



City of
Peterborough

To: Members of the General Committee

From: Jasbir Raina, Commissioner of Infrastructure and Planning Services

Meeting Date: July 11, 2022

Subject: Peterborough Airport Master Plan Recommendations, Report IPSAIR22-006

Purpose

A report to recommended approval of the Peterborough Airport Master Plan and to provide an update to Council on the next steps of the project.

Recommendations

That Council approve the recommendations outlined in Report IPSAIR22-006, dated July 11, 2022, of the Commissioner of Infrastructure and Planning Services as follows:

- a) That the presentation by HM Aero Inc. on the Peterborough Airport Master Plan be received for information;
- b) That the recommended Airport Infrastructure projects summarized in Appendix B, be approved in principle; and
- c) That the Peterborough Airport Master Plan project team finalize the Peterborough Airport Master Plan and publish for public review.

Budget and Financial Implications

The estimated capital costs associated with the recommendations outlined in the Peterborough Airport Master Plan are approximately \$80,956,333.00 over a 15-year horizon of the plan, as summarized in Table 1 – Summary of Capital Costs for Airport Master Plan Recommendations.

Future Council will determine the pace of investment and implementation timeline of the recommendations outlined in the Peterborough Airport Master Plan over a 15-year horizon based on infrastructure priorities.

Table 1 – Summary of Capital Costs for Airport Master Plan Recommendations

Category	Short-Term	Medium-Term	Long-Term
	2023-2027	2028-2032	2033-2037
Infrastructure Rehabilitation and Reconstruction	\$740,000	\$9,251,000	\$11,842,000
Servicing Improvements ¹	\$21,890,000	\$147,000	\$0
Land Acquisitions	\$3,200,000	\$1,000,000	\$600,000
Passenger Processing Facility Development ²	\$2,847,333	\$0	\$0
Infrastructure Expansion ³	\$21,163,000	\$4,404,000	\$2,857,000
Airport Plans and Studies ⁴	\$965,000	\$0	\$0
Total – Per Planning Horizon	\$50,805,333	\$14,802,000	\$15,299,000
Total – All Planning Horizons	\$80,906,333		
Notes: All costs in the summary table are in 2022 Canadian Dollars and have not been adjusted for inflation in the respective implementation years.			
¹ Servicing Improvements are identified within the current capital budget ² Passenger processing facility costs assume 33% investment by the City through a public, private partnership arrangement with three parties. ³ Short-term infrastructure Expansion primarily includes extension of Taxiway Bravo and preparation of the East Industrial Development Area and are identified within the current capital budget. ⁴ A \$500,000 budget is included to complete the federal zoning process			

Funding for capital projects will require further analysis. The budget implications could be substantially reduced if Provincial and/or Federal Grants can be obtained. Study and identification of various airport governance models could also provide opportunity for additional funding or partnership. A variety of the capital projects recommended in the Peterborough Airport Master Plan are already reflected in the current capital budget forecasts, which is updated annually as part of the budget development process.

Background

Council, at their meeting of November 23, 2021, passed a motion to update the Peterborough Airport Master Plan, identifying the airport as an important economic development tool for the creation of jobs.

The Airport Master Plan represents the blueprint for long-term development by guiding future expansion at the Peterborough Airport and outlining the business strategy to position the airport as an economic leader to meet future aviation demand and create employment.

Since the previous Airport Master Plan update in 2009, the Airport has experienced exceptional growth in fulfilling the business and development plans. As of 2022, it is estimated that the airport contributes over \$90 million to GDP annually with an estimated 507 positions directly employed by over 20 businesses at the airport.

Timeline for Development of the Airport Master Plan

The industry standard for development of an Airport Master Plan typically requires a timeline of 10 to 12 months. Recognizing Council's request to have this project completed in a shorter period, additional studies are required to deliver various detailed elements of the Airport Master Plan and will be presented through the annual Capital budget process in future years.

Previous Studies

In 2008, City Council recognized an opportunity for growth approving recommendations in a staff report PLPD08-044 regarding a \$7 million multi-year Airport Development Program (2008-2013). The first phase of the program was the creation of Skyway Drive allowing the airport to access new areas for growth. The second phase was the creation of the General Aviation Area and extension of Apron 1 to the North. In 2009, LPS Consulting completed a Business Plan and draft Airport Master Plan. Within the year, Council adopted a series of further recommendations outlined in Report PLPD09-014 "Business Case for Infrastructure Development – Peterborough Airport". This business case was used to apply for federal and provincial grants and highlighted high potential markets including Maintenance Repair and Overhaul, Engine Overhaul Facilities, Aviation Education, and Aerospace Manufacturing. A second recommendation was later passed to create an Airport Master Plan.

In 2010 an additional investment of \$21 million was made by the City of Peterborough, Provincial, and Federal governments to expand the existing 5000-foot-long runway to 7000 feet, create a new airport terminal, and prepare lots for private and commercial development. The operating surfaces were strengthened to allow for use by larger aircraft, such as the Airbus A320 and Boeing 737.

In 2013 a capital investment of \$6 million was made by the City to facilitate the relocation of Seneca College from Buttonville Airport; involving the partial extension of Taxiway Bravo, a new 2000 ft long cross wind runway with a parallel taxiway, and a private aircraft parking apron.

In 2017 WSP completed the Strategic Development Plan, building on the previous plans including new business opportunities and land use planning objectives. The Strategic Development Plan was adopted by Council through Report PLAIR18-002 dated February 5, 2017.

Airport Master Plan

The Airport Master Plan defines the developmental concept for the airport that protects options for airport operations and future development over an extended period (15 years) to ensure the airport is positioned to embrace new opportunities while serving the needs of the City of Peterborough, region, aviation operators and the aerospace industry.

The primary objective of the airport master plan is to develop an attainable phased development plan concept that will satisfy the needs of the airport in a safe, efficient, economical, and environmentally sound manner.

Serving as a guide to decision makers, the plan is a description of the most appropriate development options regarding the most appropriate land use strategy, innovative revenue generation, facilities and services required to ensure the airport meets its strategic objective to be a regional economic driver through creation of jobs and opportunity.

Aviation Demand and Economic Impact

The Peterborough Airport is part of the Southern Ontario Airport Network of 11 Airports and represents 55,300 jobs supported by the operations of these airports. The aviation industry is recovering from the global COVID-19 pandemic as passenger volumes and flights increase. The population of Southern Ontario in 2043 is expected to reach 15.5 million with a total of \$1 trillion of GDP. Regional growth is expected to drive aviation demand in Southern Ontario.

The Airport's economic impact to Gross Domestic Product (GDP) continues to grow increasing from \$41 million in 2009 to \$90 million in 2022, representing an annualized growth of approximately 9% per year. See Table 2 – Airport Economic Impact

Table 2 – Airport Economic Impact

		2009	2016	2022¹
Jobs (FTE)	Direct	251	382	507
	Indirect	171	246	87 ¹
	Induced		171	88 ¹
	Total	422	799	682¹
GDP	Direct	\$26,000,000	\$36,510,000	\$51,830,000
	Indirect	\$15,000,000	\$19,350,000	\$8,050,000 ¹
	Induced		\$18,180,000	\$30,460,000 ¹
	Total	\$41,000,000	\$74,040,000	\$90,340,000¹
Labour Income	Direct	N/A	\$33,290,000	\$43,540,000
	Indirect		\$12,070,000	\$5,280,000 ¹
	Induced		\$5,750,000	\$3,970,000 ¹
	Total	N/A	\$51,110,000	\$52,790,000¹

¹ Note: Change in Statistics Canada multipliers associated with COVID 19 for 2022. Fluctuation in staffing levels on airport between various employers with wage variations. Change in GDP is largely impacted by capital expenditures of on-site businesses.

Community and Stakeholders Engagement

The project team directly engaged with over 80 stakeholders representing 38 organizations including but not limited to Mayor and Council, other municipalities, NAV Canada, environmental agencies, off and on airport businesses, air operators, etc.

Online surveys through Connect Peterborough were targeted across the catchment area and provided a total of 623 residential and 16 business responses. The information received as part of the community and stakeholder engagement supported development of the Peterborough Airport Master Plan.

Business Development and Growth Strategies

Business development strategies to achieve activity growth in Peterborough's General Aviation and Aerospace Sectors, create employment to close the annual cost revenue

gap were prepared as part of the Peterborough Airport Master Plan. The following list was identified as key business strategies that have potential for success within the 15-year timeframe of the Master Plan.

a) Passenger Air Services and Passenger Facility Requirements

Strategies for introduction of passenger air services include:

- Expansion of existing specialized chartered air services to select destinations;
- Introduction of sun destination flights; and
- Introduction of scheduled passenger service through an Ultra Low Cost Carrier (ULCC) service utilizing a narrow-body aircraft with a targeted commencement of 2026.

The feasibility of passenger service was assessed and included as part of the public and stakeholder engagement. A catchment area for the airport was defined, identifying a market of over 1.2 million potential air travelers. Dynamic shifts in the aviation industry including the introduction and expansion of Ultra-Low-Cost Air Carrier (ULCC) models and the expansion of destination charter flights now provide a new opportunity for the Airport to attract passenger services to the region. Regional passenger services were identified as a medium-term opportunity but could be accommodated at anytime over the short-term cycle.

Introduction of passenger services provide opportunity for the airport to generate new revenues, gain access to Federal Airport Capital Assistant Program (ACAP) funding and provide economic benefit to the region.

Low passenger and flight movement growth scenarios were assessed within the study; the following growth opportunities were identified over the short-term planning cycle of the master plan (1-5 years):

- The introduction of one weekly scheduled ULCC flight;
- Expansion of existing specialized chartered air services to select destinations; and
- Introduction of sun destination flights, 16 per year to southern destinations (i.e., Florida, Caribbean, Mexico);

Medium to long-term opportunities related to passenger service were identified as:

- Organic expansion of ULCC flights;
- Increasing destination charter services;
- Expansion of sun destination flights.
- Introduction of regional service (i.e., flights to Montreal); and

The existing Air Terminal building has a peak hourly capacity for 38 passengers and has been used by the specialized air charters to date as a temporary solution, for

flights with approximately 130 passengers. There is an existing demonstrated short term need for a passenger facility.

A new Low-Cost Basic Passenger Processing Facility has been recommended as part of the Airport Master Plan. The facility is recommended at 1500m² with an additional capacity of 560m² of office space to accommodate a peak capacity of 340 passengers. Various concepts are being considered and include a main-floor warehouse style shared use space, second floor leasable space with funding through a public-private partnership.

Further study of the Passenger Processing Facility requirements is recommended and would include detailed planning, costing, financials, etc.

b) General Aviation and Aerospace

The Peterborough Airport currently supports a robust and healthy cluster of general aviation and aerospace organizations that provide important services within the domestic and international aviation industry. Organic business growth is anticipated to continue at the Peterborough Airport. The Master Plan has identified strong potential to support a wide range of general aviation and aerospace opportunities within the 15-year horizon of the study including:

- i. Electric Aircraft Support
- ii. Aerospace Research and Development
- iii. Aerospace Education
- iv. Recreational General Aviation
- v. Small Air Charter Services
- vi. Aircraft Maintenance Operators
- vii. Major Aerospace Manufacturing and Maintenance, Repair and Overhaul (MRO) Facilities
- viii. Fixed Based Operator
- ix. Supporting Flight Training Growth

Financial Performance

The airports operating budget includes debt payments related to previous capital investments

Capital Costs of Infrastructure and Design Requirements

The Peterborough Airport's primary Runway 09-27 is 7000 feet long by 100 feet wide and classified as non-instrument in accordance with Transport Canada TP312 4th Edition Aerodrome Standards and Recommended Practices. The runway is supported by a parallel taxiway spanning from the east end of the runway to the midpoint and two large aircraft parking aprons.

The primary runway, taxiways and aircraft parking surfaces were designed to accommodate Boeing 737 and Airbus A320 series aircraft, there are no proposed changes associated with the design aircraft.

Due to surrounding wetlands and ground conditions, the airport faces development constraints and a relatively limited area available for future development. Study included assessment of the following, as described below:

- a) Level of Service to the Primary Runway
- b) Widening the Primary Runway
- c) Servicing Improvements
- d) Land Acquisitions
- e) Infrastructure Expansion
- f) Passenger Processing Facility Development
- g) Additional Airport Plans and Studies
- h) Infrastructure Rehabilitation and Reconstruction

The costs associated with recommendations are summarized in this report under the section Budget and Financial Considerations, Table 1 – Summary of Capital Costs for Airport Master Plan Recommendations.

a) Level of Service Improvements to the Primary Runway

The cost benefit of improving the level of service to Runway 09-27 was assessed as part of the study. A change in the level of service of the primary runway from non-instrument to non-precision would provide increased accessibility that could improve the airports competitive position to attract business and potentially enter new markets. Increasing the level of service would require the airport to adhere to all the latest standards (TP312 5th Edition, Aerodrome Standards and Recommended Practices) including obstacle limitation surfaces, increasing runway and taxiway safety grading areas, airfield visual aids (markings and lighting), and other requirements.

Improved weather data was used to analyze the benefit to airport availability of lowering the Minimum Decent Altitudes (MDA) associated with the Instrument Flight Procedures (IFPs) for Runways 09 and 27 at Peterborough Airport.

Improving the runway's level of service to non-precision would allow aircraft, during low visibility and inclement weather, to descend to an altitude of 250 feet above the runway; in the current runway environment, aircraft cannot descend lower than 500 ft (non-instrument).

The following definitions describe non-instrument and non-precision runways:

Non-instrument: a runway intended for the operation of aircraft using visual approach procedures, or an instrument approach procedure down to a Height Above Aerodrome (HAA)/ Height Above Threshold (HAT) not lower than 500 ft.

Non-precision runway: A runway served by visual and non-visual navigation aids that provides at least lateral guidance adequate for instrument approach procedure down to a HAA/ HAT lower than 500 ft but not lower than 250 ft, and with an approach visibility not less than $\frac{3}{4}$ Statute Miles (Runway Visual Range of 4000 feet).

The percentage of improvement in availability of changing the runways level of service from non-instrument to non-precision was determined to be an annualized increase of 1.62%.

Seasonally in the winter, availability would increase by 3.35% and 0.50% in the summer. The average usability of the runway's current conditions (non-instrument) was determined to be 96.83%. Improving the runways classification to non-precision classification would be result in an annualized improvement of 1.62%, to 98.45%.

The actual benefit realized is dependent on the nature of current and future airport users (i.e., time of day, time of year, flight frequencies, etc.).

Civil construction costs associated changing the primary runways level of service was estimated at approximately \$7 million to relocate existing portions of Bravo taxiway; additional costs would include obstacle removal, establishment of obstacle removal easements, relocation and replacement of airfield visual aids and in-field grading expansion and drainage relocation.

Consultation with large airline operators determined that improving the level of service for runway 09-27 was not an absolute requirement, providing that weather analysis data could be used to support a viable business case to determine scheduled flight times within a range offering the most usability.

It is recommended that the City continue to monitor advancements in technologies and other changes within the short-term planning horizon of the Master Plan. If, for example, new Instrument Flight Procedure (IFP) design criteria is introduced and Transport Canada standards are revised, or if an Air Traffic Control Tower is commissioned, there may be opportunities to provide a Non-Precision level of service for Runway 09-27 without major infrastructure modifications. Further analysis of the

requirement and cost benefit of improving the primary runways level of service is recommended within the short-term planning horizon (2026).

b) Widening the Primary Runway

Within the scope of the study, the project team investigated the requirement and associated costs with increasing the width of the primary runway. Consultations with stakeholders identified little demand for increasing the runway width above 30 meters (100 feet) and reconfirmed that the operational width is sufficient to support narrow body aircraft operations (Boeing 737 or Airbus A320 series).

The estimated costs for widening the runway to 45 meters (150 feet) is \$9.3 million and includes costs related to relocation of sub-surface drainage infrastructure.

c) Servicing Improvements

In 2002, servicing was extended to the Airport to support business growth. The water usage dictated the size of service installed and, at the time, was oversized. Sanitary pumps were also installed based on the requirements with estimated additional capacity for the future.

In 2010, the Airport underwent a major expansion which led to an increase in the number of people on site, from 150 in 2002 to over 600 in 2018. The increase can be attributed to business expansion and the addition of the Seneca College School of Aviation.

To position the City's Airport to capitalize on potential business opportunities, investment in addition to the requirement to replace the aging infrastructure, is required to pro-actively and properly prepare the site to support prospective business needs. Capital costs related to Servicing improvements include design services, construction of new water and sewer services, improvements to fire regulation requirements, a new pump-house generator and increased sewage pumping capacity at the airport.

Land acquisitions in the short term are targeted towards acquiring property for the extension of Taxiway Bravo.

In addition, over the medium term horizon, provisions have been made for addition of well and septic services in coordination with development of the Southern Development Area.

d) Land Acquisitions

Over the planning cycle of the Airport Master Plan, provisions have been made for the establishment of easements and property purchases to support protection of the Airport's Obstacle Limitation surfaces, infrastructure expansion and the long-term development initiatives of the Airport.

e) Infrastructure Expansion

Infrastructure expansion in the short term, includes extension of Taxiway Bravo and continued preparation of the East Development Area located East of Airport Road at an estimated cost of \$6 million and \$12.5 million respectively, and a variety of smaller capital projects and initiatives as outlined in Appendix B.

The extension of Taxiway Bravo at the Peterborough Airport is an initiative that will mitigate risk, enhance safety, and improve efficiency of operations at the airport. Extension of the taxiway will require acquisition of properties, or a portion of, to the North of the runway. Section of these properties are being considered as a long-term development reserve for the airport. The Airport's 7,000 foot long primary runway currently has an adjacent taxiway covering half of the length, from the east end to the midpoint of the runway. When aircraft require full length of the runway to depart towards the east (due to wind direction), they taxi on the runway to reach their takeoff position.

The current configuration creates a regular conflict requiring multiple aircraft in the air to alter their flight paths to accommodate the time required for larger aircraft to position on the West end of the runway. As traffic volumes increase, the safety risk will increase.

Continued development of the East Industrial Area is recommended in the short-term to utilize existing environmental approvals and proactively prepare for continued airport growth by developing industrial and commercial lands for new large airport tenants. Development of this area would unlock approximately 34 acres east of Airport Road. Environmental approval to fill the area was obtained in coordination with the expansion and fill program in 2017. Collaboration with other city projects may reduce the cost of sourcing suitable fill.

Additional projects include various building and lot preparations to operationally support future operations and continue to facilitate growth at the airport.

Over the medium-term horizon, construction of the South Development area has been planned to allow for continued growth of General Aviation at the airport.

Long-term capital initiatives include the extension of Apron IV located in the East Development Area to provide access to additional industrial lots and expansion of the existing Operations Centre.

f) Passenger Processing Facility Development

Currently, there is a demonstrated need for a passenger processing facility. As stated in section, Business Development and Growth Strategies, a new Low-Cost Basic Passenger Processing Facility has been recommended as part of the Airport Master Plan. The facility is recommended at 1500m² with an additional capacity of 560m² of office space to accommodate a peak capacity of 340 passengers. Various concepts are

being considered and include a main-floor warehouse style shared use space, second floor leasable space with funding through a public-private partnership. The c

Capital costs associated with development of a passenger processing facility assume a 1/3 cost sharing public / private partnership. Additional costs would include access roads, parking lot and a pay-for-parking station.

g) Additional Airport Plans and Studies

Further studies recommended include an Airport Governance Study, revision of Airport Federal Zoning Regulations, Passenger Processing Facility Feasibility Study, Air Service Marketing, Re-Evaluation of Non-Precision Operations Study, and an Airport Master Plan Update.

h) Infrastructure Rehabilitation and Reconstruction

The capital costs for rehabilitation and reconstruction airside pavement infrastructure have been accounted for in the financial and forecasts including all runways, taxiways, and aprons. Pavement surfaces and structures at the airport are considered in good condition at the present time, assessment and classification of pavement conditions are required to determine the rehabilitation cycle, which has been assumed over the long-term horizon.

Summary

The Peterborough Airport Master Plan was developed in accordance with industry standards and includes a phased in development plan to position the airport by guiding future expansion and outlining the business strategy to position the airport as an economic driver to meet future aviation demand and create employment.

As of 2022, it is estimated that the airport will contribute over \$90 million to GDP annually with an estimated 507 positions directly employed by over 20 businesses at the airport. The plan has identified business development and growth strategies that include a supporting capital plan to position the airport for continued growth with passenger service being a new focus and key pillar in sustainable revenue generation. As a result of the restricted timeline of the study, further studies and analysis are recommended to further define and prioritize the identified capital requirements.

A final report and presentation will be delivered to council during the General Committee scheduled July 11, 2022.

Submitted by,

Jasbir Raina, CEng., M.Tech, MBA, PMP, MIAM
Commissioner, Infrastructure and Planning Services

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Attachments:

Appendix A – 2022 Peterborough Airport Master Plan Presentation
Appendix B – Capital Plan and Financials



Peterborough Airport Master Plan Update

June 23, 2022



Overview

1. Master Plan Update Process and Background
2. Airport Profile
3. Level of Service
4. Activity Forecast
5. Development Planning
6. Growth Strategies
7. Financials and Implementation Plan
8. Questions

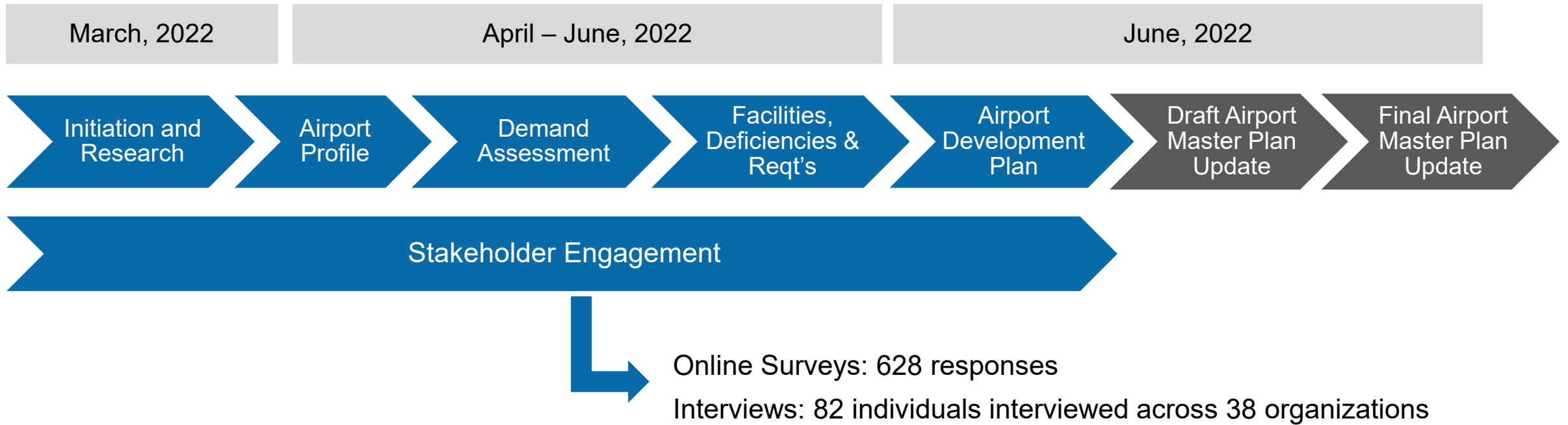




Master Plan Process and Background



Master Plan Process



Background and Objectives

- Study Update Prepared by HM Aero Staff in Close Coordination with the City of Peterborough
- 15-Year Study Time Horizon (2023-2037)
- 5-Year Planning Horizons
- Re-Examines Economic Benefits to the community
- Stakeholder Engagement and Opportunity Identification
- Activity Forecasts
- Infrastructure Assessment (NP Ops. and Rwy Width)
- Infrastructure Requirements & Strategies for Growth
- Guide Future Development – Cost Effective and Maximum Value



Context Review

Previous Studies

- 2009 Master Plan
- 2010 and 2015 Marketing Plan and Studies
- 2017 Strategic Plan

Industry Review - Changes

- Passenger Air Service Markets
- Local Passenger Demand
- New Technologies
- Uncertain Future For Pickering
- Toronto Pearson Congestion

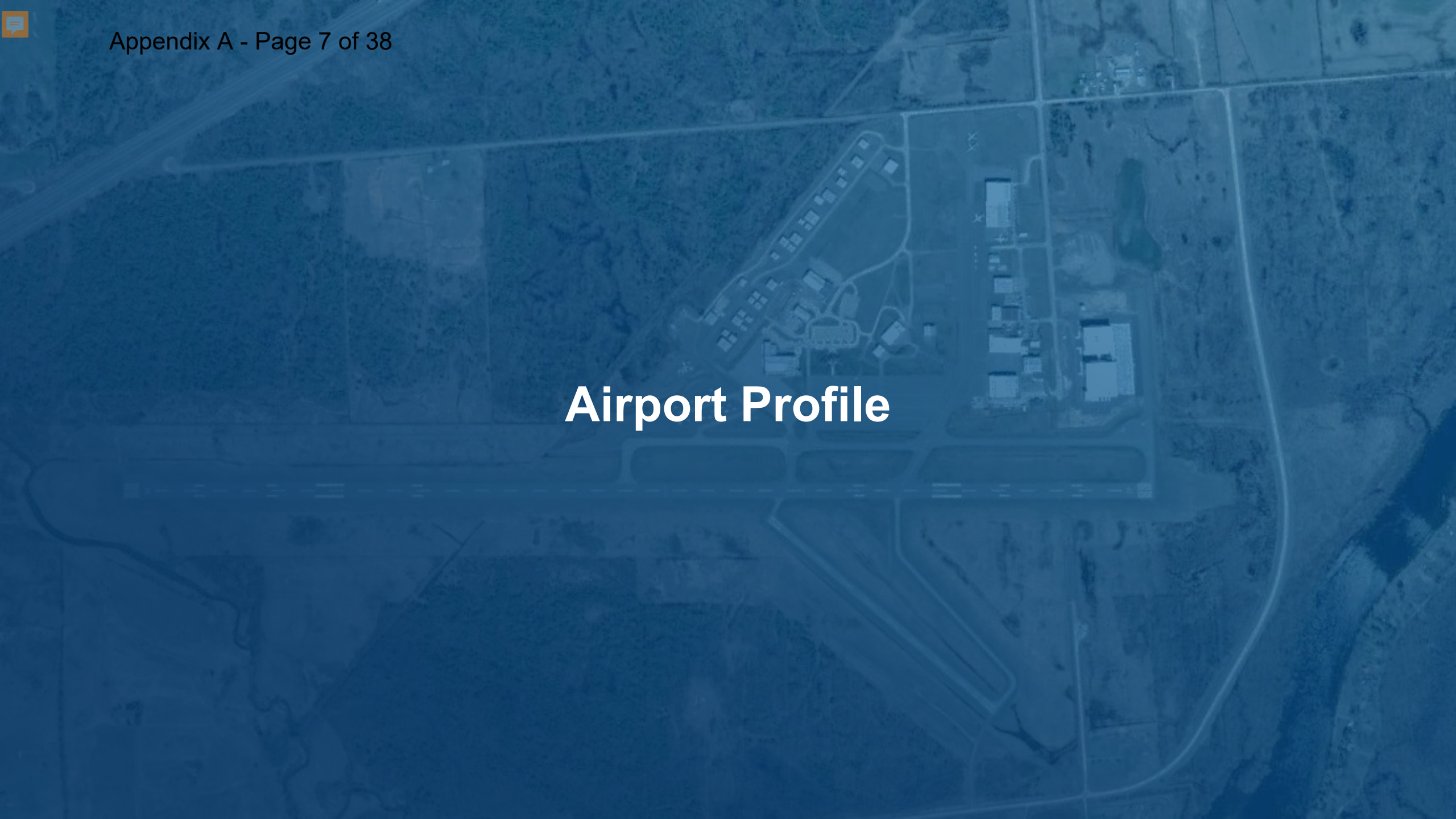
Regulatory Context

- City, County, Townships (x2)
- Airport Outside City Limits
- Significant Investment – Benefits All
- Noise Exposure and Other Challenges





Airport Profile



Ownership and Operation

- Owned by the City of Peterborough
- Operated by Loomex Group through a contract
- Maintained as a Transport Canada-certified airport and subject to an extensive series of regulatory obligations – e.g., operational standards, infrastructure requirements, safety management
- Publicly available 24 hours per day, 365 days per year



Infrastructure

- Runways: 2 – Capable of supporting regional airliners and corporate aircraft
- Taxiways: 9
- Aprons: 4
- Lighting to support nighttime operations on the primary runway
- GPS-based Instrument Approach Procedures
- Terminal building with a designed capacity of approximately 19 passengers
- Weather observation site
- Fleet of mobile equipment and maintenance facilities used to ensure year-round usability



On-Site Aviation Businesses

- Airtech – Aircraft modifications and repairs – Fixed and Rotary Wing
- Flying Colours – Maintenance, repair, and overhaul services, completions and engineering services for business aircraft
- Kadex Aero Supply - Aircraft parts and supplies distributor
- Loomex Group – Airport operator/Training/Emergency Preparedness
- Stewart Aviation – Aviation fuel / corporate ground handling
- Seneca College - Aviation Post Secondary Education
- Toronto Avionics - Service facilities and sales for avionics equipment
- Vector Air – Hangar Operator/Aircraft Sales
- W.M. Aeroflight – Flight training

Aircraft Operators

- Ontario Provincial Police, Royal Canadian Air Force, and air ambulance movements
- Flight training by Seneca College and W.M. Aeroflight
- Vacation Tours operated by Stewart Travel
- General Aviation Tenants (Local and Itinerant)
- Health Care Relocations



Stakeholder Engagement



Online Surveys

- Resident Survey – 623 Responses
- Business Survey – 16 Responses
- Top Destinations – Caribbean (254), Florida (179), Western Canada (216)



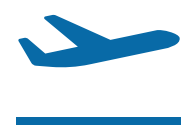
Online Public Open House

- April 25th, 2022
- Information about the project and engagement opportunities
- 8 Individuals Participated



Stakeholder Interviews

- Direct outreach by HM Aero and City
- Interviews with Individuals / Organizations with Interest in, or knowledge of YPQ
- Mayor and Council, ASIC, Municipalities, Businesses, Tenants, NAV CANADA, Off-Airport, etc.



Airline Consultations

- National, Regional, & Low Cost operators
- Representative Sample of Carriers Consulted
- Interest in Peterborough to Serve East GTA/ Durham/ Pboro etc.



Economic Benefit

- In 2016, the airport directly generated \$74 Million in GDP, \$51 Million in labour income, and 382 jobs on airport
- In 2022, the airport directly generated \$90 Million in GDP, \$52 Million in labour income, and 507 jobs on airport
- Differences between 2016 and 2022 impacts attributable to changes in Stats Canada multipliers (COVID-19), fluctuations in employment by business types, and significant capital expenditures airport businesses

		2016	2022
Jobs (FTE)	Direct	382	507
	Indirect	246	87
	Induced	171	88
	Total	799	682
GDP			
GDP	Direct	\$36,510,000	\$51,830,000
	Indirect	\$19,350,000	\$8,050,000
	Induced	\$18,180,000	\$30,460,000
	Total	\$74,030,000	\$90,340,000
Labour Income			
Labour Income	Direct	\$33,290,000	\$43,540,000
	Indirect	\$12,070,000	\$5,280,000
	Induced	\$5,750,000	\$3,970,000
	Total	\$51,110,000	\$52,790,000





Level of Service

Non-Precision Level of Service

- Airport currently has a non-instrument designation allowing for a minimum descent altitude of ~500 feet
- Improvement to non-precision could reduce MDA to 250 feet and thereby increase airport availability
- Strategies to achieve non-precision level of service were investigated and costs estimated



Benefit – Improved Airport Availability

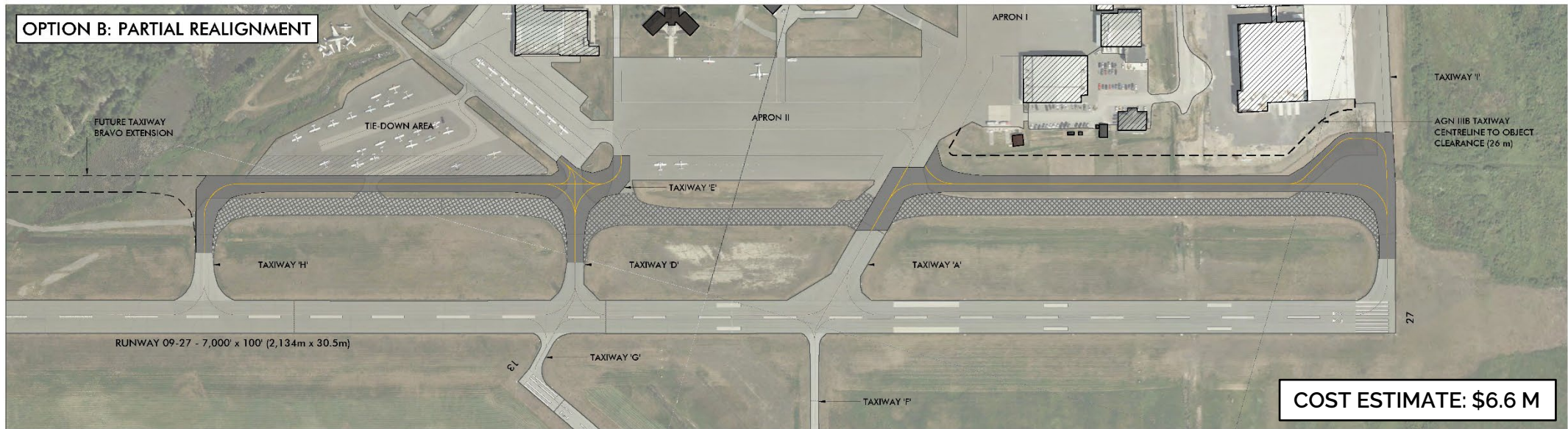
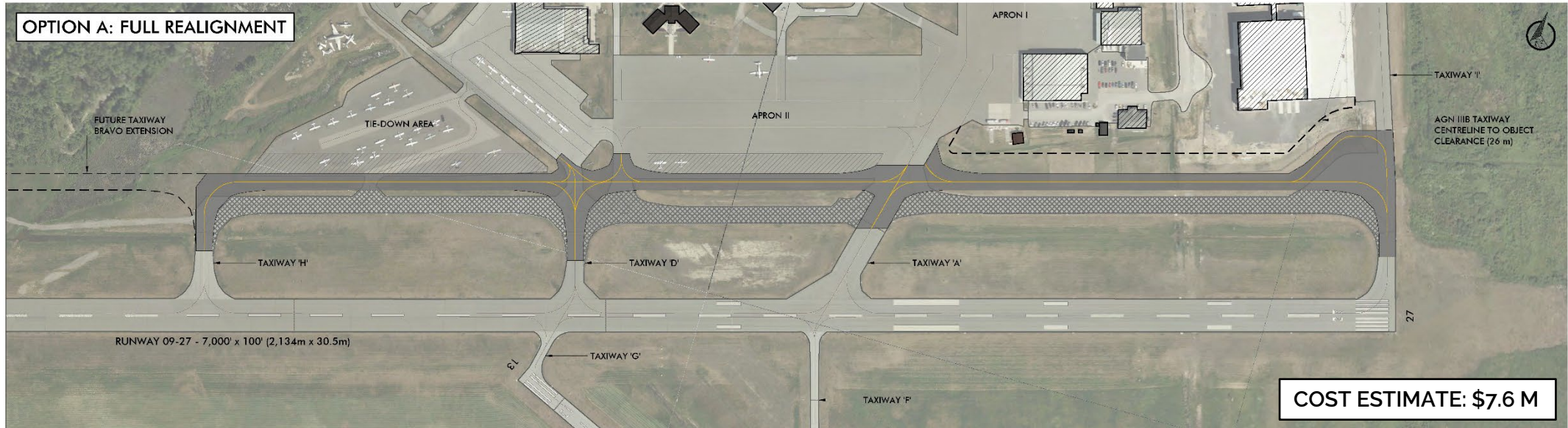
- Meteorological analysis conducted to determine the percent improvement in availability with change to non-precision
- Transport Canada recommends achieving 95% availability
- Current conditions (non-instrument): 96.83%
- Non-precision: increase availability to 98.45% (+1.62%) annually
- Winter season would benefit most from non-precision with availability increasing from 94.39% to 97.74% (3.35%). The summer season would improve by 0.50%
- Actual benefit realized would be dependent on nature of current and future airport users (i.e., time of day, time of year, flight frequencies, etc.)

HOUR (LST)	% Visual Flight Rules	% Non-Instrument (>= 500 Ft & 1.5 Mi)	% Non-Precision (>= 300 Ft & 1 Mi)	% Precision (>= 200 Ft & 0.5 Mi)
6:00	84.29%	91.72%	94.32%	96.15%
7:00	85.41%	92.87%	95.61%	96.89%
8:00	88.23%	95.29%	97.31%	98.42%
9:00	90.14%	96.25%	98.28%	99.14%
10:00	91.23%	97.32%	98.94%	99.61%
11:00	92.41%	97.60%	99.05%	99.69%
12:00	92.55%	97.55%	99.05%	99.78%
13:00	93.54%	97.50%	98.95%	99.75%
14:00	94.54%	98.22%	99.41%	99.92%
15:00	94.44%	98.44%	99.53%	99.92%
16:00	94.51%	98.72%	99.61%	99.97%
17:00	94.98%	98.61%	99.56%	99.83%
18:00	94.70%	98.39%	99.50%	99.75%
19:00	93.23%	98.01%	99.48%	99.75%
20:00	93.30%	97.42%	99.03%	99.42%
21:00	91.70%	96.64%	98.25%	99.39%
22:00	90.20%	95.46%	97.65%	98.75%
YEAR	91.74%	96.83%	98.45%	99.19%





Cost - Taxiway Bravo Realignment



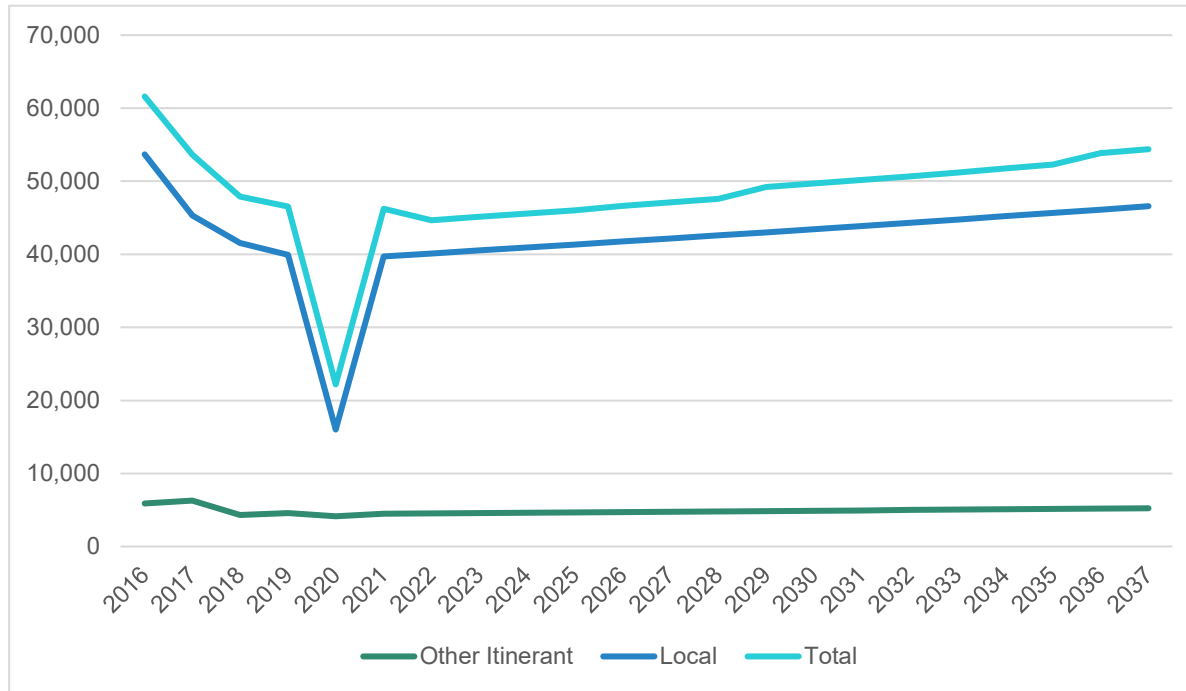


Activity Forecast

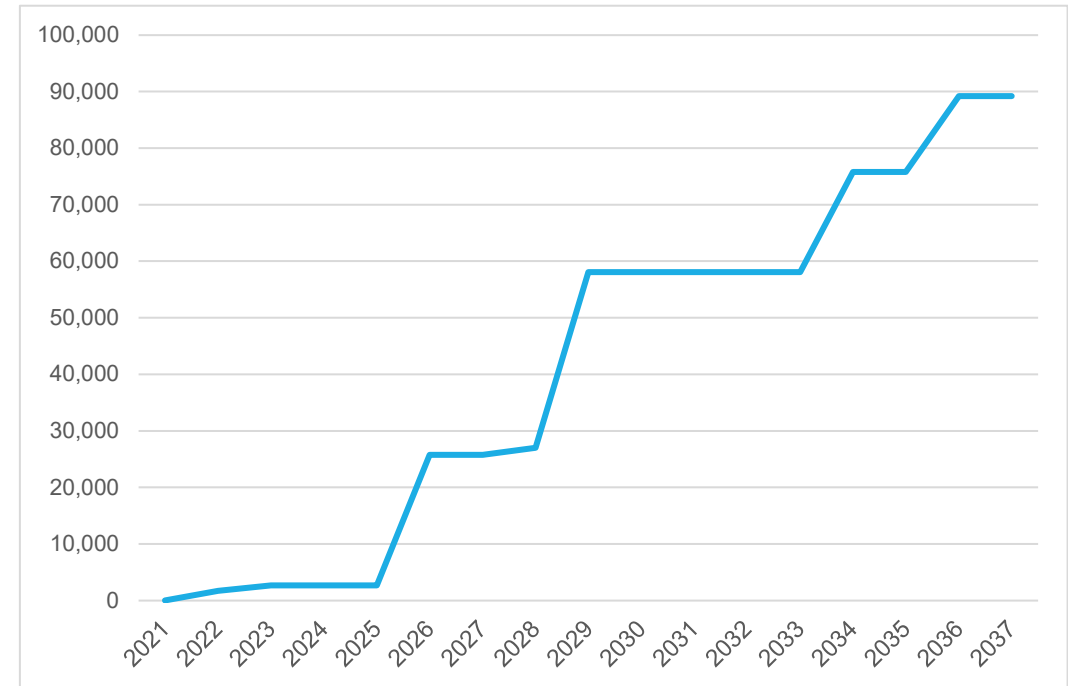


Activity Forecast

Annual Aircraft Movements



Annual Enplaned/Deplaned Passengers



- Forecast 1% Annual Growth for Other Itinerant and Local Traffic
- Air Carrier Movements Included in Total – Growth Based on Continued Boutique Charter Activity, New Charters Starting in 2026





Growth Opportunities and Infrastructure Requirements

Runway 09-27 Widening

- Master Plan investigated the requirement to widen Runway 09-27
- Runway 09-27 is currently 30m (100 ft.) wide – sufficient to satisfy Transport Canada standards for the design aircraft (Boeing 737)
- Consultations identified little demand from stakeholders, including prospective air carriers
- Cost estimate to widen the runway to 45m (150 ft.) is **\$9.3M**



Air Service Development

- Vacation tours offered from Peterborough to a variety of locations in Canada and the US – plans for growth
- High potential to attract ULCC and sun destination service in the short term – regional service uncertain
- New passenger facilities or airfield infrastructure required to facilitate these services
- National, regional, and low cost, air operators included in consultation process to identify opportunities, constraints, and infrastructure requirements

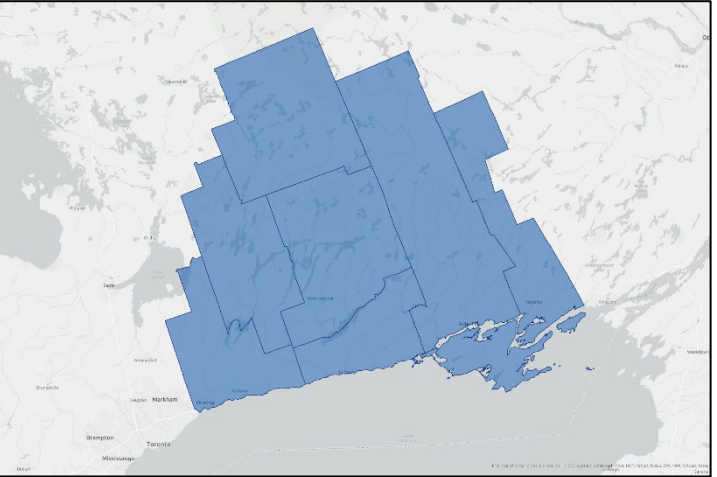




Growth Opportunities



	Short Term (1-5 Years)-	Medium Term (6-10 Years)	Long Term (11-15 Years)
Passenger Air Services			
<i>ULCC B737 Max 8/B737-800</i>	- 1 Per Week Service to YYC (2026)	- 2 Per Week Service to YYC (2029)	- 3 per week two destinations (2034)
<i>Boutique Charters B737-700</i>	- 11 per year to select destinations (2023)	- 16 per Year to Select Destinations (2028)	
<i>Caribbean/Mexico B737-800</i>	- 1 Per Week Service - 16 Week Charters to Caribbean and Mexico (2026)		- 2 Per Week Service (32 Week Charters - 1 Destination (2036)
<i>Southern U.S. Charters (Florida) B737-800</i>	- 1 Per Week Service – 16 Week Charters to Florida (2029)		
<i>Sked Regional King Air 100</i>		- 1x Daily (Mon-Fri) 9 Seats (2029)	- 2x Daily (Mon-Fri) 9 Seats (2036)
General Aviation and Aerospace			
	<ul style="list-style-type: none"> - -Unleaded Aviation Gasoline Support and Distribution <ul style="list-style-type: none"> - -Electric Aircraft Support - -Aerospace Research and Development <ul style="list-style-type: none"> - -Aerospace Education - -Recreational General Aviation - -Small Air Charters/Corporate Aviation <ul style="list-style-type: none"> - Aircraft Maintenance - Aerospace Manufacturing and MRO Facilities <ul style="list-style-type: none"> - Fixed Base Operator - Flight Training Growth - Organic Growth – Existing Businesses 		



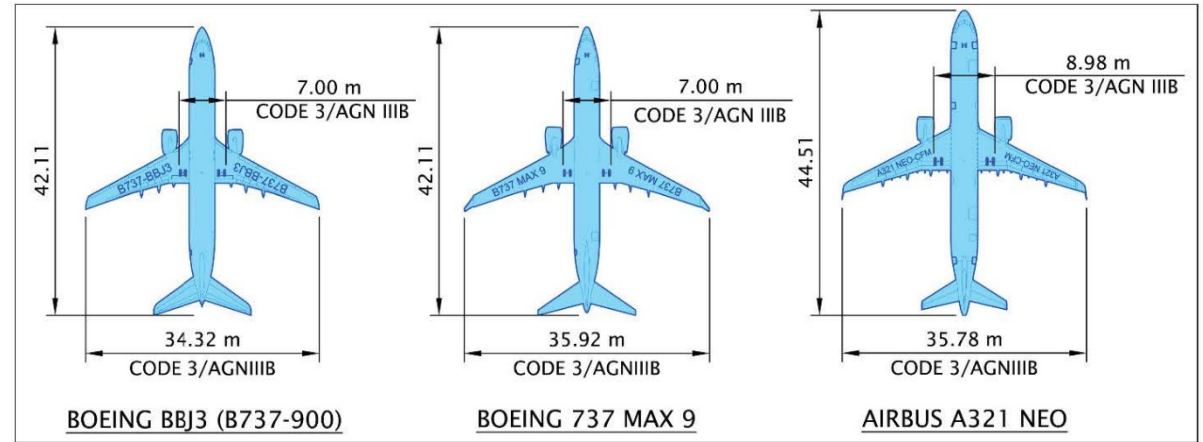
YPQ Catchment Area



Pipistrel Alpha Electro

Infrastructure Assessment & Requirements

- Airport Role Shift – Charter Air Services and ULCC
- No Design Aircraft Change Required Within Horizon
- TP312 5th Edition Standards – Airside Elements
- IATA Airport Development Recommendations – Pax Facility
- General Aviation Area Expansion (Short Term)
- Southern Development Area
 - New GA Development Lots + Supporting Taxiways Aprons
 - Shared Public Use Facility – Septic and Well
 - Cardlock Avgas System
- Current Infrastructure – Fair to Good Condition
 - Rehabs Planned at Lifecycle End



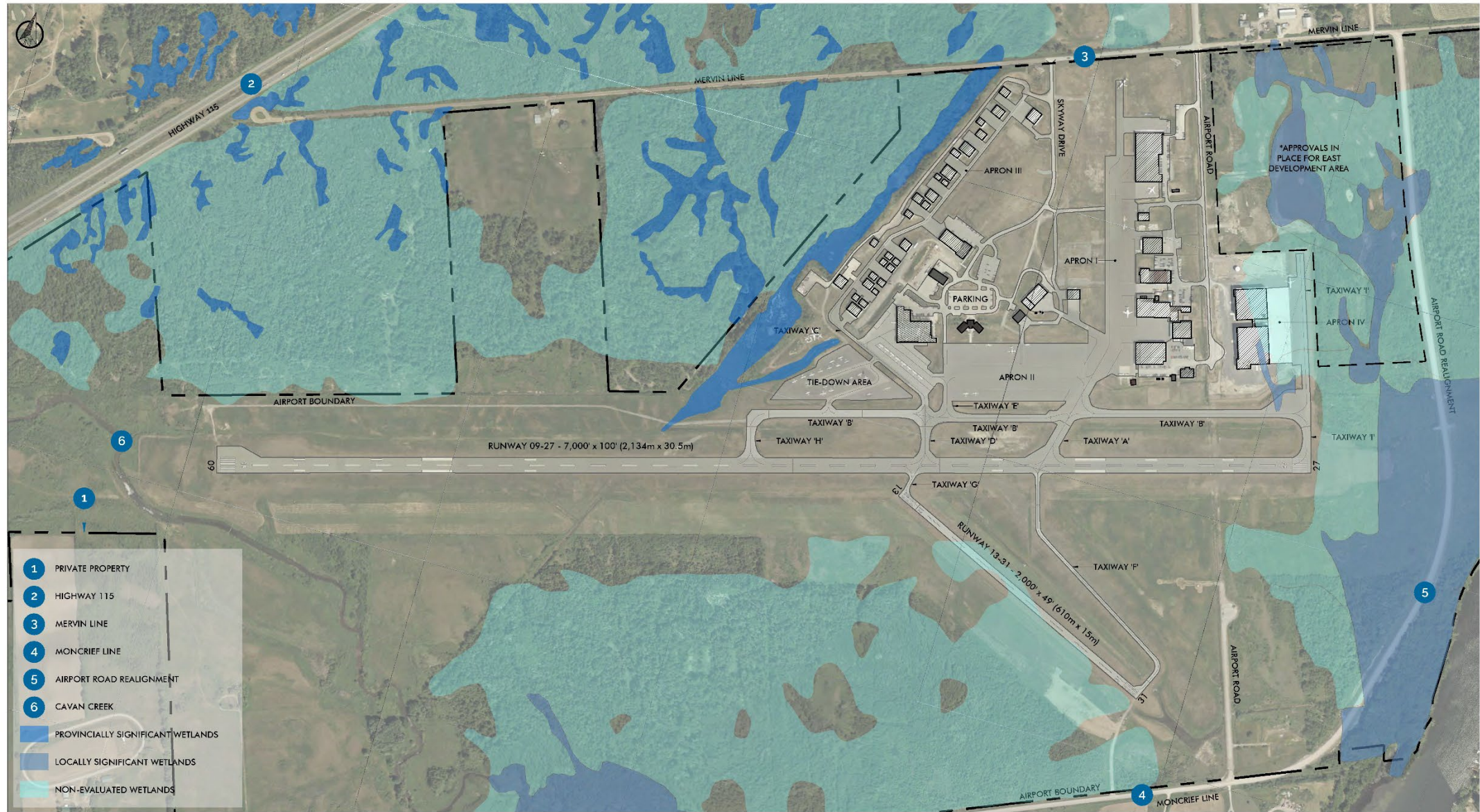
Lot Type	Assumed Rate/Year	New Lot Absorptions		
		Short Term (1-5 Years)	Medium Term (6-10 Years)	Long Term (11-15 Years)
Airside Commercial	0.5	2	3	3
Airside Industrial	0.25	1	1	2
General Aviation	1	4	5	5
Groundside Commercial	0	-	-	-
TOTAL		7	9	10



Development Planning

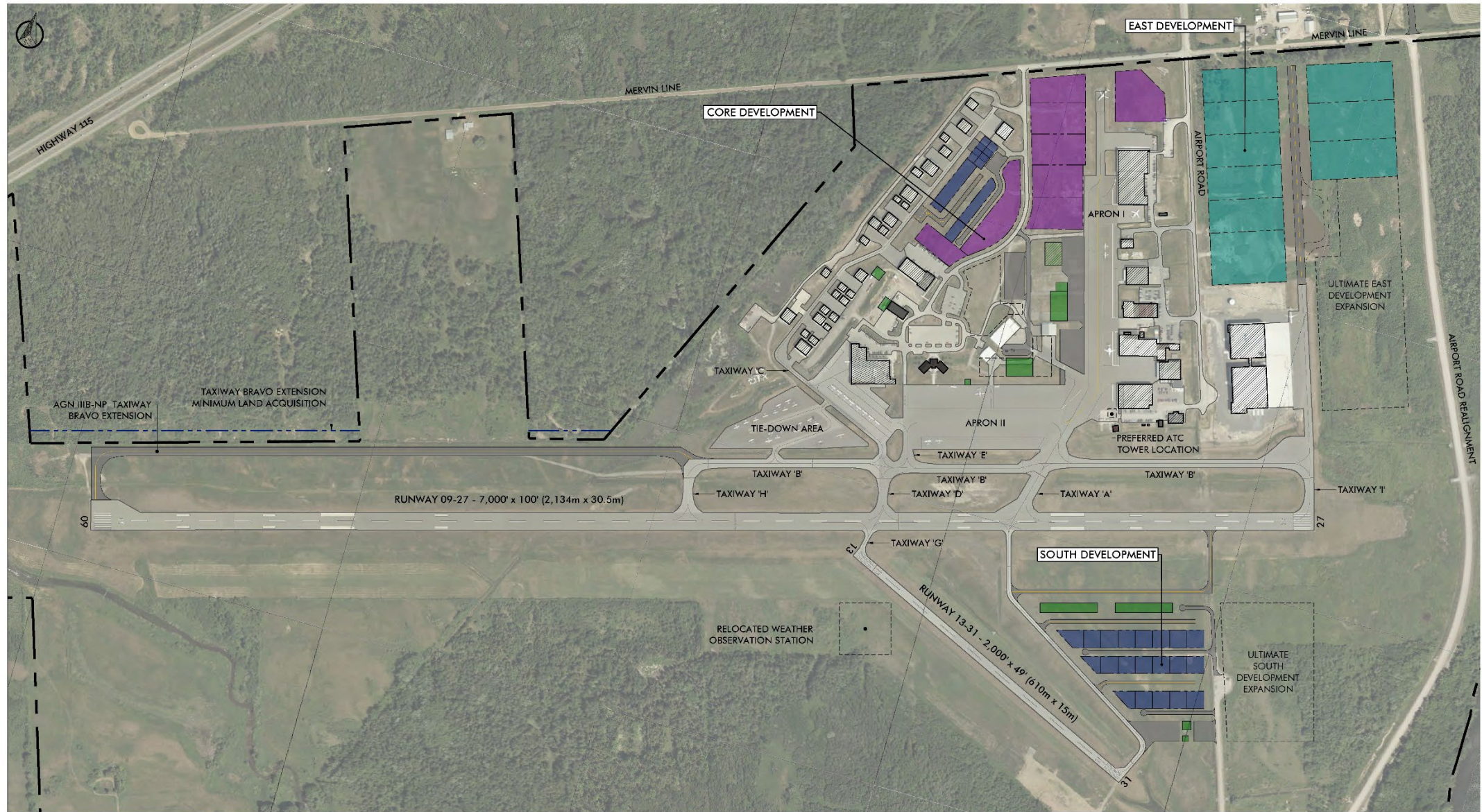


Appendix A - Page 25 of 38 Development Constraints



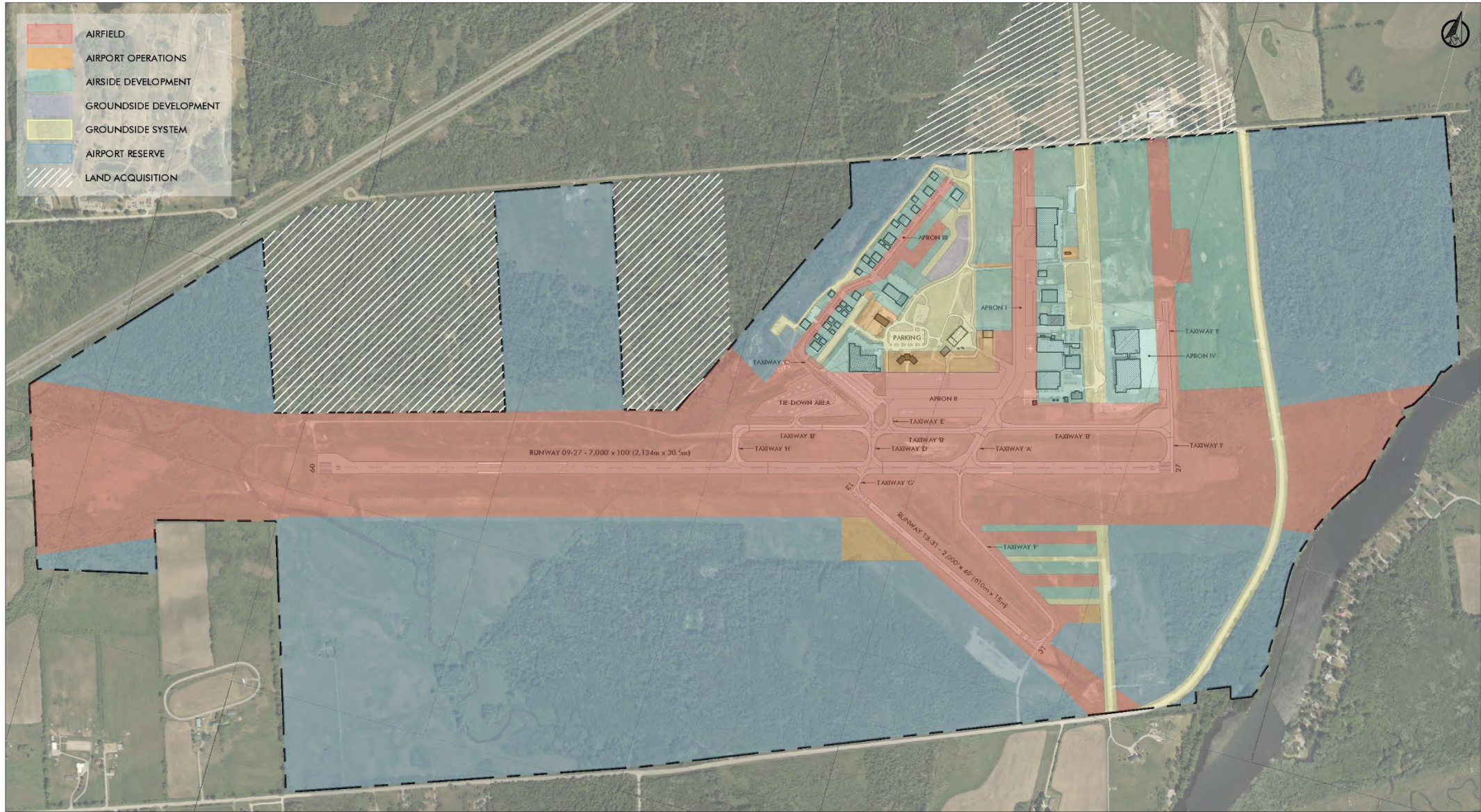
Appendix A - Page 26 of 38

Airport Development Plan



Appendix A - Page 27 of 38
Core Development Plan





Passenger Processing Facility Requirements

- Existing Air Terminal Building – 38 PHP Capacity
- 2022 Boutique Charters Utilizing Air Terminal Restaurant – Temporary Solutions (approx. 240 PHP)
- New Low-Cost **Basic** Passenger Processing Facility Recommended – 1,500 m² (340 PHP Capacity)
 - Main Floor Warehouse-Style Shared Use Space
 - Second Floor Leasable Space (560 m²)
 - Public-Private Partnership Potential
- Check-In, Secure Holdroom, Baggage Claim, Mixed Use Equipment Provisions for Carriers
- Further Feasibility Study Recommended – Detailed Planning, Costing, Financing, etc.





Growth Strategies

Future Growth Strategies

- Passenger Air Services
- Unleaded Aviation Gasoline Support
- Electric Aircraft Support
- Aerospace Research and Development
- Aerospace Education
- Recreational General Aviation
- Small Air Charters/Corporate Aviation
- Aircraft Maintenance, Aerospace Manufacturing and MRO Facilities, Fixed Base Operator, Flight Training Growth
- Organic Business Growth





Financials and Implementation Plan

Capital Plan

Category	Short-Term	Medium-Term	Long-Term
	2023-2027	2028-2032	2033-2037
Infrastructure Rehabilitation and Reconstruction	\$790,000	\$9,251,000	\$11,842,000
Servicing Improvements*	\$21,890,000	\$147,000	\$0
Land Acquisitions	\$3,200,000	\$1,000,000	\$600,000
Passenger Processing Facility Development**	\$2,847,333	\$0	\$0
Infrastructure Expansion	\$21,163,000	\$4,404,000	\$2,857,000
Airport Plans and Studies***	\$965,000	\$0	\$0
Total – Per Planning Horizon	\$50,805,333	\$14,802,000	\$15,299,000
Total – All Planning Horizons			\$80,906,333

Notes

All costs in the summary table are in 2022 Canadian Dollars and have not been adjusted for inflation in the respective implementation years.

*Servicing improvements are identified within the current budget.

**Passenger processing facility costs assume 33% investment by the City through P3 arrangement.

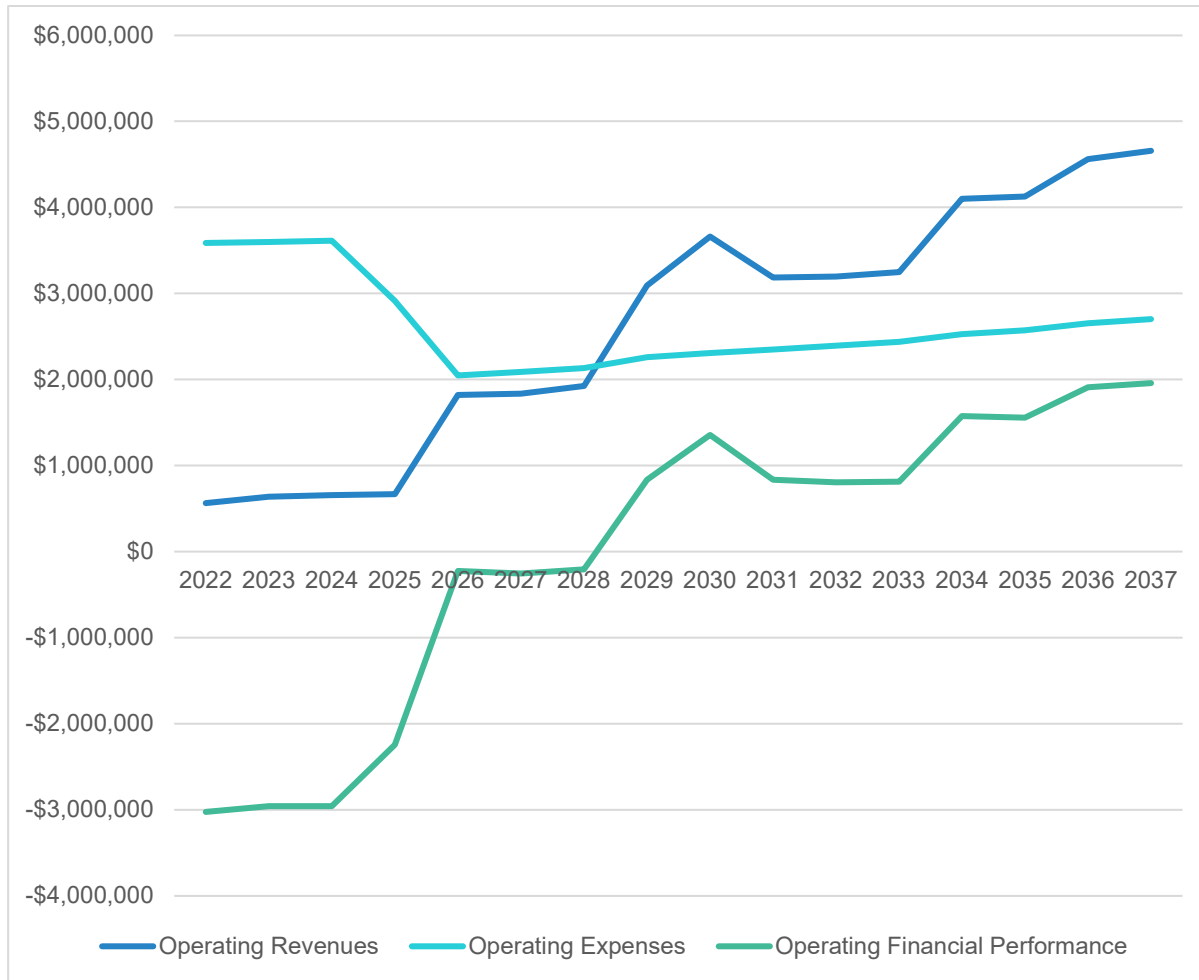
***A \$500,000 budget is included to complete the federal zoning process.

- Significant amount of investment required in short term for servicing expansions and upgrades (almost 50% of total capital required)
- Infrastructure expansion in short term mainly related to Taxi B extension and East Development Area preparations.
- Passenger processing facility costs access roads and parking and 1/3 of facility development costs.
- Comparator Airports:
 - Lake Simcoe Regional: Implementing **\$60M** Strategic Plan
 - Region of Waterloo International: Implementing **\$375M** 20-Year Master Plan (**\$60.8M** spent last 15 years)

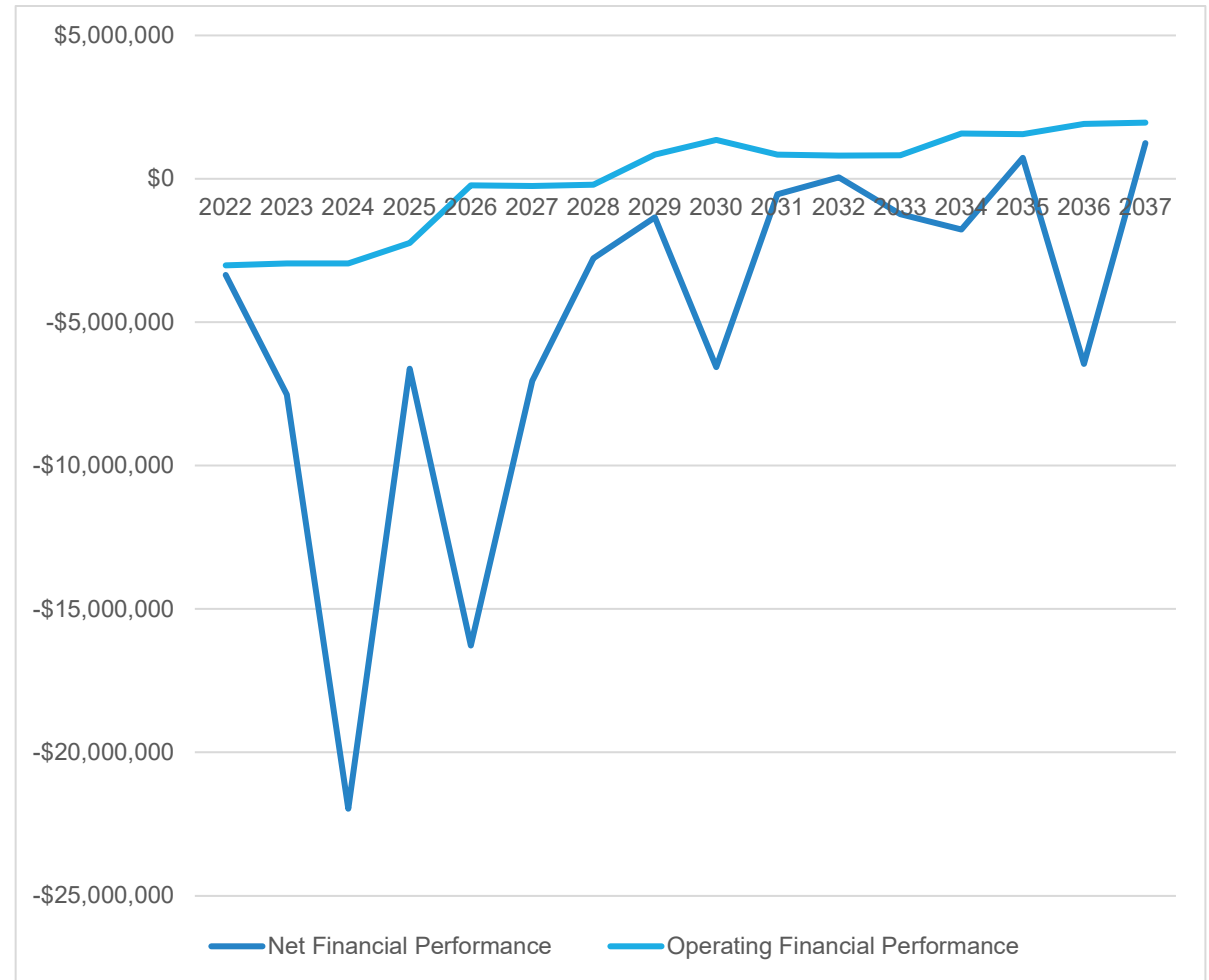


Financial Outlook

Operating Performance



Operating and Capital Performance



Implementation Plan / Recommendations

Recommended Master Plan Implementation Plan

	Short Term (1-5 Years)	Medium Term (6-10 Years)	Long Term (11-15 Years)
Airside	<ul style="list-style-type: none"> • LED Edge Lighting and Internal Roadway Lighting Upgrades (2023) • Core Development – Apron III Aircraft Holding Bay (2023) • Taxiway Bravo EA (2024) • Taxiway Bravo Design (2025) • Taxiway Bravo Extension (2026) • General Aviation Area Lot Preparation (Ongoing) 	<ul style="list-style-type: none"> • South Development - Construct 3 x AGN I Taxiways (2028) • General Aviation Area Lot Preparation (Ongoing) • Core Development – FBO Facility Reserve (2030) • Rehabilitate Runway 09-27 (2030) • Rehabilitate Taxiway Alpha (2030) • Rehabilitate Runway 13-31 (2031) • Rehabilitate Taxiway Golf (2032) • Rehabilitate Taxiway Charlie (2032) 	<ul style="list-style-type: none"> • East Development - Taxiway India Extension (2033) • Rehabilitate Taxiway Bravo (2034) • Rehabilitate Taxiway Delta (2034) • Rehabilitate Taxiway Hotel (2034) • Rehabilitate Taxiway Echo (2034) • Rehabilitate Apron III (2035) • Rehabilitate Apron I (2036) • Rehabilitate Apron II (2036) • Rehabilitate Taxiway Foxtrot (2037) • General Aviation Area Lot Preparation (Ongoing)



Implementation Plan / Recommendations

	Short Term (1-5 Years)	Medium Term (6-10 Years)	Long Term (11-15 Years)
Groundside	<ul style="list-style-type: none"> • Core Development – Apron III Access Road Construction (2023) • Emergency Access Road Development (2023) • Airport Pumphouse Generator Replacement (2023) • Water and Sewer – Design (2023) • Water and Sanitary Servicing Upgrades to Airport (2024) • Install Electric Vehicle Charging Stations (2024) • Airport Fire Regulation Requirements (2025) • Construct New Access Road and Parking Areas – Passenger Processing Facility (2025) • Procure Parking Lot Payment System (2025) • Core Development – Construct New Access Roads – Passenger Processing Facility (2025) • Core Development – Apron III Groundside Development Lot Preparation (2025) • Water Pumping Station Upgrades – Based on demand (2026) 	<ul style="list-style-type: none"> • South Development – Prepare General Aviation Lots for Hangar Development (2028) • South Development – Construct Access Road and Parking (2028) • South Development – Prepare Lots for T-Hangars (2031) 	<ul style="list-style-type: none"> • Core Development – Operations Centre Expansion (2036)



Implementation Plan / Recommendations

	Short Term (1-5 Years)	Medium Term (6-10 Years)	Long Term (11-15 Years)
Air Terminal and Other	<ul style="list-style-type: none"> • Passenger Processing Facility Feasibility Study (2023) • Introduction of Unleaded Avgas (2023) • Airport Governance Study (2023) • Air Service Marketing (2023) • Airport Easements and Property Acquisition (2023-2025) • Core Development – Passenger Processing Facility Design or Design-Build P3 (2024) • Core Development – Sand Storage Shed (2025) • Federal Zoning Process (2023-2025) • Re-evaluation of Non-Precision Study (2026) • Airport Industrial Park East Development Area Preparation (2026-2027) • South Development – Weather Observation Station Relocation (2027) • Obstacle Limitation Surface Tree Cutting (Ongoing) 	<ul style="list-style-type: none"> • Master Plan Update (2027) • South Development – Electrical Servicing (2028) • South Development – Establish Aviation Gas Cardlock System (2029) • South Development - Construct Tenant Services Building Apron Area (2029) • South Development - Construct Tenant Services Building (2029) • South Development – Provide Septic and Well Services to Tenant Services Building (2029) • Airport Fencing Replacement (2030) • Obstacle Limitation Surface Tree Cutting (Ongoing) 	<ul style="list-style-type: none"> • Obstacle Limitation Surface Tree Cutting (Ongoing)





Thank You

Appendix B – Capital Plan and Financials

Short Term Priorities (1-5 years)

Project #	Description	Cost	Year	Comments
1	Commercial and General Aviation Lot Preparation	\$1,000,000	2023-2027	
2	Obstacle Limitation Surface Tree Cutting	\$400,000	2023-2027	
3	LED Edge Lighting and Internal Roadway Lighting Upgrades	\$340,000	2023	
4	Apron III Aircraft Holding Bay	\$300,000	2023	
5	Apron III Access Road Construction	\$170,000	2023	
6	Emergency Access Road Development	\$70,000	2023	
7	Airport Pumphouse Generator Replacement	\$290,000	2023	
8	Passenger Processing Facility Feasibility Study	\$50,000	2023	
9	Airport Governance Study	\$75,000	2023	
10	Air Service Marketing	\$200,000	2023-2024	
11	Airport Easements and Property Acquisition Reserve	\$3,200,000	2023-2027	
12	Federal Zoning Process	\$500,000	2023-2025	
13	Airport Water and Sewer Upgrade Design	\$800,000	2023	
13	Airport Water and Sewer Upgrades	\$15,250,000	2024	
13	Airport Fire Regulation Requirements	\$1,800,000	2025	
13	Airport Water Pumping Station Upgrades	\$3,750,000	2026	
14	Install Electrical Vehicle Charging Stations	\$60,000	2024	

15	Construct Passenger Processing Facility (P3)	\$2,223,333	2024	
15	Procure Parking Lot Payment System	\$75,000	2025	
15	New Access Roads and Parking - Pax Processing Facility	\$549,000	2025	
16	Taxiway Bravo Environmental Assessment	\$500,000	2024	
16	Taxiway Bravo Extension Design	\$500,000	2025	
16	Taxiway Bravo Extension	\$5,519,000	2026	
17	Sand Storage Building	\$431,000	2025	
18	Re-Evaluation of Non-Precision Operations Study	\$55,000	2026	
19	Airport Industrial Park East Development Area Preparation	\$12,500,000	2026-2027	
20	Weather Observation Station Relocation	\$113,000	2027	
21	Airport Master Plan Update	\$85,000	2027	

Medium Term Priorities (6-10 years)

Project #	Description	Cost	Year	Comments
22	Commercial and General Aviation Lot Preparation	\$500,000	2028-2032	
22	Obstacle Limitation Surface Tree Cutting	\$250,000	2028-2032	
23	Airport Easements and Property Acquisition Reserve	\$1,000,000	2028-2032	
24	South Development - Construct 3x AGN I Taxiways	\$1,577,000	2028	
24	South Development - Prepare GA Lots for Hangars	\$23,000	2028	

24	South Development - Access Road and Parking Areas	\$487,000	2028	
24	South Development - Prepare Lots for T Hangars	\$70,000	2028	
24	South Development - Electrical Servicing	\$58,000	2028	
24	South Development - Establish Avgas Cardlock	\$713,000	2029	
24	South Development - Construct Tenant Services Building	\$416,000	2029	
24	South Development - Construct Tenant Services Apron	\$618,000	2029	
24	South Development - Provide Septic and Well Services	\$89,000	2029	
24	Airport Fencing Replacement	\$305,000	2030	

Long Term Priorities (11-15 years)

Project #	Description	Cost	Year	Comments
25	Commercial and General Aviation Lot Preparation	\$500,000	2033-2037	
26	Obstacle Limitation Surface Tree Cutting	\$250,000	2033-2037	
27	Taxiway India Extension	\$1,693,000	2033	
28	Maintenance Building Expansion	\$664,000	2036	
29	Airport Easements and Property Acquisition Reserve	\$600,000	2033-2035	

Rehabilitation Requirements

Project #	Description	Cost	Year	Comments
30	Runway 09-27 Rehabilitation	\$6,872,000	2030	
31	Taxiway A Rehabilitation	\$390,000	2030	
32	Runway 13-31 Rehabilitation	\$1,028,000	2031	
33	Taxiway G Rehabilitation	\$52,000	2032	
34	Taxiway C Rehabilitation	\$354,000	2032	
35	Taxiway B Rehabilitation	\$2,569,000	2034	
36	Taxiway D Rehabilitation	\$161,000	2034	
37	Taxiway H Rehabilitation	\$215,000	2034	
38	Taxiway E Rehabilitation	\$54,000	2034	
39	Apron III Rehabilitation	\$482,000	2035	
40	Apron I Rehabilitation	\$3,349,000	2036	
41	Apron II Rehabilitation	\$4,197,000	2036	
42	Taxiway F Rehabilitation	\$565,000	2037	

Appendix B – Capital Plan and Financials Short Term Priorities (1-5 years)

Peterborough Airport 15-Year Pro-Forma Financial Analysis															
	Year:	0	1	2	Short Term					Medium Term					
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total Medium Term	Total Long Term	
Passenger Forecast (E/D) Movement Forecast	0	1,688	2,653	2,653	2,653	25,787	25,787	26,993	58,082	58,082	58,082	58,082	259,322	387,972	
Air Carrier	0	14	22	22	22	158	158	168	1,344	1,344	1,344	1,344	5,544	9,280	
Other Itinerant	1.0%	4,495	4,540	4,585	4,631	4,678	4,724	4,772	4,819	4,867	4,916	4,965	24,583	25,837	
Local	1.0%	39,719	40,116	40,517	40,923	41,332	41,745	42,163	42,584	43,010	43,440	43,874	217,222	228,302	
TOTAL		44,214	44,670	45,125	45,576	46,031	46,627	47,092	47,571	49,221	49,700	50,184	247,349	263,419	
Revenue (Existing)															
Restaurant Rent	2%	\$0	\$0	\$17,000	\$18,041	\$18,401	\$18,769	\$19,145	\$19,528	\$19,918	\$20,317	\$20,723	\$21,137	\$101,623	\$112,200
Lease Revenue	2%	\$379,449	\$400,000	\$416,160	\$424,483	\$432,973	\$441,632	\$450,465	\$459,474	\$468,664	\$478,037	\$487,598	\$497,350	\$2,391,123	\$2,639,992
Advertising Revenue	2%	\$0	\$1,500	\$1,561	\$1,592	\$1,624	\$1,656	\$1,689	\$1,723	\$1,757	\$1,793	\$1,828	\$1,865	\$8,967	\$9,900
Parking Permits	2%	\$1,862	\$9,450	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Charter Revenues		\$2,679	\$5,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Misc. Revenues	2%	\$10,549	\$1,575	\$1,639	\$1,671	\$1,705	\$1,739	\$1,774	\$1,809	\$1,845	\$1,882	\$1,920	\$1,958	\$9,415	\$10,395
Aviation Fuel Concessions	2%	\$42,352	\$46,000	\$47,858	\$48,816	\$49,792	\$50,788	\$51,803	\$52,840	\$53,896	\$54,974	\$56,074	\$57,195	\$274,979	\$303,599
Airport Landing Fees	2%	\$15,467	\$26,250	\$27,311	\$27,857	\$28,414	\$28,982	\$29,562	\$30,153	\$30,756	\$31,371	\$31,999	\$32,639	\$156,917	\$173,250
Airport Tie Downs	2%	\$19,293	\$15,000	\$15,606	\$15,918	\$16,236	\$16,561	\$16,892	\$17,230	\$17,575	\$17,926	\$18,285	\$18,651	\$89,667	\$99,000
Local Improvements	2%	\$61,195	\$56,935	\$59,235	\$60,420	\$61,628	\$62,861	\$64,118	\$65,400	\$66,708	\$68,043	\$69,403	\$70,792	\$340,346	\$375,770
Transfer From Pavement Reserve											\$500,000				
Revenues (New)															
Additional Fuel Concessions	Per L		\$4,675	\$4,675	\$4,675	\$33,575	\$33,575	\$35,700	\$71,100	\$71,100	\$71,100	\$71,100	\$320,100	\$470,500	
Landing Fees	varies		\$6,865	\$7,142	\$7,285	\$53,368	\$54,435	\$59,038	\$128,536	\$131,107	\$133,729	\$136,404	\$588,814	\$965,705	
Passenger Fees	\$20		\$9,751	\$9,751	\$9,751	\$257,868	\$257,868	\$269,928	\$580,824	\$580,824	\$580,824	\$580,824	\$2,593,224	\$3,879,720	
Land Leases	\$ 3.43		\$31,846	\$35,346	\$36,053	\$78,087	\$79,649	\$101,514	\$107,159	\$159,830	\$166,787	\$163,637	\$698,927	\$1,410,891	
Vehicle Parking Revenues	\$12		\$0	\$0	\$0	\$773,604	\$773,604	\$809,784	\$1,543,174	\$1,543,174	\$1,543,174	\$1,543,174	\$6,982,481	\$10,244,075	
Total Gross Revenue		\$532,846	\$561,960	\$639,506	\$655,712	\$668,537	\$1,819,491	\$1,834,580	\$1,924,122	\$3,091,914	\$3,660,378	\$3,183,444	\$3,196,725	\$14,556,583	\$20,694,997

**Peterborough Airport
15-Year Pro-Forma Financial Analysis**

	Year:	0	1	2	Short Term			Medium Term							
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total Medium Term	Total Long Term	
Passenger Forecast (E/D)	0	1,688	2,653	2,653	2,653	25,787	25,787	26,993	58,082	58,082	58,082	58,082	259,322	387,972	
Movement Forecast															
Air Carrier	0	14	22	22	22	158	158	168	1,344	1,344	1,344	1,344	5,544	9,280	
Other Itinerant	1.0%	4,495	4,540	4,585	4,631	4,678	4,724	4,772	4,819	4,867	4,916	4,965	24,583	25,837	
Local	1.0%	39,719	40,116	40,517	40,923	41,332	41,745	42,163	42,584	43,010	43,440	43,874	217,222	228,302	
TOTAL	44,214	44,670	45,125	45,576	46,031	46,627	47,092	47,571	49,221	49,700	50,184	50,672	247,349	263,419	
Operating Expenses (Existing)															
Salaries, Wages and Benefits	2%	\$148,964	\$194,884	\$202,757	\$206,812	\$210,949	\$215,168	\$219,471	\$223,860	\$228,338	\$232,904	\$237,563	\$242,314	\$1,164,979	\$1,286,231
Utilities	2%	\$74,088	\$85,000	\$88,434	\$90,203	\$92,007	\$93,847	\$95,724	\$97,638	\$99,591	\$101,583	\$103,615	\$105,687	\$508,114	\$560,998
Insurance (Base)	2%	\$87,966	\$95,963	\$99,840	\$101,837	\$103,873	\$105,951	\$108,070	\$110,231	\$112,436	\$114,685	\$116,978	\$119,318	\$573,648	\$633,354
Insurance (Additional)	2%	\$18,742	\$21,500	\$22,369	\$22,816	\$23,272	\$35,607	\$40,099	\$40,901	\$41,719	\$42,553	\$43,404	\$44,272	\$212,849	\$235,003
Office Supplies and Operations	2%	\$17,270	\$9,035	\$9,400	\$9,588	\$9,780	\$9,975	\$10,175	\$10,378	\$10,586	\$10,798	\$11,014	\$11,234	\$54,009	\$59,631
Repairs and Maintenance	2%	\$138,744	\$169,738	\$176,595	\$180,127	\$183,730	\$187,404	\$191,153	\$194,976	\$198,875	\$202,853	\$206,910	\$211,048	\$1,014,661	\$1,120,268
Miscellaneous Expenses	2%	\$22,039	\$10,039	\$10,445	\$10,653	\$10,867	\$11,084	\$11,306	\$11,532	\$11,762	\$11,998	\$12,237	\$12,482	\$60,011	\$66,257
Staff Training	2%	\$0	\$2,500	\$2,601	\$2,653	\$2,706	\$2,760	\$2,815	\$2,872	\$2,929	\$2,988	\$3,047	\$3,108	\$14,945	\$16,500
Contractual Services	2%	\$1,064,487	\$1,049,520	\$1,076,468	\$1,142,356	\$1,136,034	\$1,158,755	\$1,181,930	\$1,205,569	\$1,229,680	\$1,254,274	\$1,279,359	\$1,304,946	\$6,273,827	\$6,926,812
Consulting and Professional Fees	2%	\$3,325	\$6,200	\$6,450	\$6,579	\$6,711	\$6,845	\$6,982	\$7,122	\$7,264	\$7,410	\$7,558	\$7,709	\$37,062	\$40,920
Advertising and Marketing	2%	\$12,172	\$30,000	\$31,212	\$31,836	\$32,473	\$33,122	\$33,785	\$34,461	\$35,150	\$35,853	\$36,570	\$37,301	\$179,334	\$197,999
Airport Noise Monitoring	2%	\$2,079	\$31,312	\$32,577	\$33,229	\$33,893	\$34,571	\$35,262	\$35,968	\$36,687	\$37,421	\$38,169	\$38,933	\$187,177	\$206,659
Financial Institution Charges	2%	\$3,042	\$2,800	\$2,913	\$2,971	\$3,031	\$3,091	\$3,153	\$3,216	\$3,281	\$3,346	\$3,413	\$3,481	\$16,738	\$18,480
Transfer to Airport Pavement	1%	\$50,004	\$50,000	\$51,005	\$51,515	\$52,030	\$52,551	\$53,076	\$53,607	\$54,143	\$54,684	\$55,231	\$55,783	\$273,448	\$287,397
Debt Repayment - Airport Development Capital	varies	\$592,421	\$569,216	\$545,526	\$521,534	\$497,056	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
Debt Repayment - ISF	varies	\$570,144	\$547,812	\$525,013	\$501,923	\$478,366	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
Debt Repayment - Seneca Airside	varies	\$335,287	\$327,372	\$319,455	\$311,562	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
Debt Repayment - Seneca Crosswind	varies	\$112,889	\$110,224	\$107,558	\$104,901	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
Debt Repayment - Seneca Taxi Bravo	varies	\$262,749	\$256,545	\$250,342	\$244,156	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
Debt Repayment GA Expansion	varies	\$17,520	\$17,496	\$17,467	\$17,445	\$17,419	\$17,394	\$17,368	\$17,341	\$0	\$0	\$0	\$0	\$17,341	0
Operating Expenses (New)															
CBSA Costs	Per FTE	2%		\$12,000	\$12,734	\$12,989	\$13,249	\$13,514	\$13,784	\$40,000	\$47,804	\$48,760	\$49,735	\$200,083	\$263,999
Passenger Processing Facility Operating Costs	\$5		\$6,633	\$6,633	\$6,633	\$64,467	\$64,467	\$67,482	\$145,206	\$145,206	\$145,206	\$145,206	\$648,306	\$969,930	
Total Operating Expenses		\$3,533,932	\$3,587,156	\$3,597,060	\$3,614,065	\$2,913,819	\$2,045,841	\$2,088,350	\$2,130,937	\$2,257,646	\$2,306,358	\$2,349,034	\$2,392,558	\$11,436,533	\$12,890,438
Gross Revenue (-) Operating Expenses		-\$3,001,086	-\$3,025,196	-\$2,957,554	-\$2,958,354	-\$2,245,282	-\$226,351	-\$253,770	-\$206,816	\$834,267	\$1,354,020	\$834,411	\$804,167	\$3,620,050	\$7,804,559
Projected Rehabilitation Costs			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,262,000	\$1,028,000	\$406,000	\$8,696,000	\$11,592,000
Projected Capital Costs		\$0	\$325,000	\$4,570,000	\$19,008,333	\$4,380,000	\$16,049,000	\$6,798,000	\$2,565,000	\$2,186,000	\$655,000	\$350,000	\$350,000	\$6,106,000	\$3,707,000
Total Expenses (Operating and Capital)		\$3,533,932	\$3,912,156	\$8,167,060	\$22,622,399	\$7,293,819	\$18,094,841	\$8,886,350	\$4,695,937	\$4,443,646	\$10,223,358	\$3,727,034	\$3,148,558	\$26,238,533	\$28,189,438
Income - Expenses		-\$3,001,086	-\$3,350,196	-\$7,527,554	-\$21,966,687	-\$6,625,282	-\$16,275,351	-\$7,051,770	-\$2,771,816	-\$1,351,733	-\$6,562,980	-\$543,589	\$48,167	-\$11,181,950	-\$7,494,441
Profit / Loss		Loss	Loss	Loss	Loss	Loss	Loss	Loss	Loss	Loss	Loss	Loss	Profit	Loss	Loss

Rehabilitation Requirements

Description	Cost	Short Term							Medium Term					Long Term					Total Short Term	Total Medium Term	Total Long Term
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037				
Runway 09-27 Rehabilitation	\$5,640,000									\$6,872,000								\$0	\$6,872,000	\$0	
Taxiway A Rehabilitation	\$320,000								\$390,000									\$0	\$390,000	\$0	
Runway 13-31 Rehabilitation	\$710,000									\$1,028,000								\$0	\$1,028,000	\$0	
Taxiway G Rehabilitation	\$40,000											\$52,000						\$0	\$52,000	\$0	
Taxiway C Rehabilitation	\$270,000											\$354,000						\$0	\$354,000	\$0	
Taxiway B Rehabilitation	\$1,910,000													\$2,569,000				\$0	\$0	\$2,569,000	
Taxiway D Rehabilitation	\$120,000													\$161,000				\$0	\$0	\$161,000	
Taxiway H Rehabilitation	\$160,000													\$215,000				\$0	\$0	\$215,000	
Taxiway E Rehabilitation	\$40,000													\$54,000				\$0	\$0	\$54,000	
Apron III Rehabilitation	\$350,000														\$482,000			\$0	\$0	\$482,000	
Apron I Rehabilitation	\$2,370,000															\$3,349,000		\$0	\$0	\$3,349,000	
Apron II Rehabilitation	\$2,970,000															\$4,197,000		\$0	\$0	\$4,197,000	
Taxiway F Rehabilitation	\$390,000																\$565,000	\$0	\$0	\$565,000	
Total 15-Year Rehabilitation Costs	\$15,290,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,262,000	\$1,028,000	\$406,000	\$0	\$2,999,000	\$482,000	\$7,546,000	\$565,000	\$0	\$8,696,000	\$11,592,000	

Capital Infrastructure and Project Requirements

Description	Cost	Short Term							Medium Term					Long Term					Total Short Term	Total Medium Term	Total Long Term
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037				
Short Term (1-5 Years)																					
Commercial and General Aviation Lot Prep	-	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$1,000,000	\$500,000	\$500,000
Obstacle Limitation Surface Tree Cutting	-	\$100,000	\$100,000	\$100,000	\$100,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$400,000	\$250,000	\$250,000
LED Edge Lighting and Internal Roadway Lighting Upgrades	\$340,000																		\$340,000	\$0	\$0
Apron III Aircraft Holding Bay	\$300,000																		\$300,000	\$0	\$0
Apron III Access Road Construction	\$170,000																		\$170,000	\$0	\$0
Emergency Access Road Development	\$70,000																		\$70,000	\$0	\$0
Airport Pumphouse Generator Replacement	\$290,000																		\$290,000	\$0	\$0
Passenger Processing Facility Feasibility Study	\$50,000																		\$50,000	\$0	\$0
Airport Governance Study	\$75,000																		\$75,000	\$0	\$0
Air Service Marketing	-		\$50,000	\$150,000															\$200,000	\$0	\$0
Airport Easements and Property Acquisition Reserve	-		\$2,000,000	\$400,000	\$400,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000				\$3,200,000	\$1,000,000	\$600,000
Federal Zoning Process	-		\$100,000	\$100,000	\$300,000														\$500,000	\$0	\$0
Airport Water and Sewer Upgrade Design	\$800,000		\$800,000																\$800,000	\$0	\$0
Airport Water and Sewer Upgrades	\$15,250,000			\$15,250,000															\$15,250,000	\$0	\$0
Install Electrical Vehicle Charging Stations	\$60,000			\$60,000															\$60,000	\$0	\$0
Construct Passenger Processing Facility (P3)	\$2,223,333			\$2,223,333															\$2,223,333	\$0	\$0
Taxiway Bravo Environmental Assessment	\$500,000			\$500,000															\$500,000	\$0	\$0
Taxiway Bravo Extension Design	\$500,000				\$500,000														\$500,000	\$0	\$0
Airport Fire Regulation Requirements	\$1,800,000				\$1,800,000														\$1,800,000	\$0	\$0
Procure Parking Lot Payment System	\$70,000				\$75,000														\$75,000	\$0	\$0
New Access Roads and Parking - Pax Processing Facility	\$510,000				\$549,000														\$549,000	\$0	\$0
Sand Storage Shed	\$400,000				\$431,000														\$431,000	\$0	\$0
Taxiway Bravo Extension	\$5,000,000					\$5,519,000													\$5,519,000	\$0	\$0
Re-Evaluation of Non-Precision Operations Study	\$50,000					\$55,000													\$55,000	\$0	\$0
Airport Industrial Park East Development Area Preparation	-					\$6,250,000	\$6,250,000												\$12,500,000	\$0	\$0
Airport Water Pumping Station Upgrades	\$3,750,000					\$3,750,000													\$3,750,000	\$0	\$0
Weather Observation Station Relocation	\$100,000						\$113,000												\$113,000	\$0	\$0
																			\$0	\$0	\$0
																			\$0	\$0	\$0
Medium Term (6-10 Years)																					
Airport Master Plan Update	\$75,000						\$85,000											\$85,000	\$0	\$0	
South Development - Construct 3x AGN I Taxiways	\$1,360,000							\$1,577,000										\$0	\$1,577,000	\$0	
South Development - Prepare GA Lots for Hangars	\$20,000							\$23,000										\$0	\$23,000	\$0	
South Development - Access Road and Parking Areas	\$420,000							\$487,000										\$0	\$487,000	\$0	
South Development - Prepare Lots for T Hangars	\$60,000							\$70,000										\$0	\$70,000	\$0	
South Development - Electrical Servicing	\$50,000							\$58,000										\$0	\$58,000	\$0	
South Development - Establish Avgas Cardlock	\$600,000								\$713,000									\$0	\$713,000	\$0	
South Development - Construct Tenant Services Building	\$350,000								\$416,000									\$0	\$416,000	\$0	
South Development - Construct Tenant Services Apron	\$520,000								\$618,000									\$0	\$618,000	\$0	
South Development - Provide Septic and Well Services	\$75,000								\$89,000									\$0	\$89,000	\$0	
Airport Fencing Replacement	\$250,000									\$305,000								\$0	\$305,000	\$0	
																		\$0	\$0	\$0	
																		\$0	\$0	\$0	
Long Term (11-15 Years)																					
Taxiway India Extension	\$1,290,000											\$1,693,000									
Maintenance Building Expansion	\$470,000														\$664,000						
Total 15-Year Capital Costs	\$60,943,333	\$325,000	\$4,570,000	\$19,008,333	\$4,380,000	\$16,049,000	\$6,798,000	\$2,565,000	\$2,186,000	\$655,000	\$350,000	\$350,000	\$2,043,000	\$350,000	\$350,000	\$814,000	\$150,000	\$50,805,333	\$6,106,000	\$3,707,000	
Approved Projects			\$860,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350,000	\$2,043,000	\$350,000	\$350,000	\$814,000	\$150,000	\$0	\$0	\$0	
Additional Capital Requests Required			\$3,710,000	\$19,008,333	\$4,380,000	\$16,049,000	\$6,798,000	\$2,565,000	\$2,186,000	\$655,000	\$350,000	\$350,000	\$2,043,000	\$350,000	\$350,000	\$814,000	\$150,000	\$50,805,333	\$6,106,000	\$3,707,000	