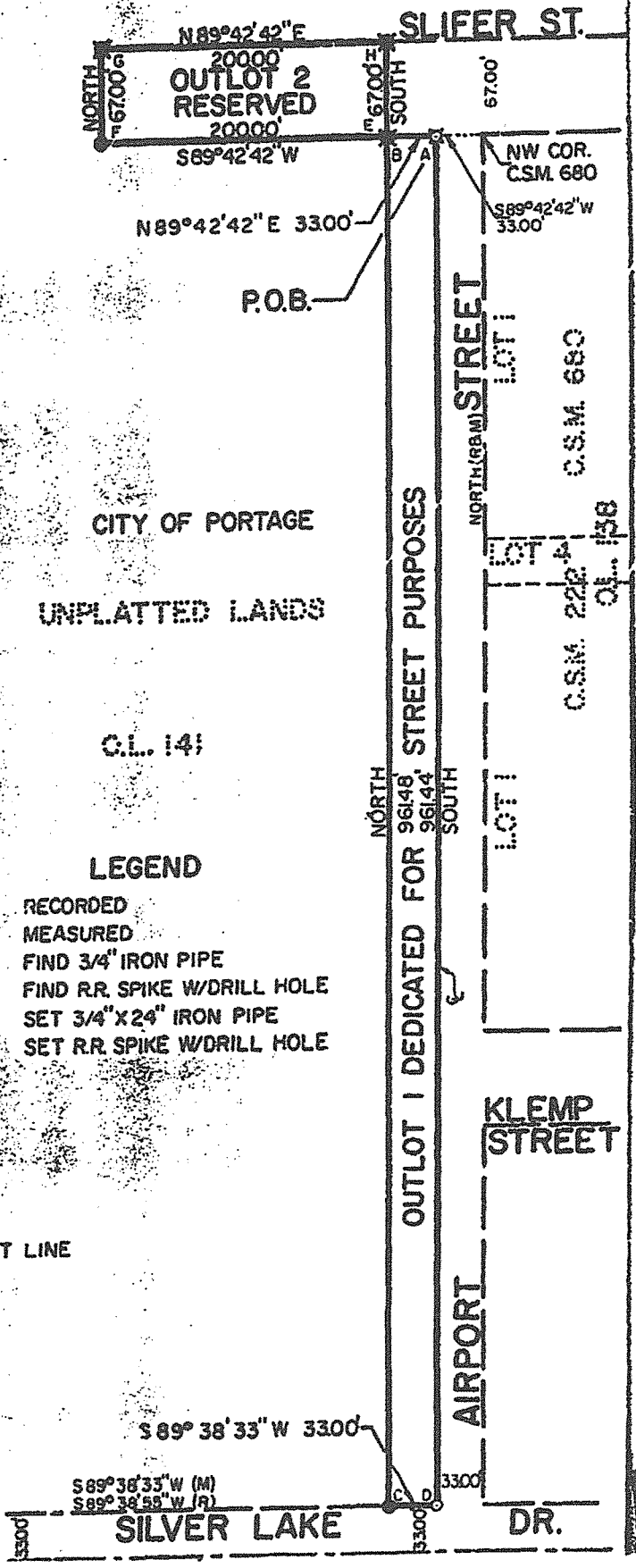
1/19

COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. 890

A PART OF OUTLOT 141, ASSESSOR'S SUBDIVISION OF THE CITY OF PORTAGE, LOCATED IN THE S 1/2 OF THE SW 1/4 OF SEC. 31, T 13 N, R 9 E, COLUMBIA COUNTY, WISCONSIN.

WISCONSIN
LARRY R. BREWSTER
PORTAGE, WIS.
LAND SURVEYOR





ACREAGE

OUTLOT 1	0.7284	ACRES
OUTLOT 2	0.3076	ACRES
TOTAL	1.0360	ACRES

TABLE OF ANGLES

A	89° 42' 42"
B	90° 17' 18"
C	89° 38' 33"
D	90° 21' 27"
E	90° 17' 18"
F	89° 42' 42"
G	90° 17' 18"
H	89° 42' 42"

LEGEND

(R)	RECORDED
(M)	MEASURED
▣	FIND 3/4" IRON PIPE
⌑	FIND R.R. SPIKE W/DRILL HOLE
●	SET 3/4" X 24" IRON PIPE
⊙	SET R.R. SPIKE W/DRILL HOLE

NOTE: ALL BEARINGS REFERENCED TO THE WEST LINE OF C.S.M. 680, THE SAME BEING NORTH.

011

SURVEYOR'S CERTIFICATE

I, Larry R. Brewster, Registered Land Surveyor, do hereby certify:

That I have surveyed, divided, and mapped a tract of land located in Outlot 141, Assessor's Subdivision of the City of Portage, all being in the S½ of the SW¼ of Section 31, T 13 N, R 9 E, City of Portage, Columbia County, Wisconsin.

That I have made such survey, land-division, and plat by the direction of the the City of Portage, owner of said land.

The tract is described as follows:

A parcel of land being a part of Outlot 141, Assessor's Subdivision of the City of Portage, located in the S½ of the SW¼ of Section 31, T 13 N, R 9 E, City of Portage, Columbia County, Wisconsin, more fully described as follows:

Commencing at the northwest corner of Certified Survey Number 680 as recorded in Volume 3, Page 155 of Certified Survey Maps of Columbia County; thence S 89°42'42" W, 33.00 feet to the point of beginning; thence South 961.44 feet to the northerly right of way line of Silver Lake Drive; thence S 89°48'33" W (recorded as S 89°38'55" W), 33.00 feet along the northerly right of way line of Silver Lake Drive; thence North 961.48 feet; thence S 89°42'42" W, 200.00 feet; thence North 67.00 feet; thence N 89°42'42" E, 200.00 feet; thence South 67.00 feet; thence N 89°42'42" E, 33.00 feet to the point of beginning.

The above described tract contains 1.0360 acres.

That such plat is a correct representation of all exterior boundaries of the land surveyed and the subdivision thereof made.

That I have fully complied with the provisions of Chapter 236.34 regarding Certified Surveys and the Subdivision Regulations of the City of Portage in surveying, dividing, and mapping the same.

That the survey is correct to the best of my knowledge and belief.

Dated this 16th day of April, 1985.

Larry R. Brewster RLS-705

OWNER'S CERTIFICATE OF DEDICATION

As owner, the City of Portage certifies that they have caused the land described on this plat to be surveyed, divided, mapped, and dedicated as represented on the plat.

WITNESS the hand and seal of said owner this 30th day of April, 1985.

In the prescence of:

Lisa E. Bisenius

Vincent P. Smith

Mayor, Vincent P. Smith

Lorna M. McMahon

Alma M. Braun

Clerk, Alma M. Braun

8

CERTIFICATE OF COUNTY REGISTER OF DEEDS

Received for record this 9th day of April 2004, at 8:00 o'clock A.m. & recorded in Volume 29 of Certified Survey Maps of Columbia County, Page 79

DOCUMENT NO. 711761

Columbia County Register of Deeds

COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. 4199

GENERAL LOCATION

BEING LOT 1, C.S.M. NO. 4143, LOCATED IN THE SW1/4 OF THE SW1/4, SECTION 31, T.13N. R.9E., CITY OF PORTAGE, COLUMBIA COUNTY WISCONSIN.

CONTAINING: 116,277 SQ. FT. – 2.67 ACRES PARCEL NO. 2517

BASIS OF BEARINGS: IS THE SOUTH LINE OF THE SW1/4 OF SEC. 31, WHICH IS ASSUMED TO BEAR S89°42'04"E.

LEGEND

- 3/4"x 24" IRON ROD SET (WT=1/5 LBS./L.F.)
- 3/4" IRON ROD FND.
- 3/4" IRON PIPE FND.
- P.K. FND
- COLUMBIA CO. MON. FND.

N W E S

NOTE: THIS PROPERTY IS ZONED B1.

SCALE: 1" = 100'

NOTE: THESE EASEMENTS ARE THE MINIMUM TO BE APPLIED FOR ALL PUBLIC UTILITIES TO ALL LOTS IN THIS PLAT. NO SURFACE IMPROVEMENTS (SUCH AS SHRUBS, HEDGES, ETC.) SHALL BE PLACED ON THE PROPERTY SUBJECT TO THE PUBLIC UTILITY EASEMENTS BY LOT OWNERS. THE CITY OF PORTAGE MAY USE THE PROPERTY SUBJECT TO THE EASEMENT FOR ALL PUBLIC UTILITY IMPROVEMENTS, BOTH SURFACE AND SUBSURFACE, INCLUDING, BUT NOT LIMITED TO SURFACE WATER DRAINAGE, STORM SEWER, STORM WATER DRAINAGE, SANITARY SEWER FACILITIES, ELECTRICAL, CABLE TV, TELEPHONE, ETC.

LANDS BY CITY OF PORTAGE
LOT 1
C.S.M. 889

66'

67.00' (OUTLOT 2)
(CSM 890) WEST SLIFER STREET
S89°37'55"E
67.00'

15' 200.00' 33' 33'

15' PUBLIC UTILITY EASEMENT
25' BUILDING SETBACK

192.08' 188.29'

15' LOT 1 38,036 SQ.FT 0.87 ACRES 15'

583.26' 50' 579.52'

25' BUILDING SETBACK

N89°16'57"E

200.05'

10' BUILDING SETBACK

LOT 2
78,241 SQ.FT
1.80 ACRES

LOT 1
C.S.M. 4143

15' PUBLIC UTILITY EASEMENT

50' BUILDING SETBACK

N00°39'23"E 391.18' 391.23' S00°39'23"W

ROAD

AIRPORT

LOT 1 C.S.M. 680 BY OTHERS

LOT 1 C.S.M. 222 BY OTHERS

ALTA SURVEY BY G&A (498–187)

LANDS BY THE CITY OF PORTAGE
PORTAGE MUNICIPAL AIRPORT
OUTLOT 141

B1 ZONING SETBACKS

STREET	= 25'
REAR	= 50'
SIDE	= 10'

HANGER HANGER

ASPHALT

HANGER

2.6'

10' BUILDING SETBACK

15' PUBLIC UTILITY EASEMENT

9.6'

200.05'

33' 33'

S89°17'46"W

12.0' 12.0'

HANGER HANGER

66'

KLEMP STREET

414.98' N00°39'23"E

WISCONSIN JAMES R GROTHMAN S-1321 PORTAGE WISCONSIN LAND SURVEYOR

3-31-04

LANDS BY THE CITY OF PORTAGE

SW COR. SEC. 31

S89°42'04"E – 890.49'

S. LINE SW1/4

1613.71'

S1/4 COR. SEC. 31

S89°42'04"E – 2504.20'

As prepared by:	OWNER	CLIENT
GROTHMAN & ASSOCIATES, S.C. LAND SURVEYORS PO BOX 373 PORTAGE, WI 53901 Phone Portage (608) 742-7788 Phone Sauk (608) 644-8877 Fax (608) 742-0434	RICHARD G. & MARY M. TAYLOR 235 WEST HOWARD STREET PORTAGE, WI 53901	RICHARD G. & MARY M. TAYLOR 235 WEST HOWARD STREET PORTAGE, WI 53901
	PROJ: 797-392 DWG: 304210	DRAFTED BY: J. ABBOTT CHECKED BY: J.R.G. SHEET 1 OF 2 FILE NO. 304-810

SURVEYOR'S CERTIFICATE

I, **JAMES R. GROTHMAN**, Registered Land Surveyor, do hereby certify that by the order of **Richard G. and Mary M. Taylor**, I have surveyed, monumented, mapped, and divided Lot 1, Certified Survey Map, No. 4143 located in the Southwest Quarter of the Southwest Quarter of Section 31, Town 13 North, Range 9 East, City of Portage, Columbia County, Wisconsin, described as follows:

Commencing at the southwest corner of Section 31;
thence South 89°42'04" East along the south line of the Southwest Quarter of said Section 31, 880.49 feet;
thence North 00°39'23" East along the west right-of-way line of Airport Road and the southerly extension thereof, 414.96 feet to the southeast corner of Lot 1, Certified Survey Map, No. 4143 and the point of beginning;
thence South 89°17'46" West along the south line of said Lot 1, 200.05 feet;
thence North 00°39'23" East along the west line of said Lot 1, 583.26 feet to a point in the south right-of-way line of West Slifer Street;
thence South 89°37'55" East along the south right-of-way line of West Slifer Street and the north line of said Lot 1, 200.00 feet;
thence South 00°39'23" West along the west right-of-way line of Airport Road and the east line of said Lot 1, 579.52 feet to the point of beginning.
Containing 116,277 square feet, (2.67 acres), more or less. And being subject to servitudes and easements of use of record if any.

I DO FURTHER CERTIFY that this is a true and correct representation of the boundaries of the land surveyed and that I have fully complied with the Provisions of Chapter 236.34 of the Wisconsin State Statutes and the City of Portage Subdivision Ordinance in surveying and mapping the same to the best of my knowledge and belief.

JAMES R. GROTHMAN
Registered Land Surveyor, No. 1321
Dated: March 31, 2004
File No. 302-210

WISCONSIN
JAMES R GROTHMAN
S-1321
PORTAGE
WISCONSIN
LAND SURVEYOR

COMMON COUNCIL RESOLUTION

RESOLVED that the Certified Survey Map and the lands as dedicated on such map in the City of Portage, Columbia County, Wisconsin is hereby approved and accepted as dedicated by the Common Council.

Jeff G. Grothman, Mayor — **Date** 05-03-04

I HEREBY certify that the foregoing is a copy of a Resolution adopted by the Common Council of the City of Portage, Wisconsin, this 22nd day of April, 2004.

Marie A. Moe, City Clerk — **Date** 05-03-04

759697

As prepared by:
GROTHMAN & ASSOCIATES, S.C.
LAND SURVEYORS
PO BOX 373 PORTAGE, WI 53901
Phone Portage (608) 742-7788
Phone Sauk (608) 644-8877
Fax (608) 742-0434
e-mail surveying@grothman.com

G & A FILE NO. 1106-834
DRAFTED BY: D. ABLEMAN
CHECKED BY: J.R.G.
PROJ. 1006-795
DWG. 1106834 SHEET 1 OF 3

SEAL: JAMES R. GROTHMAN S-1321 PORTAGE WISCONSIN LAND SURVEYOR

11-21-06

DOC # 759697
REGISTER OF DEEDS
COLUMBIA COUNTY

RECORDED ON:
01/23/2007 11:30:40AM
PAGES: 3

LISA WALKER
REGISTER OF DEEDS
REC FEE: 15.00
Exempt #:

COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. 4676

Volume 33 Page 11

GENERAL LOCATION

BEING ALL OF C.S.M. NO. 4208, RECORDED IN VOLUME 29 OF RECORDS ON PAGE 88 AS DOCUMENT NO. 712680 AND LOT 1, C.S.M. NO. 889, AND A PART OF OUTLOT 142, LOCATED IN THE NW1/4 OF THE SW1/4 AND THE SW1/4 OF THE SW1/4, SECTION 31, T. 13 N., R. 9 E., CITY OF PORTAGE, COLUMBIA COUNTY, WISCONSIN.

CONTAINING: 111,315 SQ. FT. – 2.56 ACRES

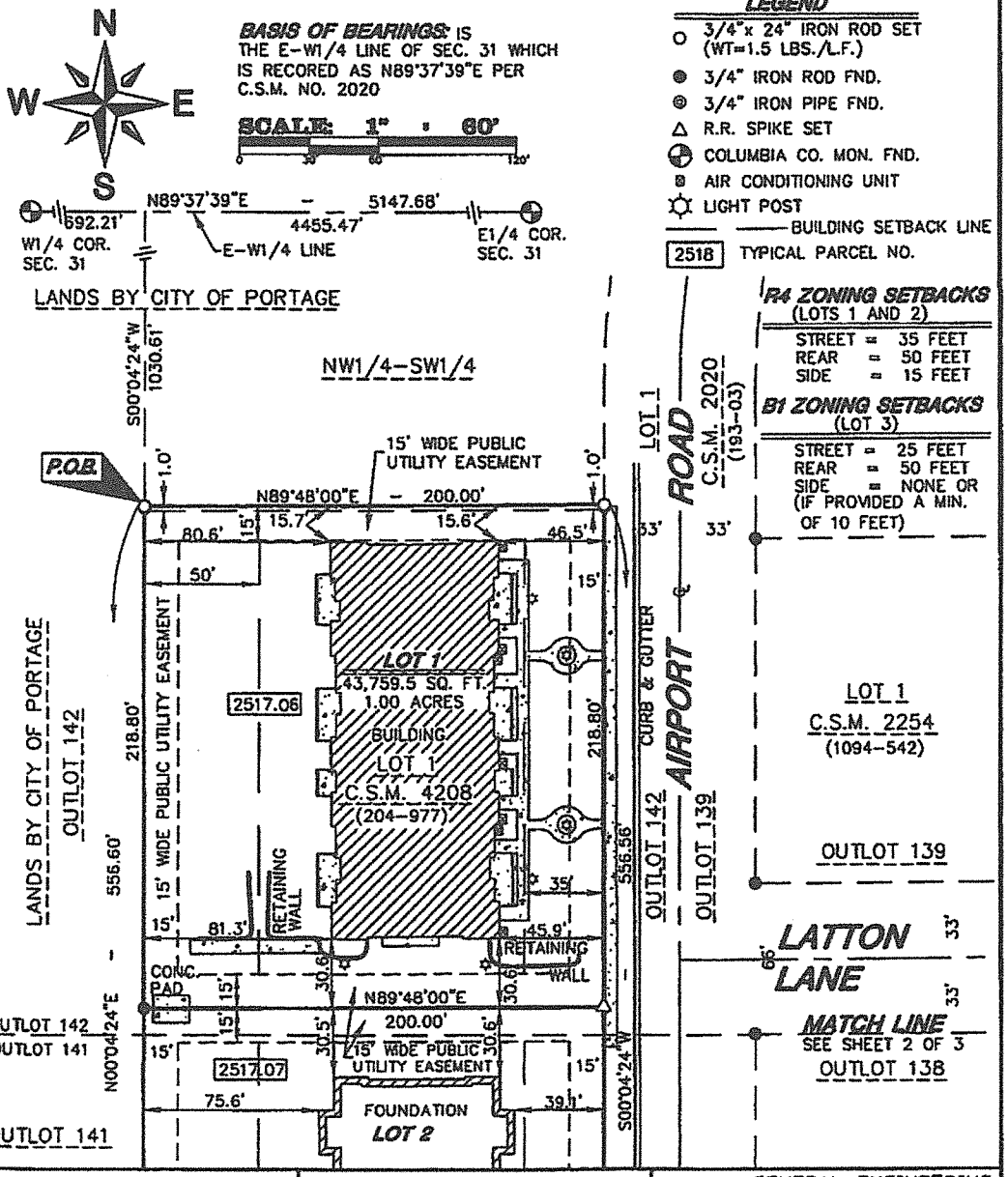
BASIS OF BEARINGS: IS THE E-W1/4 LINE OF SEC. 31 WHICH IS RECORED AS N89°37'39"E PER C.S.M. NO. 2020

SCALE: 1" = 60'

LEGEND
- ○ 3/4"x 24" IRON ROD SET (WT=1.5 LBS./L.F.)
- ● 3/4" IRON ROD FND.
- ◎ 3/4" IRON PIPE FND.
- △ R.R. SPIKE SET
- ⊕ COLUMBIA CO. MON. FND.
- ▣ AIR CONDITIONING UNIT
- ☼ LIGHT POST
- —— BUILDING SETBACK LINE
- 2518 TYPICAL PARCEL NO.

R4 ZONING SETBACKS (LOTS 1 AND 2)
STREET = 35 FEET
REAR = 50 FEET
SIDE = 15 FEET

B1 ZONING SETBACKS (LOT 3)
STREET = 25 FEET
REAR = 50 FEET
SIDE = NONE OR (IF PROVIDED A MIN. OF 10 FEET)



OWNER LOTS 1 AND 2 C.S.M. 4208
GILBERT FAMILY REVOCABLE TRUST, 2002
3700 TERRA COURT, SUITE 5
SUN PRAIRIE, WI 53590

OWNER O.L. 142 & LOT 1, C.S.M. 889
CITY OF PORTAGE
115 W. PLEASANT STREET
PORTAGE, WI 53901

CLIENT: GENERAL ENGINEERING CO, INC.
916 SILVER LAKE DR.
PORTAGE, WI 53901

As prepared by:
GROTHMAN & ASSOCIATES, S.C.
LAND SURVEYORS
PO BOX 373 PORTAGE, WI 53901
Phone Portage (608) 742-7788
Phone Souk (608) 644-8877
Fax (608) 742-0434
e-mail surveying@grothman.com

SEAL: WISCONSIN JAMES R. GROTHMAN S-1321 PORTAGE WISCONSIN LAND SURVEYOR

G & A FILE NO. 1106-834
DRAFTED BY: D. ABLEMAN
CHECKED BY: J.R.G.
PROJ. 1006-795
DWG. 1106834 SHEET 2 OF 3

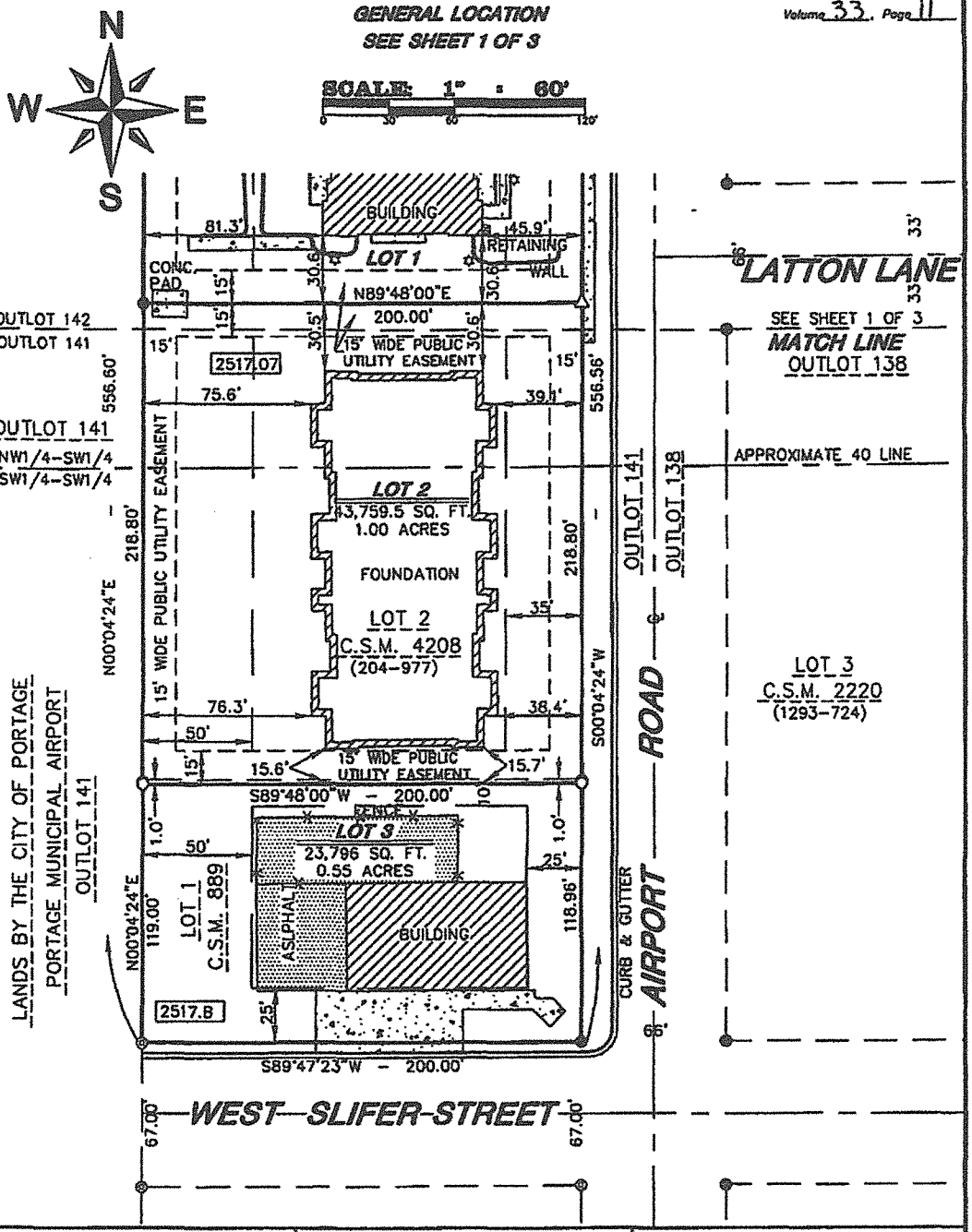
11-21-06

COLUMBIA COUNTY CERTIFIED SURVEY MAP NO. 4676

Volume 33, Page 11

GENERAL LOCATION
SEE SHEET 1 OF 3

SCALE: 1" = 60'



OWNER LOTS 1 AND 2 C.S.M. 4208	OWNER O.L. 142 & LOT 1 C.S.M. 889	CLIENT:
GILBERT FAMILY REVOCABLE TRUST, 2002 3700 TERRA COURT, SUITE 5 SUN PRAIRIE, WI 53590	CITY OF PORTAGE 115 W. PLEASANT STREET PORTAGE, WI 53901	GENERAL ENGINEERING CO. INC. 916 SILVER LAKE DR. PORTAGE, WI 53901

SURVEYOR'S CERTIFICATE

I, **JAMES R. GROTHMAN**, Registered Land Surveyor, do hereby certify that by the order of **General Engineering Co., Inc,** I have surveyed, monumented, mapped, and divided Certified Survey Map, No. 4208 as recorded in Volume 29 on page 88 as Document No. 712680, Lot 1, Certified Survey Map, No. 889 and a part of Outlot 142, City Assessor's Plat located in the Northwest Quarter of the Southwest Quarter and the Southwest Quarter of the Southwest Quarter of Section 31, Town 13 North, Range 9 East, City of Portage, Columbia County, Wisconsin, described as follows:

Commencing at the west quarter corner of said Section 31;
thence North 89°37'39" East along the east – west quarter line of said Section 31, 692.21 feet;
thence South 00°04'24" West, 1,030.61 feet to the point of beginning;
thence North 89°48'00" East, 200.00 feet;
thence South 00°04'24" West along the east line of Certified Survey Map, No. 4208 and Certified Survey Map, No. 889 and the west right-of-way line of Airport Road, 556.56 feet;
thence South 89°47'23" West along the south line of Certified Survey Map, No. 889 and the north line right-of-way line of West Slifer Street, 200.00 feet;
thence North 00°04'24" East along the west line of Certified Survey Map, No. 889 and the west line of Certified Survey Map, No. 4208 and the northerly extension thereof, 556.60 feet to the point of beginning.
Containing 111,315 square feet, (2.56 acres), more or less. And being subject to servitudes and easements of use or record, if any.

I DO FURTHER CERTIFY that this is a true and correct representation of the boundaries of the land surveyed and that I have fully complied with the Provisions of Chapter 236.34 of the Wisconsin State Statutes and the City of Portage Subdivision Ordinances in surveying and mapping the same to the best of my knowledge and belief.

JAMES R. GROTHMAN
Registered Land Surveyor No. 1321
Dated: November 21, 2006
File No.: 1106-834

WISCONSIN
JAMES R. GROTHMAN
S-1321
PORTAGE
WISCONSIN
LAND SURVEYOR

CITY of PORTAGE APPROVAL CERTIFICATE

Approved for recording by the **City of Portage**, Columbia County, Wisconsin.

Jeff G. Grothman, Mayor — **Date** 01-12-07

I HEREBY certify that the certified survey map is approved by the **City of Portage**, Wisconsin, this 11th day of January, 2007.

Marie A. Moe, City Clerk — **Date** 01-12-07

388977

CONVEYANCE OF LAND FOR HIGHWAY PURPOSES

It having been deemed necessary for the proper improvement or maintenance of a county highway, and so ordered, to change or relocate a portion thereof through lands owned by CITY OF PORTAGE in the City of Portage, Columbia County, and a plat, showing the existing location, the proposed change and the right of way to be acquired, having been filed with and approved by the state Highway Commission and filed with the County Clerk of said County, by the County Highway Committee as required by Section 83.08, Wisconsin Statutes; and the said County Highway Committee having dealt by contract with the owner of said lands;

KNOW ALL MEN BY THESE PRESENTS, That the said owner....., for the valuable consideration, to wit: the sum of One and no/100 Dollars ($1.00) in hand paid, the receipt of which is hereby acknowledged, do es hereby grant and convey to Columbia County, Wisconsin, for highway purposes as long as so used, the lands of said owner....necessary for said relocation shown on the plat and described as follows, to wit.

Fee title in and to the following tract of land in the City of Portage, Columbia County, State of Wisconsin, described as a tract of land in Town 13 North, Range 9 East, Section 31, the SW¼ of the NW¼ thereof and located from a highway reference line described as follows:

Commencing at the north quarter corner of Section 31, Town 13 North, Range 9 East; thence S 89°52'45" W along the north line of said Section 31, 1132.89 feet; thence S 44°07' W, 887.58 feet to a point of curve; thence southwesterly on a curve to the left, radius 22918.32 feet, 464.44 feet to a point of tangency of said curve; thence S 42°57'20" W, 453.60 feet to a point of curve; thence southwesterly on a curve to the right, radius 22918.32 feet, 234.16 feet to the point of beginning of the reference line; thence northeasterly on a curve to the left, radius 22918.32 feet, 234.16 feet to a point of tangency of said curve; thence N 42°57'20" E, 10.00 feet and the end of the reference line.

Said parcel includes all of the land of the owner lying between the southeasterly right-of-way line of STH 78, (Project F 05-2(38)) and a line lying

(Description continued on next page)

The grantor releases all claim to any trees within the said lands, and understands and agrees that the purposes of this agreement include the right to preserve and protect any vegetation existing on the said lands, and the right to plant thereon and protect any vegetation that the highway authorities may deem desirable to prevent erosion of the soil or to beautify the highway.

A covenant is hereby made with the said Columbia County that the said grantor holds the above described premises by good and perfect title; having good right and lawful authority to sell and convey the same; that said premises are free and clear from all liens and encumbrances whatsoever except as hereinafter set forth.

This conveyance shall be binding on the grantor....his heirs, executors, assigns and grantees, and the consideration hereinbefore named is acknowledged to be in full payment of all claims of whatsoever nature by the grantor arising through or by reason of the granting and conveying of the said lands.

And FEE # 2 EXEMPT being the owner....and holder....of....certain....lien.... against said premises, do hereby join in and consent to said conveyance free of said lien.

WITNESS the hand and seal of the grantor and the person joining in and consenting to this conveyance, this 6th day of June, 19 77

In Presence of

Francis W. Murphy — City of Portage (SEAL)

Francis W. Murphy — By: Francis P. Riley (SEAL)

Francis P. Riley, Mayor (SEAL)

Lorna M. McMahon — Alma M. Braun (SEAL)

Lorna M. McMahon — Alma M. Braun, Clerk (SEAL)

State of Wisconsin
County of Columbia

On this the 6th day of June, 1977, before me, Francis W. Murphy the undersigned officer, personally appeared Francis P. Riley, Mayor, and Alma M. Braun, Clerk, of the City of Portage, Columbia County, Wisconsin, known to me (or satisfactorily proven) to be the person... whose name... are subscribed to the within instrument and acknowledged that they executed the same for the purposes therein contained.

In witness whereof I hereunto set my hand and official seal.

Francis W. Murphy
Notary Public

My commission expires is permanent

Project

The above description made by Larry R. Brewster S-705 dated 3-31-77 Parcel 1

CCH-48

VOL 424 PAGE 66

507017

H/10 HS

STATE OF WISCONSIN } SS
COLUMBIA COUNTY
RECEIVED FOR RECORD
SEP 9 1992
Penny Judd
Reg. of Deeds at 3:40 P M
City of Portage - E

WARRANTY DEED

THIS DEED, made between the City of Portage, a Wisconsin Municipal Corporation, Grantor, and Howard Latton, Grantee,

WITNESSETH, That the said Grantor, for a valuable consideration of $1.00 and o/v/c conveys to Grantee the following described real estate in Columbia County, State of Wisconsin:

Being a parcel located in part of Outlot 140, part of Outlot 136, and part of Outlot 137, Assessor's Subdivision of the City of Portage, located in the SW 1/4, Section 31, T. 13 N., R. 9 E., Columbia County, Wisconsin, described as follows:

Beginning at a point on the North line of said Outlot 140, said point being a true northerly extension of the west line of Columbia County Certified Survey Map No. 379 as recorded in Volume 2, Page 154 and its intersection with the aforesaid North line of Outlot 140; thence Southerly along the West line of Certified Survey Map No. 379, 500.00' to the Southeast corner of lands as described in Volume 201, Page 174 of Deeds; thence Westerly along the South line of said lands as described in Volume 201, Page 174 of Deeds, 630' M/L to a point on a future street right-of-way; thence N. 56 degrees East along said future right-of-way, 410' M/L to the point of curvature of a 263.00' radius curve to the left, having a central angle of 55 degrees 15' 00" and whose long chord bears N 28 degrees 22' 30" E., 243.90'; thence Northeasterly along the arc of said 263.00' radius curve and said future right-of-way 253.61', to the point of tangency thereof; thence Northerly along said future right-of-way and its extension thereof 56' M/L to the point of intersection with the aforesaid North line of Outlot 140' thence Easterly along said North line, 175' M/L to the point of beginning. (Excepting therefrom the most northerly 49.5' for road right-of-way purposes.)

This description is intended to include all lands lying easterly of a future street right-of-way and the north, south and east property lines.

FEE
NO. 2
EXEMPT

This is not homestead property.

Together with all and singular the hereditaments and appurtenances thereunto belonging; And the City of Portage warrants that the title is good, indefeasible in fee simple and free and clear of encumbrances except easements and rights of way of record and will warrant and defend the same.

DATED this 25th day of August, 1992.

THE CITY OF PORTAGE

Jerome D. Kutzke (SEAL)
By: Jerome D. Kutzke, Mayor

Marie A. Moe (SEAL)
By: Marie A. Moe, City Clerk

AUTHENTICATION

Signature(s) Jerome D. Kutzke, Mayor and Marie A. Moe, City Clerk authenticated this 25 day of August, 1992.

Vytautas P. Salna
TITLE: MEMBER STATE BAR OF WISCONSIN

ACKNOWLEDGMENT

STATE OF WISCONSIN
ss
COLUMBIA COUNTY

Personally came before me this ____ day of August, 1992, the above named _____ to me known to be the person who executed the foregoing instrument and acknowledges the same.

_____
Notary Public Columbia County, Wisconsin

THIS INSTRUMENT WAS DRAFTED BY:
Attorney Vytas P. Salna
Portage, Wisconsin 53901

651

685886

15

Document Number

WARRANTY DEED

Exempt from fee: s.77.25(2r) Wis. Stats.
LPA 3004 (DT1560) 99

THIS DEED, made by City of Portage

GRANTOR, conveys and warrants the property described below to Columbia County GRANTEE, for the sum of Highway and Transportation,

($).

Any person named in this deed may make an appeal from the amount of compensation within six months after the date of recording of this deed as set forth in s.32.05(2a) Wisconsin Statutes. For the purpose of any such appeal, the amount of compensation stated on the deed shall be treated as the award, and the date the deed is recorded shall be treated as the date of taking and the date of evaluation.

Other persons having an interest of record in the property: None

Legal Description This (is) (is not) homestead property:

See attached description.

STATE OF WISCONSIN } ss
COLUMBIA COUNTY
RECEIVED FOR RECORD

MAY 30 2003

Reg of Deeds at 1:30P M

This space is reserved for recording data

Return to City of Portage

Parcel Identification Number/Tax Key Number
271-2523

Jeffrey D. Grottman
(Signature)

Jeffrey G. Grottman
(Print Name)

02-12-03
(Date)

(Signature)

(Print Name)

(Signature)

(Print Name)

(Signature)

(Print Name)

State of Wisconsin)
) ss.
Columbia County)

On the above date, this instrument was acknowledged before me by the named person(s).

Marie A. Mae
(Signature, Notary Public, State of Wisconsin)

Marie A. Mae
(Print or Type Name, Notary Public, State of Wisconsin)

05-25-03
(Date Commission Expires)

Project ID 6130-00-21 This instrument was drafted by City of Portage Parcel No. 3

Thence northwesterly 357.34 feet along the arc of a curve concave to the southwest having a radius of 233.00 feet (the chord of which bears N46°34'02"W, 323.32 feet);
Thence S89°29'41"W, 200.07 feet;
Thence northwesterly 174.88 feet along the arc of a curve concave to the north having a radius of 167.00 feet (the chord of which bears N60°30'20"W, 167.00 feet) to the existing east right-of-way line of CTH CX;
Thence S47°54'44"E, 64.30 feet;
Thence S79°20'56"E, 118.79 feet;
Thence N89°29'41"E, 50.00 feet;
Thence N44°37'22"E, 99.22 feet;
Thence S89°42'21"E, 88.59 feet;
Thence N43°20'33"E, 164.62 feet;
Thence S49°22'12"E, 59.63 feet;
Thence S43°07'04"W, 129.29 feet;
Thence S10°08'43"W, 70.70 feet;
Thence S56°21'16"E, 123.71 feet;
Thence S27°42'24"E, 123.70 feet;
Thence S03°36'10"E, 259.14 feet;
Thence S48°14'48"E, 27.98 feet to the existing north right-of-way line of Silver Lake Drive;
Thence S89°29'40"W, 20.01 feet along said north right-of-way line to the point of beginning.

Said easement contains 25,755 sf.

652

LEGAL DESCRIPTION

Fee title for the owners interest in land contained within the following described tract being part of Outlot 145, Assessor's Plat of the City of Portage in the Southeast 1/4 of the Southeast 1/4 of Section 36, T13N, R8E, City of Portage, Columbia County, Wisconsin:

Commencing at an aluminum monument at the southeast corner of Section 36, T13N, R8E;
Thence S89°29'40"W, 552.23 feet along the south section line of said Section 36;
Thence N00°30'20"W, 33.00 feet to the existing north right-of-way line of Silver Lake Drive, also being the point of beginning;
Thence N31°26'32"E, 30.33 feet;
Thence N02°37'58"W, 202.48 feet;
Thence northwesterly 256.13 feet along the arc of a curve concave to the southwest having a radius of 167.00 feet (the chord of which bears N46°34'07"W, 231.74 feet);
Thence S89°29'41"W, 200.06 feet;
Thence northwesterly 64.19 feet along the arc of a curve concave to the north having a radius of 233.00 feet (the chord of which bears N82°37'04"W, 64.00 feet) to the existing east right-of-way line of CTH CX;
Thence northwesterly 179.80 feet along the arc of a curve concave to the northeast having a radius of 233.00 feet (the chord of which bears N52°36'41"W, 175.37 feet) to the existing west right-of-way line of said CTH CX;
Thence N59°29'40"E, 66.00 feet to said east right-of-way line of said CTH CX;
Thence southeasterly 174.88 feet along the arc of a curve concave to the northeast having a radius of 167.00 feet (the chord of which bears S60°30'20"E, 167.00 feet);
Thence N89°29'41"E, 200.07 feet;
Thence southeasterly 357.34 feet along the arc of a curve concave to the southwest having a radius of 233.00 feet (the chord of which bears S46°34'02"E, 323.32 feet);
Thence S02°37'58"E, 202.48 feet;
Thence S33°09'06"E, 33.47 feet to said existing north right-of-way line of Silver Lake Drive, also being a point hereinafter known as Point "B";
Thence S89°29'40"W, 100.06 feet along said north right-of-way line to the point of beginning.

Said tract contains **11,200 sf.**

Also **temporary limited easement** for grading slopes, including for such purpose the right to operate necessary equipment thereon, the right of ingress and egress, as long as required for such public purpose, including the right to preserve, protect, remove, or plant thereon any vegetation that the highway authorities may deem desirable to prevent erosion of the soil. **This easement is to terminate upon the completion of the construction of this project.**

Said easement consists of the following tract of land being part of Outlot 145, Assessor's Plat of the City of Portage in the Southeast 1/4 of the Southeast 1/4 of Section 36, T13N, R8E, City of Portage, Columbia County, Wisconsin:

Commencing at Point "B" as located in the above described traverse and the point of beginning;
Thence N33°09'06"W, 33.47 feet;
Thence N02°37'58"W, 202.48 feet;

n/4

Document Number	RIGHT OF FIRST REFUSAL AGREEMENT Title of Document

* 8 0 4 8 1 3 *

DOC # 804813
REGISTER OF DEEDS
COLUMBIA COUNTY

RECORDED ON:
12/17/2009 02:12:38PM
PAGES: 4

LISA WALKER
REGISTER OF DEEDS
REC FEE: 17.00
Exempt #:

Record this document with the Register of Deeds

Name and Return Address:
Attorney David R. Carlson
Carlson, Rogers & Owens
P.O. Box 277
Portage, WI 53901 -E

A part of 11-271-2523.1
(Parcel Identification Number)

Exhibit A

A parcel of land contained within the following described tract being part of Outlot 145, Assessor's Plat of the City of Portage in the Southeast ¼ of the Southeast ¼ of Section 36, T13N, R8E, City of Portage, Columbia County, Wisconsin, more particularly described as follows:

Commencing at an aluminum monument at the southeast corner of Section 36, T13N, R8E; Thence S89°29'40"W, 452.17 feet along the south section line of said Section 36; Thence N00°30'20"W, 33.00 feet to the existing north right-of-way line of Silver Lake Drive; Thence N33°09'06"W, 33.47 feet; Thence N02°37'58"W, 202.48 feet; Thence northwesterly 277.93 feet along the arc of a curve concave to the southwest having a radius of 233.00 feet (the chord of which bears N36°48'20"W, 261.75 feet) to the point of beginning;
Thence northwesterly 79.41 feet along the arc of a curve concave to the southwest having a radius of 233.00 feet (the chord of which bears N80°44'29"W, 79.03 feet);
Thence S89°29'41"W, 151.31 feet;
Thence N43°10'40"E, 341.18 feet;
Thence S46°51'01"E, 140.40 feet;
Thence S02°37'57"E, 48.25 feet;
Thence S43°10'40"W, 159.02 feet to the point of beginning.

EXHIBIT B

RIGHT OF FIRST REFUSAL AGREEMENT

THIS AGREEMENT is made and dated this 25th day of November, 2009, by and between the City of Portage (hereinafter referred to as the "City") and Richard W. Gyr and Sheila K. Gyr (hereinafter collectively referred to as the "Gyrs").

FOR GOOD AND VALUABLE CONSIDERATION, receipt of which is hereby acknowledged by the City, the parties agree as follows:

1. **Right of first refusal.** The City grants to the Gyrs a right of first refusal for the purchase of the real estate fully described on the attached Exhibit "A" (hereinafter referred to as the "Property"). The City and the Gyrs agree that if the City receives a bona fide offer from a third party for the purchase of all or any part of the Property, which offer the City is willing to accept, the City will give the Gyrs written notice thereof by US mail or personal service. Such notice shall include a copy of the proposed contract of sale to such third party and any other material documents evidencing the terms of the sale. The Gyrs shall have the right until the close of business on the seventh (7th) business days after the post mark or personal service of the City's notice to enter into a contract for the sale of the Property at the same price and on the same purchase terms as contained in the proposed contract of sale with the third party, which right of the Gyrs shall be paramount to the rights of the third party. If the Gyrs fail to exercise any such preemptive right within the time herein specified, the City shall be at liberty to enter into a contract for the sale of the Property with the third party at the same price and on the same purchase terms as contained in the proposed contract of sale provided to the Gyrs.

2. **Term of right of first refusal.** This right of first refusal shall continue in effect until the first of the following to occur: 1) the conveyance of all of the Property in fee simple to one or both of the Gyrs pursuant to the right of first refusal described above; or 2) until conveyance of all of the Property to a third party upon the Gyrs' failure to timely exercise the Gyrs' purchase rights provided for under this instrument (however if only part of the Property is being sold by the City and the Gyrs do not exercise its purchase rights, the Gyrs' purchase rights shall terminate only as to that part of the Property conveyed to such third party but shall continue as to the balance of the Property) or 3) the death of both the Gyrs before the purchase rights under this Agreement are exercised. If the Gyrs fail to exercise their right of first refusal, but the terms of any accepted offer as they relate to the purchase price, closing date, guaranteed value of the improvements to the property and/or timing of the completion of the improvements is changed by more than five (5%) percent or the guaranteed number of employees to be hired upon completion of the improvements is reduced by agreement of the City and a third party purchaser, the Gyrs' right of first refusal shall be revived and Gyrs' rights pursuant to said right of first refusal shall be as set forth in paragraph 1, above. Further, Gyrs' right of first refusal shall similarly revive if the City waives any contingency concerning the zoning of or conditional use permit for the property, terms of financing, any contingency concerning environmental site assessment and/or cleanup, special assessments and/or utility hookup costs or any contingency related to point(s) of access and/or improvements to a public road. Upon termination of this right of first refusal, as to any portion of this property if by conveyance of all or a part of the Property to a third party after the Gyrs' failure to timely exercise the Gyrs' purchase rights, the City shall deliver to the Gyrs a document confirming that this right of first refusal has terminated as to the portion so conveyed.

3. **The City's right to encumber and lease.** Notwithstanding anything to the contrary contained in this Agreement, the City shall have the right during the term of this right of first refusal to mortgage or otherwise encumber the Property and to grant leases for all or parts of the Property, as the City sees fit.

4. **Warranty of title.** The City warrants and represents that the City is the sole owner of good, fee simple, and marketable title to the Property and has full authority to grant this right of first refusal.

5. **Assignment of Rights.** Neither of the Gyrs may assign his/her rights under this right of first refusal agreement.

6. **Recording.** This Agreement shall be executed in recordable form, and if the Gyrs elect, may be recorded at the Gyrs' expense with the Columbia County Register of Deeds.

7. **Binding effect.** This right of first refusal shall be binding upon and inure to the benefit of the parties and their respective representatives, successors and assigns.

8. **Headings.** Headings in this Agreement are for convenience only and shall not be used to interpret or construe its provisions.

9. **Entire agreement.** This Agreement supersedes all prior agreements between the parties with regard to the subject matter hereof, and there are no other understandings or agreements between them. This Agreement can only be modified by a written instrument signed by both the City and the Gyrs.

10. **Notices and correspondence.** All notices and correspondence shall be sent by certified mail, return receipt requested, to the parties hereto at the following addresses:

If to the City, to:

City Clerk
115 W. Pleasant Street
Portage, WI 53901

If to the Gyrs, to:

Richard and Sheila Gyr
W7154 W. South Shore Drive
Pardeeville, WI 53954

Any party may change the above address by sending a certified letter, return receipt requested, to the other party setting forth such changed address.

IN WITNESS WHEREOF, the parties hereto have executed this agreement at the City of Portage, Columbia County, Wisconsin.

Dated this 25th day of November, 2009.

CITY OF PORTAGE

Richard W. Gyr — By: Kenneth H. Jahn, Mayor

Richard W. Gyr

Kenneth H. Jahn, Mayor

Sheila K. Gyr — By: Marie A. Moe, Clerk

Sheila K. Gyr

Marie A. Moe, Clerk

ACKNOWLEDGMENT

STATE OF WISCONSIN)
(ss.
COUNTY OF COLUMBIA)

Personally came before me this 2nd day of ~~November,~~ Dec 2009, the above-named Richard W. Gry and Sheila K. Gyr, to be known to be the persons who executed the foregoing instrument and acknowledge the same.

Sharon A. Pyrek
Sharon A. Pyrek
Notary Public, State of Wisconsin
My Commission: 1/30/11.

STATE OF WISCONSIN)
)ss
COLUMBIA COUNTY)

Personally came before me this 25th day of November, 2009, the above-named Kenneth H. Jahn, Mayor and Marie A. Moe, Clerk of the City of Portage, Wisconsin, to me known to be the persons who executed the foregoing instrument and acknowledged the same in the capacity and for the purposes therein intended.

Sharon A. Pyrek
Sharon A. Pyrek
Notary Public, State of Wisconsin
My Commission: 1/30/11

THIS INSTRUMENT DRAFTED BY:
Attorney W. Andrew Voigt
Miller and Miller, LLC
P.O. Box 200
Portage, WI 53901-0200

APPENDIX E

FAA DESIGN STANDARD DEFICIENCIES

PORTAGE MUNICIPAL AIRPORT

AIRPORT MASTER PLAN – PHASE 1

TKDA

444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

Memorandum

To:	Mark Graczykowski, WBOA	**Reference:**	C47 Airport Master Plan
Copies To:	Aaron Jahncke, City of Portage		Design Standard Deficiencies
	Portage Airport TAC		Technical Memo
		Project No.:	17011
From:	Marcus Watson, TKDA	**Routing:**	MSW:JEL
Date:	August 2, 2019		
	Revised March 18, 2021		

Introduction

The Portage Municipal Airport (C47) Airport Master Plan study includes identifying deficiencies to FAA airport design standards. These deficiencies were identified using available FAA obstacle data, visual inspections and aerial photography. This is not a comprehensive design-level assessment. These standards are defined in FAA Advisory Circular (AC) 150/5300-13A, *Airport Design*. The AC applies to projects that receive federal grant monies through the Airport Improvement Program (AIP). Specific design standards reviewed using available information as part of this analysis include:

- Runway Safety Area (RSA)
- Runway Obstacle Free Area (OFA)
- Runway Object Free Zone (OFZ)
- Runway Visibility Zone (RVZ)
- Runway Protection Zone (RPZ)
- FAA Approach/Departure Surfaces
- Taxiway/Taxilane Object Free Area (TOFA)
- Runway/Taxiway Design

The purpose of this review is to develop an action plan to correct design standard deficiencies to meet FAA airport design standards. All standards **must** be met except for the FAA Departure Surface and some taxiway design elements that *should* be met. On-airport obstructions to the FAA Departure Surface should be mitigated. Land uses within the FAA Runway Protection Zone (RPZ) require a separate evaluation.

Runway and taxiway design standards reference the mid-term (10 years) critical design aircraft derived from the aviation activity forecasts of this master plan study.

Element	Design Standard(s)
Runway 18	FAA Runway Design Code B-I(S)-5000 (1 mile)
Runway 36	FAA Runway Design Code B-I(S)-VIS, Circling Approach
Runway 4	FAA Runway Design Code B-I(S)-VIS, Circling Approach
Runway 22	FAA Runway Design Code B-I(S)-VIS, Circling Approach
Taxiway	Airplane Design Group I, Taxiway Design Group 1A

Results

Table 1 itemizes each design standard deficiency noted during the planning-level review. Elements include location, design standard, deficiency, and mitigation options. The deficiencies are shown graphically in **Figure 1**.

Mitigation options listed are unique to correcting each individual design standard deficiency. The actions taken may trigger additional deficiencies. A comprehensive mitigation plan will be developed to provide a path to compliance.

Table 1: C47 Design Standard Deficiencies

Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
36-1	Runway 18-36	Runway Safety Area (RSA), Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	Off-Airport, South of Runway 36 End	Silver Lake Drive and sidewalk within RSA/OFA/OFZ	• Shift RWY 36 end north by 240' • Shift RWY 36 end north by 200' to maintain clear OFZ, reduce RWY 18 takeoff/landing distance by 40' • Remove/relocate road
36-2	Runway 18-36	Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	Off-Airport, South of Runway 36 End	Power Pole along Silver Lake Drive within OFA/OFZ	• Remove/relocate pole • Shift RWY 36 end north by 220' • Shift RWY 36 end north by 200' to maintain clear OFZ, reduce RWY 18 takeoff/landing distance by 20'.
36-3	Runway 18-36	Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	West of Runway 36 End	Tree, sign, and parked aircraft are OFA/OFZ penetrations	• Acquire land, remove tree, remove/relocate sign, relocate aircraft tie-downs • Shift RWY 36 end north by 1,020'
36-4	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	On-Airport, East of Runway 36 End	Aircraft tails and wind cone obstruct surface by up to 20'	• Shift RWY 36 landing threshold north by 400' • Reclassify RWY 36 for VFR landings and displace landing threshold north by 200' • Relocate fuel facility and wind cone
36-5	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, West of Runway 36 End	Building and antenna obstruct surface by up to 33'	• Shift RWY 36 landing threshold north by 660' • Reclassify RWY 36 for VFR landings and displace landing threshold north by 460' • Remove building

Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
36-6	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, South of Runway 36 End	Several roads with mobile objects obstruct surface by up to 9' (Silver Lake Drive, Driveway, Parking Lot)	• Shift RWY 36 landing threshold north by 180' • Reclassify RWY 36 for VFR landings • Remove/relocate Roads
36-7	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, South of Runway 36 End	Trees obstruct surface by up to 20'	• Acquire land rights and trim/remove trees • Shift RWY 36 landing threshold north by 400' • Reclassify RWY 36 for VFR landings and shift RWY 36 landing threshold by 200'
36-8	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, South of Runway 36 End	Building vent obstructs surface by 16'	• Acquire land rights and remove building • Shift RWY 36 landing threshold north by 320' • Reclassify RWY 36 for VFR landings and shift RWY 36 landing threshold by 120'
36-9	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, South of Runway 36 End	Power lines/poles obstruct surface by up to 37'	• Shift RWY 36 landing threshold north by 740' • Reclassify RWY 36 for VFR landings and shift RWY 36 landing threshold by 540' • Bury high-voltage power line through approach
36-10	Runway 18-36	Runway 36 FAA Runway Protection Zone (RPZ)	Off-Airport, South of Runway 36 End	Two (2) commercial structures are within RPZ and require further evaluation	• Implement FAA-approved mitigation plan, which may include removing structures if opportunity arises • Shift RWY 36 end north by 720' or reduce usable length



Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
36-11	Runway 18-36	Runway 18 FAA Departure Surface (40:1 Slope)	South of Runway 36 Arrival End	Over 240 objects (e.g. buildings, poles, vehicles on roads, trees) penetrating surface by up to 87’	• Remove/mitigate on-airport obstructions as opportunities arise, and prevent establishment of new obstructions • Do not allow instrument departures to RWY 18
36-12	Runway 18-36	Runway Edge Lighting	Along Runway 18-36	Non-standard runway edge light locations and lamp covers	• Install new medium intensity runway edge light fixtures and lamp covers
18-1	Runway 18-36	Runway Safety Area (RSA), Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	Off-Airport, North of Runway 18 End	Interstate 39 and County Highway CX within RSA/OFA/OFZ, RSA does not meet gradient standards	• Shift RWY 18 end south by 240’ • Shift RWY 18 end south by 200’ to maintain clear OFZ, reduce RWY 36 takeoff/landing distance by 40’ • Remove/relocate roads
18-2	Runway 18-36	Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	On- and Off-Airport, North of Runway 18 End	Numerous trees within OFA/OFZ beyond runway end and alongside of runway	• Trim/remove trees • Shift RWY 18 end south by 438’
18-3	Runway 18-36	Runway 18 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, North of Runway 18 End	Interstate 39 and County Highway CX with mobile objects obstruct surface by up to 9’ and 7’, respectively	• Shift RWY 18 landing threshold south an estimated 280’ • Reclassify RWY 18 for VFR landings and displace landing threshold south an estimated 20’ • Remove/relocate roads
18-4	Runway 18-36	Runway 36 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, North of Runway 18 End	Trees obstruct surface by up to 34’ *(may have been removed since FAA survey)*	• Acquire rights and trim/remove Trees • Shift RWY 18 landing threshold south by 680’ • Reclassify RWY 18 for VFR landings and shift RWY 18 landing threshold by 480’

Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
18-5	Runway 18-36	Runway 36 FAA Departure Surface (40:1 Slope)	North of Runway 18 Arrival End	Over 90 objects (e.g. pole, vehicles on roads, trees) penetrating surface by up to 58’	• Remove/mitigate on-airport obstructions as opportunities arise, and prevent establishment of new obstructions • Do not allow instrument departures to RWY 36
18-6	Runway 18-36	Runway Visibility Zone (RVZ)	Off-Airport, 400’ West of Runway Intersection	Several trees penetrate intersecting runway RVZ	• Acquire land rights and trim/remove trees within RVZ • Close Runway 4-22
22-1	Runway 4-22	Runway Safety Area (RSA), Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	Off-Airport, Northeast of Runway 22 End	Field Road and Trees within RSA/OFA/OFZ, Terrain in OFA/OFZ	• Shift RWY 22 end north by 200’ to maintain clear OFZ, reduce RWY 4 takeoff/landing distance by 60’ • Shift RWY 22 end south by 280’, remove trees, re-grade terrain • Remove/relocate field road, remove trees, acquire land, re-grade terrain
22-2	Runway 4-22	Runway 22 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Northeast of Runway 22 End	Mulch pile, nearby trees and power poles obstruct surface by up to 15’, 22’, and 3’ respectively. Field road also obstructs airspace by 10’. *(Many trees removed since survey data collected)*	• Acquire rights and remove trees, bury/relocate power pole, remove/relocate field road • Shift RWY 22 landing threshold southwest by 60’ to clear pole, acquire rights and remove trees, remove/relocate field road • Reclassify RWY 22 for VFR landings, remove trees, remove/relocate field road



Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
22-3	Runway 4-22	Runway 22 FAA Runway Protection Zone (RPZ)	Off-Airport, Northeast of Runway 22 End	Four (4) residential structures within RPZ and require further evaluation	• Implement FAA-approved mitigation plan, which may include removing structures if opportunity arises • Shift RWY 22 end southwest by 540' or reduce usable length
22-4	Runway 4-22	Runway 22 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Northeast of Runway 22 End	80' tall trees in residential properties penetrate by up to 57'	• Acquire rights and remove trees • Shift RWY 22 landing threshold southwest by 1,140' • Reclassify RWY 22 for VFR landings and shift landing threshold southwest by 940'
22-5	Runway 4-22	Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	On-Airport, 380' Northeast of Runway Intersection	Segmented circle pylons penetrate OFA/OFZ	• Relocate wind cone and segmented circle
22-6	Runway 4-22	Runway Markings	Runway 4 End	Runway designation markings not at runway end for visual runway	• Remark Runway 4-22
22-7	Runway 4-22	Runway 22 FAA Departure Surface (40:1 Slope)	Northeast of Runway 4 Arrival End	Over 40 objects (e.g. buildings, poles, vehicles on roads, trees) penetrating surface by up to 79'	• Remove/mitigate on-airport obstructions as opportunities arise, and prevent establishment of new obstructions • Do not allow instrument departures to RWY 22
4-1	Runway 4-22	Runway Width	Along Runway 4-22	Runway is 40' wide and the design standard is 60'	• Widen runway by 20' to 60' width
4-2	Runway 4-22	Runway Safety Area (RSA), Runway Object Free Area (OFA), Runway Obstacle Free Zone (OFZ)	On and Off-Airport, Near of Runway 4 End	Numerous trees within OFA/OFZ northwest of Runway 4-22, tree within RSA	• Shift RWY 4 end north by 120', acquire land on sides, remove trees • Acquire OFA/OFZ land beyond end and on sides, remove trees



Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
4-3	Runway 4-22	Runway 4 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Southwest of Runway 4 End	County Highway CX and parking lot with mobile objects obstruct surface by up to 10’	• Shift RWY 4 landing threshold northeast by 200’ • Reclassify RWY 4 for VFR landings • Remove/relocate road and parking lot
4-4	Runway 4-22	Runway 4 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Southwest of Runway 4 End	Building obstructs surface by 5’	• Shift RWY 4 landing threshold northeast by 100’ • Reclassify RWY 4 for VFR landings • Remove building
4-5	Runway 4-22	Runway 4 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Southwest of Runway 4 End	Trees obstruct surface by up to 51’	• Acquire land rights and remove trees • Shift RWY 4 landing threshold northeast by 1,020’ • Reclassify RWY 4 for VFR landings and shift landing threshold northeast by 820’
4-6	Runway 4-22	Runway 4 FAA Approach Surface (Circling, ≥ ¾ mi. approach; 20:1 Slope)	Off-Airport, Southwest of Runway 4 End	Power poles obstruct surface by up to 3’	• Acquire land rights and lower/remove power pole • Shift RWY 4 end or landing threshold southwest by 60’ • Reclassify RWY 4 for VFR landings
4-7	Runway 4-22	Runway 4 FAA Runway Protection Zone (RPZ)	Off-Airport, Southwest of Runway 4 End	One (1) industrial structures within RPZ and require further evaluation	• Implement FAA-approved mitigation plan, which may include removing structures if opportunity arises • Shift RWY 4 end northeast by 290’ or reduce usable length



Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
4-8	Runway 4-22	Runway Design	Runway 4 End	Additional 108' of pavement beyond Runway 4 end results in in-line taxiway	• Remark extra pavement as unusable • Remove extra pavement
4-9	Runway 4-22	Runway 4 FAA Departure Surface (40:1 Slope)	Southwest of Runway 22 Arrival End	Over 80 objects (e.g. buildings, poles, vehicles on roads, trees) penetrating surface by up to 74'	• Remove/mitigate on-airport obstructions as opportunities arise, and prevent establishment of new obstructions • Do not allow instrument departures to RWY 4
T-1	Terminal/Hangar Area	Taxiway Design, Holding Position	West of Runway 18-36	Private taxiways have direct access to Runway 18-36 without holding positions	• Install runway hold position markings and signs • Consider relocating entrance taxiway to Runway 36 end
T-2	Terminal/Hangar Area	Taxiway Design, Holding Position	Taxiway at Runway 36 Entrance	Wide expanse of pavement near Runway 36 end	• Restripe runway holding position markings, install signs, remove excess pavement
T-3	Terminal/Hangar Area	Taxiway Object Free Area (TOFA)	Taxilane west of hangar development	Tie-downs and light poles 30' from centerline, 39.5' required to meet TOFA standards	• Shift taxilane centerline and/or relocate aircraft tie-downs and poles to meet design standards
T-4	Terminal/Hangar Area	Taxilane Object Free Area (TOFA)	Taxilane south of Hangar #7	Hangar #7 is 19.5' from taxilane centerline, 39.5' required to meet TOFA standards	• Construct additional taxilane pavement to the south, relocate centerline to provide 25' wide taxilane and 39.5' clearance
T-5	Terminal/Hangar Area	Taxilane Object Free Area (TOFA)	Taxilane between of Hangars #7 and #9	Total actual TOFA width is 75' between hangars, 79' required to meet TOFA standards	• Document 45' wingspan restriction to meet acceptable level of safety per FAA Engineering Brief 78
T-6	Terminal/Hangar Area	Taxilane Object Free Area (TOFA)	Taxilane between of Hangars #9 and #11/12	Hangar #11 is 30' from taxilane centerline, 39.5' required to meet TOFA standards	• Shift taxilane adjacent to Hangar #11 and document 40' wingspan restriction to meet acceptable level of safety per FAA Engineering Brief 78



Map ID	Airport Area	Design Standard(s)	Location	Deficiency	Mitigation Options
T-7	Terminal/Hangar Area	Taxilane Object Free Area (TOFA)	Taxilane between Hangars #12 and #10	Hangar 27' from taxilane centerline, 39.5' required to meet TOFA standards. 73' between hangar buildings.	• Relocate taxilane to maximize clearance, document 44' wingspan restriction to meet acceptable level of safety per FAA Engineering Brief 78
T-8	Terminal/Hangar Area	Taxilane Object Free Area (TOFA)	South of Hangar #5	No taxilane centerlines for maneuvering clearance from fixed objects	• Stripe taxilane centerlines meeting FAA standards for object clearance
T-9	Terminal/Hangar Area	Taxiway Design	North of Hangar #1	Direct access taxiway to Runway 18-36, wide expanse of pavement	• Relocate Runway 36 entrance taxiway • Remove excess pavement or reutilize as aircraft parking

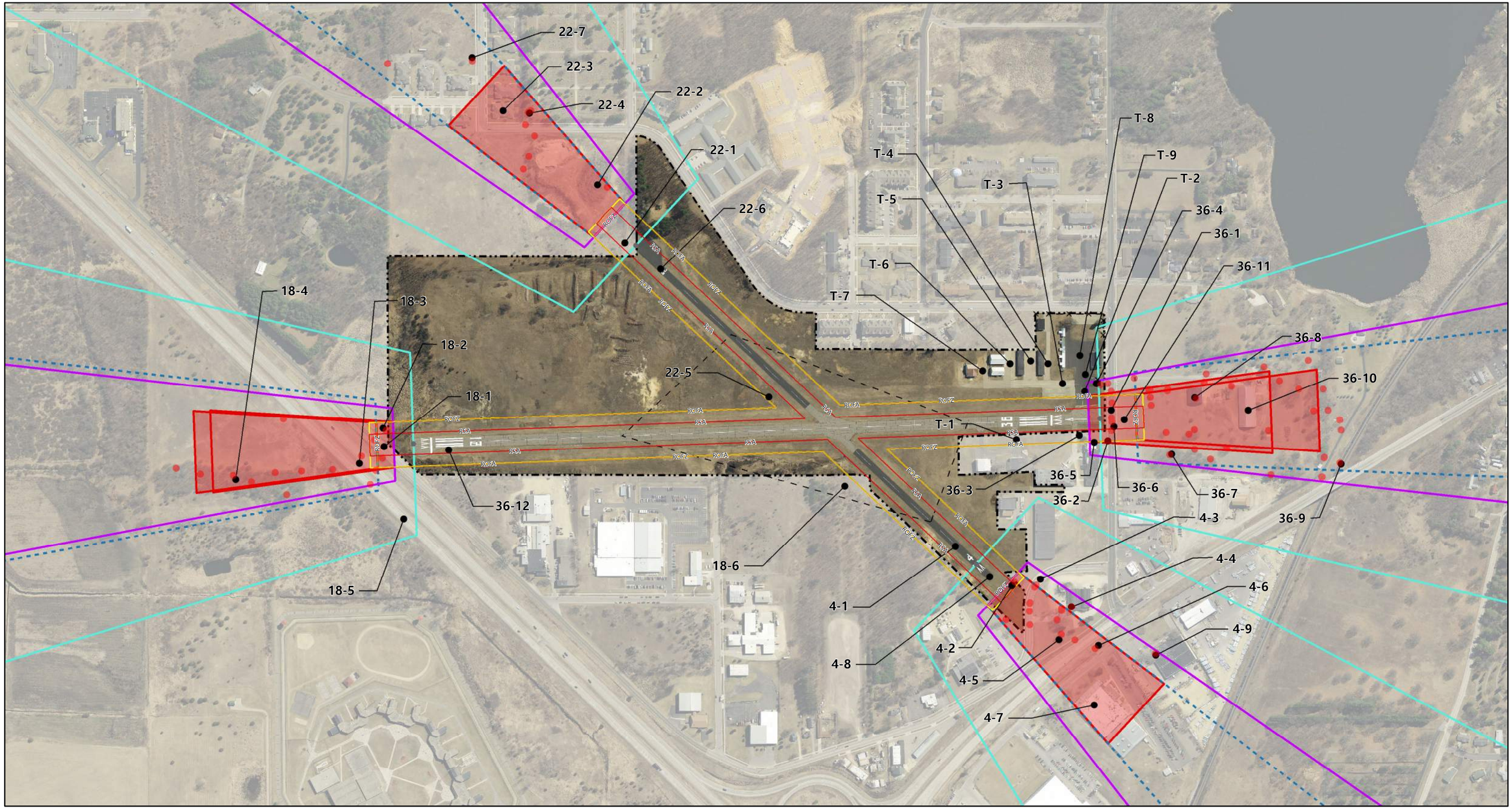


FIGURE 1: AIRPORT DESIGN DEFICIENCIES

PORTAGE MUNICIPAL AIRPORT

AIRPORT MASTER PLAN STUDY

PORTAGE, WI



- Fence
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)
- Runway Protection Zone (RPZ)
- Runway Visibility Zone (RVZ)
- P77 Surfaces
- FAA Approach Surfaces
- FAA Departure Surfaces
- Airport Boundary
- FAA Approach Surface Obstructions

0 250 500 1,000 Feet

DATA SOURCE: COLUMBIA COUNTY LAND INFORMATION DEPARTMENT

APPENDIX F

ALTERNATIVES COST ESTIMATES

PORTAGE MUNICIPAL AIRPORT

AIRPORT MASTER PLAN – PHASE 1

TKDA

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
REFINED AIRFIELD ALTERNATIVE 1A

IMPROVE RUNWAY 18/36 TO MEET DESIGN STANDARDS,
IMPROVE RUNWAY 4/22 TO MEET DESIGN STANDARDS

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	500,000.00
REMOVALS	$	400,000.00
EARTHWORK	$	90,000.00
PAVEMENT SUBBASE & BASE	$	195,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	281,000.00
ELECTRICAL	$	400,000.00
DRAINAGE	$	-
FUEL FACILITY	$	400,000.00
FENCING	$	-
SEEDING	$	10,000.00
CONSTRUCTION CONTINGENCY	$	350,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	1,240,000.00
ROADWAY MODIFICATIONS	$	-
WETLAND MITIGATION	$	50,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	-
ENGINEERING / PROFESSIONAL SERVICES	$	420,000.00
PLANNING-LEVEL COST	**$**	**4,400,000.00**
PRIMARY RUNWAY 18/36 BREAKDOWN	*$*	*2,800,000.00*
CROSSWIND RUNWAY 4/22 BREAKDOWN	*$*	*1,600,000.00*

NOTES:

(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 1A

IMPROVE RUNWAY 18/36 TO MEET DESIGN STANDARDS,
IMPROVE RUNWAY 4/22 TO MEET DESIGN STANDARDS

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	500,000.00
REMOVALS	$	420,000.00
EARTHWORK	$	90,000.00
PAVEMENT SUBBASE & BASE	$	195,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	281,000.00
ELECTRICAL	$	400,000.00
DRAINAGE	$	-
FUEL FACILITY	$	400,000.00
FENCING	$	-
SEEDING	$	10,000.00
CONSTRUCTION CONTINGENCY	$	350,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	1,280,000.00
ROADWAY MODIFICATIONS	$	-
WETLAND MITIGATION	$	50,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	-
ENGINEERING / PROFESSIONAL SERVICES	$	420,000.00
PLANNING-LEVEL COST	**$**	**4,400,000.00**
PRIMARY RUNWAY 18/36 BREAKDOWN	*$*	*3,000,000.00*
CROSSWIND RUNWAY 4/22 BREAKDOWN	*$*	*1,400,000.00*

NOTES:

(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 2A

IMPROVE RUNWAY 18/36 TO 3,300' USABLE LENGTH,
IMPROVE RUNWAY 4/22 TO MEET DESIGN STANDARDS

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	500,000.00
REMOVALS	$	470,000.00
EARTHWORK	$	90,000.00
PAVEMENT SUBBASE & BASE	$	195,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	281,000.00
ELECTRICAL	$	400,000.00
DRAINAGE	$	-
FUEL FACILITY	$	400,000.00
FENCING	$	-
SEEDING	$	10,000.00
CONSTRUCTION CONTINGENCY	$	360,000.00
OTHER ITEMS		
BURY POWER LINES	$	11,600,000.00
LAND ACQUISITION & RELOCATION	$	2,580,000.00
ROADWAY MODIFICATIONS	$	1,160,000.00
WETLAND MITIGATION	$	50,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	-
ENGINEERING / PROFESSIONAL SERVICES	$	610,000.00
PLANNING-LEVEL COST	**$**	**18,800,000.00**
PRIMARY RUNWAY 18/36 BREAKDOWN	*$*	*17,400,000.00*
CROSSWIND RUNWAY 4/22 BREAKDOWN	*$*	*1,400,000.00*

NOTES:

(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 2B

IMPROVE RUNWAY 18/36 TO MEET DESIGN STANDARDS,
IMPROVE RUNWAY 4/22 TO 3,300' USABLE LENGTH

DESCRIPTION		AMOUNT
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	1,100,000.00
REMOVALS	$	1,200,000.00
EARTHWORK	$	780,000.00
PAVEMENT SUBBASE & BASE	$	510,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	616,000.00
ELECTRICAL	$	500,000.00
DRAINAGE	$	50,000.00
FUEL FACILITY	$	400,000.00
FENCING	$	-
SEEDING	$	50,000.00
CONSTRUCTION CONTINGENCY	$	800,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	15,800,000.00
ROADWAY MODIFICATIONS	$	400,000.00
WETLAND MITIGATION	$	100,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	-
ENGINEERING / PROFESSIONAL SERVICES	$	990,000.00
PLANNING-LEVEL COST	**$**	**23,300,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*20,200,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*3,100,000.00*

NOTES:

(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 2C

IMPROVE RUNWAY 18/36 TO MEET DESIGN STANDARDS,
CONSTRUCT NEW RUNWAY 3/21 (3,300' x 60')

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	1,500,000.00
REMOVALS	$	790,000.00
EARTHWORK	$	1,965,000.00
PAVEMENT SUBBASE & BASE	$	810,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	1,091,000.00
ELECTRICAL	$	500,000.00
DRAINAGE	$	80,000.00
FUEL FACILITY	$	400,000.00
FENCING	$	-
SEEDING	$	130,000.00
CONSTRUCTION CONTINGENCY	$	1,090,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	3,800,000.00
ROADWAY MODIFICATIONS	$	30,000.00
WETLAND MITIGATION	$	150,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	-
ENGINEERING / PROFESSIONAL SERVICES	$	1,290,000.00
PLANNING-LEVEL COST	**$**	**13,700,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*10,600,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*3,100,000.00*

NOTES:

(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 3A

IMPROVE RUNWAY 18/36 TO 3,800' USABLE LENGTH AND 75' WIDE
CLOSE RUNWAY 4/22 AND CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	600,000.00
REMOVALS	$	700,000.00
EARTHWORK	$	75,000.00
PAVEMENT SUBBASE & BASE	$	390,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	564,000.00
ELECTRICAL	$	400,000.00
DRAINAGE	$	80,000.00
FUEL FACILITY	$	-
FENCING	$	-
SEEDING	$	130,000.00
CONSTRUCTION CONTINGENCY	$	450,000.00
OTHER ITEMS		
BURY POWER LINES	$	11,600,000.00
LAND ACQUISITION & RELOCATION	$	3,100,000.00
ROADWAY MODIFICATIONS	$	40,000.00
WETLAND MITIGATION	$	150,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	6,280,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	1,490,000.00
PLANNING-LEVEL COST	**$**	**26,100,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*26,100,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*-*

NOTES:

(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 3B

IMPROVE RUNWAY 18/36 TO MEET DESIGN STANDARDS,
CONSTRUCT NEW RUNWAY 4/22 (3,800' x 75')

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	1,500,000.00
REMOVALS	$	640,000.00
EARTHWORK	$	1,800,000.00
PAVEMENT SUBBASE & BASE	$	1,125,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	1,516,000.00
ELECTRICAL	$	500,000.00
DRAINAGE	$	100,000.00
FUEL FACILITY	$	-
FENCING	$	-
SEEDING	$	150,000.00
CONSTRUCTION CONTINGENCY	$	1,100,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	26,700,000.00
ROADWAY MODIFICATIONS	$	40,000.00
WETLAND MITIGATION	$	100,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	6,280,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	2,240,000.00
PLANNING-LEVEL COST	**$**	**43,800,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*40,700,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*3,100,000.00*

NOTES:

(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 4A

IMPROVE RUNWAY 18/36 TO 5,500' LENGTH AND 75' WIDE,
CLOSE RUNWAY 4/22 AND CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	2,500,000.00
REMOVALS	$	1,220,000.00
EARTHWORK	$	1,905,000.00
PAVEMENT SUBBASE & BASE	$	1,470,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	1,906,000.00
ELECTRICAL	$	1,200,000.00
DRAINAGE	$	150,000.00
FUEL FACILITY	$	-
FENCING	$	1,650,000.00
SEEDING	$	220,000.00
CONSTRUCTION CONTINGENCY	$	1,840,000.00
OTHER ITEMS		
BURY POWER LINES	$	11,600,000.00
LAND ACQUISITION & RELOCATION	$	16,000,000.00
ROADWAY MODIFICATIONS	$	25,040,000.00
WETLAND MITIGATION	$	500,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	8,150,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	7,170,000.00
PLANNING-LEVEL COST	**$**	**82,600,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*82,600,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*-*

NOTES:

(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

(2) COST ESTIMATE DOES NOT INCLUDE PAVEMENT RECONSTRUCTION COSTS

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
AIRFIELD ALTERNATIVE 4B

CONSTRUCT NEW RUNWAY 4/22 (5,500' x 75')
CLOSE RUNWAY 18/36 AND CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		**AMOUNT**
AIRFIELD CONSTRUCTION		
MOBILIZATION	$	2,800,000.00
REMOVALS	$	1,760,000.00
EARTHWORK	$	2,430,000.00
PAVEMENT SUBBASE & BASE	$	1,470,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	1,826,000.00
ELECTRICAL	$	1,200,000.00
DRAINAGE	$	150,000.00
FUEL FACILITY	$	-
FENCING	$	1,650,000.00
SEEDING	$	250,000.00
CONSTRUCTION CONTINGENCY	$	2,050,000.00
OTHER ITEMS		
BURY POWER LINES	$	-
LAND ACQUISITION & RELOCATION	$	74,300,000.00
ROADWAY MODIFICATIONS	$	170,000.00
WETLAND MITIGATION	$	250,000.00
TERMINAL/HANGAR AREA INFRASTRUCTURE	$	8,150,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	3,650,000.00
PLANNING-LEVEL COST	**$**	**102,200,000.00**
PRIMARY RUNWAY BREAKDOWN	*$*	*102,200,000.00*
CROSSWIND RUNWAY BREAKDOWN	*$*	*-*

NOTES:

(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
GENERIC NEW AIRPORT SITE (PAL 2)

CONSTRUCT NEW AIRPORT WITH 3,300' x 60' PRIMARY RUNWAY,
CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		AMOUNT
AIRFIELD & TERMINAL/HANGAR AREA CONSTRUCTION		
MOBILIZATION	$	2,400,000.00
REMOVALS	$	200,000.00
EARTHWORK	$	2,400,000.00
PAVEMENT SUBBASE & BASE	$	1,080,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	1,452,000.00
ELECTRICAL	$	600,000.00
DRAINAGE	$	200,000.00
UTILITY EXTENSIONS	$	120,000.00
SEEDING	$	250,000.00
FENCING	$	300,000.00
PUBLIC BUILDINGS & HANGARS	$	2,800,000.00
FUEL FACILITY	$	400,000.00
CONSTRUCTION CONTINGENCY	$	1,840,000.00
OTHER ITEMS		
LAND ACQUISITION & RELOCATION	$	2,800,000.00
ROADWAY MODIFICATIONS	$	1,500,000.00
WETLAND MITIGATION	$	500,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	2,420,000.00
PLANNING-LEVEL COST	**$**	**21,300,000.00**

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
GENERIC NEW AIRPORT SITE (PAL 3)

CONSTRUCT NEW AIRPORT WITH 3,800' x 75' PRIMARY RUNWAY,
CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		AMOUNT
AIRFIELD & TERMINAL/HANGAR AREA CONSTRUCTION		
MOBILIZATION	$	3,200,000.00
REMOVALS	$	200,000.00
EARTHWORK	$	3,735,000.00
PAVEMENT SUBBASE & BASE	$	1,470,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	2,197,000.00
ELECTRICAL	$	600,000.00
DRAINAGE	$	300,000.00
UTILITY EXTENSIONS	$	120,000.00
SEEDING	$	280,000.00
FENCING	$	320,000.00
PUBLIC BUILDINGS & HANGARS	$	3,000,000.00
FUEL FACILITY	$	500,000.00
CONSTRUCTION CONTINGENCY	$	2,390,000.00
OTHER ITEMS		
LAND ACQUISITION & RELOCATION	$	3,100,000.00
ROADWAY MODIFICATIONS	$	1,500,000.00
WETLAND MITIGATION	$	600,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	3,080,000.00
PLANNING-LEVEL COST	**$**	**26,600,000.00**

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY

PORTAGE MUNICIPAL AIRPORT
AIRPORT MASTER PLAN STUDY
PLANNING-LEVEL COST ESTIMATE BREAKDOWN
GENERIC NEW AIRPORT SITE (PAL 4)

CONSTRUCT NEW AIRPORT WITH 5,500' x 75' PRIMARY RUNWAY,
CONSTRUCT NEW TERMINAL/HANGAR AREA

DESCRIPTION		AMOUNT
AIRFIELD & TERMINAL/HANGAR AREA CONSTRUCTION		
MOBILIZATION	$	5,400,000.00
REMOVALS	$	300,000.00
EARTHWORK	$	8,715,000.00
PAVEMENT SUBBASE & BASE	$	2,415,000.00
BITUMINOUS PAVEMENT & MARKINGS	$	3,183,000.00
ELECTRICAL	$	1,500,000.00
DRAINAGE	$	400,000.00
UTILITY EXTENSIONS	$	120,000.00
SEEDING	$	470,000.00
FENCING	$	1,650,000.00
PUBLIC BUILDINGS & HANGARS	$	3,500,000.00
FUEL FACILITY	$	600,000.00
CONSTRUCTION CONTINGENCY	$	4,240,000.00
OTHER ITEMS		
LAND ACQUISITION & RELOCATION	$	4,900,000.00
ROADWAY MODIFICATIONS	$	1,500,000.00
WETLAND MITIGATION	$	750,000.00
ENGINEERING / PROFESSIONAL SERVICES	$	5,220,000.00
PLANNING-LEVEL COST	**$**	**44,900,000.00**

NOTES:
(1) COST ESTIMATE IS CONCEPTUAL FOR MASTER PLANNING PURPOSES ONLY