



City of
Peterborough

To: **Members of General Committee**

From: **Jeffrey Humble, Director, Planning and Development Services**

Meeting Date: **February 5, 2018**

Subject: **Report PLAIR18-002
Airport Strategic Development Plan**

Purpose

A report to recommend the adoption of the 2017 Airport Strategic Development Plan to guide development and investment decisions at the Peterborough Airport (the Airport).

Recommendations

That Council approve the recommendations outlined in Report PLAIR18-002 dated February 5, 2018, of the Director, Planning & Development Services, as follows:

- a) That the presentation by Adam Martin, Manager, Aviation Planning with WSP, on the Airport Strategic Development Plan, be received;
- b) That the Airport Strategic Development Plan, dated November 2017 prepared by WSP, be adopted as a development and investment guide, subject to annual capital budget approvals, at the Peterborough Airport for the period of 2018 to 2028; and
- c) That an update to the Airport Strategic Plan be provided within the next term of Council (i.e. 2022).

Budget and Financial Implications

The 2017 Airport Strategic Development Plan is a multi-year blueprint for development and investment at the Airport. The Plan identifies approximately \$48.0 million in Airport improvements over the next 20 years. In addition there will be corresponding increases to operational expenses as additional infrastructure is built. These will be analyzed by

staff for efficiencies and reported back to Council at a future date. The Plan also identifies the relationship between capital investment and the potential for wealth creation in the regional economy. All expenditures would be based on merit and subject to budget approval.

Background

The Airport Expansion Since 2008:

In May of 2008 City Council approved a \$7.6 M multi-year expansion of the Airport to provide for a large inventory of serviced land for aviation manufacturing and general aviation purposes. The multi-year plan also included a modest expansion to the airside infrastructure to serve the expanded aviation industrial area.

In 2008 the City also committed to the preparation of a Business Case for Infrastructure Investment at the Airport to better position the City for anticipated economic stimulus infrastructure funding. The Business Case not only validated the merits of the Council-approved multi-year expansion but concluded that the economic benefits to the region would be greater if the runway length was extended from 5,000 ft to 7,000 ft and if the runway and aprons were strengthened and expanded for larger, heavier aircraft. These core infrastructure improvements would then allow existing and future aviation enterprises to serve the largest sector of the commercial aviation fleet – the Boeing 737 or equivalent class of aircraft.

The City approved a Master Plan for the Airport in 2009 to reflect the long-term development opportunities should the airside infrastructure be expanded as outlined in the Business Case. The Master Plan showed the development potential of the Airport including lands then owned by the City and properties in the vicinity. The specific planning horizon for the Master Plan was not a fixed date as much as it was the sequencing of development priorities to respond to market demand over time.

The Federal and Provincial governments accepted the findings of the Business Case. The City was awarded \$14.0 M of funding to implement the Airport Expansion project on the basis that the City would contribute \$7.0 M in addition to its \$7.6 M multi-year program already committed and that construction would proceed immediately to meet the quick delivery expectations of the Infrastructure Stimulus program. The financial investment of the Federal and Provincial governments allowed the implementation of the Master Plan recommendations to be achieved over 2 years rather than decades.

The Airport has, since the expansion efforts, been regarded as a “Working Airport”. The infrastructure investment was intended to reinforce the municipal objective to grow jobs and investment in aviation so that the economic benefits would flow to the region. The story of the Airport since the adoption of the Business Case and Master Plan is best told by observing the physical change on the ground and the growth in Airport employment and air traffic over the past 8 years.

Figure 1:
Peterborough
Airport
July 2008



Figure 2:
Peterborough
Airport
Fall 2017



The global business environment is highly dynamic and the aviation sector even more so. Pursuit of the Master Plan has thus far served the City well but in an environment of change it is always prudent to step back and test the direction being followed and to evaluate the merits of new opportunities that may now be present. Accordingly, in 2016 the City retained WSP (formerly Marshall Macklin Monaghan and LPS Avia) to prepare a Strategic Development Plan for the Airport. The primary objectives of the study are as follows:

1. To understand the Economic Impact of the Airport as a result of the infrastructure investments made during the preceding 8 years.

2. To validate if the high potential markets for the Airport as identified in the Business Case and Master Plan are still relevant and to identify new business opportunities in the market that warrant attention.
3. To understand if the physical development priorities of the approved Master Plan adequately capture the potential of emerging high potential markets.
4. To provide a well-researched basis for ongoing Airport investment in areas that return the greatest benefits to the Airport and region.

The Strategic Development Plan represents a midpoint pause in the planning horizon of the approved Master Plan. The purpose of the Strategic Development Plan is to validate the merits of the investment to date and to make adjustments to the development and market priorities that reflect changes in the broader aerospace sector since the Master Plan was approved 8 years ago.

The Economic Impact of the Airport:

The aerospace sector in the Peterborough region primarily resides at the Airport. In addition, large corporate entities are now enabled to locate in the broader region because their business travel requirements are made possible due to the presence of the Airport. The benefit is perhaps best demonstrated by the business enterprises at the Airport which impact the local economy.

There are 3 types of impacts. **Direct** impacts measure the spending of Airport businesses **at** the Airport and largely reflect labour costs. **Indirect** impacts measure the spending of Airport businesses off-site but in the region. **Induced** impacts flow from the spending of on-Airport employees and off-Airport suppliers in the region that generates further employment and business activity as money is re-circulated in the local economy. All 3 impacts combine to produce an accurate estimate of Economic Impact.

The same type of analysis was completed in 2008 to support the Business Case for Infrastructure Investment; however, the best that study could do was to **forecast** impact, based on reasonable assumptions, with the infrastructure investments made. The current study has been able to compare the 2016 actual impact with the 2016 forecasted impact developed during the 2008 Business Case. The Business Case justified the major Airport Expansion of 2010/11 based on the forecasted economic impact. If the 2016 “actuals” meet or exceed the 2016 forecast, then the difficult decision to invest so much in the future of the Airport will have been validated.

The measured Economic Impact of the expanded Airport in 2016, as outlined in Figure 3, has far exceeded the forecasted impacted and has boosted the **annual** GDP attributed to the Airport from \$41.3 M to \$74.03 M. Total employment has increased from 422 to 799 full-time equivalents.

Figure 3: Economic Impact of the Peterborough Airport

	2008 Actual	2008 Forecast for 2016	2016 Actual	Actual Annual Growth
Gross Domestic Product (\$Millions)				
Total	\$41.3 M	\$57.7 M	\$74.03 M	7.6%/year
Employment (Full Time Equivalent)				
Total	422	557	799	8.3%/year

Source: Airport Strategic Development Plan, November 2017 (p.13)

During the period 2008-2016 a total public capital investment of \$39.8 M was made in Airport infrastructure including the original multi-year City project, the major Airport Expansion project, the airside enhancements to support Seneca College's relocation and the East of Airport Road Industrial Expansion. During that same time period, investment by institutional and private investors in new Airport facilities reached \$29.8 M. The most significant economic impact however, has been the significant boost to the regional GDP of almost \$33.0 M annually, a recurring enhancement that replaces each and every year the total public investments made since 2008. At a time when the Canadian economy grew on average 1.4% per year the GDP growth at the Airport grew 7.6% per year. By these measures of value, the Economic Impact of the Airport continues to exceed expectations.

Confirming the Strategic Role of the Peterborough Airport:

The Business Case of 2008 positioned the Airport to predominantly serve the Industrial Aviation and higher-end General Aviation sectors of the market including aviation education. Flying Colours continues to grow in size and stature within the Canadian aviation sector and is considered a top Canadian aerospace organization. Seneca College is regarded as Canada's premier flight training organization and both are anchor tenants at the Airport. Both organizations are flagships of the Airport's role as defined in the 2008 Business Case.

The 2016 Strategic Development Plan has evaluated the on-going relevance of these high-potential markets but has also considered the new opportunities that are being presented in an ever-changing business environment.

The most significant agent of change may prove to be the evolving role of Pearson Airport. Toronto Pearson International Airport has declared that it envisions itself becoming a "Mega-Hub" airport with its priority being international travel. To do so Pearson will need to encourage existing low volume aviation businesses that do not align with Pearson's mandate to leave the airport for other Airports in Southern Ontario. Similarly, Pearson has a world class reputation and would be an obvious choice for new

aerospace business entries into the Canadian market. Pearson may not have the capacity for a new business or may not want to host an activity that does not align with its mandate but would be quite willing to direct that opportunity to a nearby airport.

Accordingly Pearson Airport has established the Southern Ontario Airport Network (SOAN) as a vehicle to communicate the priorities of Pearson and the opportunities for other airports in southern Ontario. There are 11 southern Ontario airports in the network including Peterborough and Peterborough has elected to become an active participant in Network leadership.

It is not the role of Pearson Airport to direct growth to or establish a role for other airports in the network. Rather it is left to each airport in the network to seize the opportunity. The 2016 Strategic Development Plan identifies the following opportunities for Peterborough – a strategic positioning of the Airport in the Southern Ontario Airport Network:

- a) A logical home for displaced Corporate General Aviation Activity, supported by a large-scale Fixed Base Operator with short term hangar rental for high end corporate travel.
- b) Promotion of the ongoing growth of Seneca's flight training program to respond to the anticipated shortfall of trained professional pilots serving the Canadian market. Growth should not be seen only as higher enrolment in existing programs but in new areas of training such as advanced flight training and full-motion devices. Growth in flight training activities may require the addition of Air Traffic Services such as a control tower.
- c) A logical home base for maintenance, repair and overhaul enterprises by offering shovel-ready development sites.
- d) Support the growth of Leisure Destination Charters that flow from the travel preferences of tour operators in the Peterborough regional market, supported by a better facility to house customs, handle passenger security and passenger/baggage volumes, and a full service Fixed Base Operator.

The 2016 Strategic Development Plan affirms the priority role of the Airport to serve the Industrial and General Aviation sectors but also recommends that consideration be given to new opportunities that compliment these priority roles and do so utilizing and building from the initial infrastructure investment that is in place. Continued growth will rely on what is built but require the additional investments noted in Figures 7-9.

Master Plan Development Priorities:

The updated Strategic Development Plan recognizes that the City has successfully constructed the physical asset base of the Airport well ahead of the timelines envisioned in the 2009 Master Plan. This was made possible by Council's resolve to advance the Airport Expansion under the Infrastructure Stimulus Fund, the successful recruitment of Seneca's School of Aviation, the ongoing growth of the anchor manufacturing tenant Flying Colours, investment from other businesses, and the continuing commitment of Council to see the importance of the Aerospace sector in transforming Peterborough's economy.

The Strategic Development Plan recommends that Peterborough stay the course – that the land development recommendations of the Airport Master Plan are still relevant; however, in response to regulatory change and emerging opportunities there is logic in supporting the introduction of new Airport facilities/services and prioritizing the remaining development recommendations. The Plan makes many detailed observations and recommendations, the key opportunities are as follows:

1. Lower Instrument Flight Minimas:

The Airport landing approaches are presently deemed "Non-Instrument". A "Non-Instrument" approach means that a pilot must be able to see the runway approximately 500 feet above the airfield. If the visibility does not permit this then the pilot is unable to land. Lower instrument flight minimas by improving the approaches to "Non-Precision" will allow aircraft to land in reduced visibility conditions, perhaps as low as 250 feet. This designation change benefits everyone by increasing the Airport's availability. Changing the designation involves a great degree of study and acceptance by Transport Canada. The study has already been initiated by the City. Transport Canada may require corrective action as a precondition to a designation change; however, seeking lower instrument flight minimas is regarded as a priority for user convenience and safety, as an important achievement to successfully market the airport, and to maximize the return on investment in expensive airside infrastructure.

2. Adapting to a New Regulatory Regime:

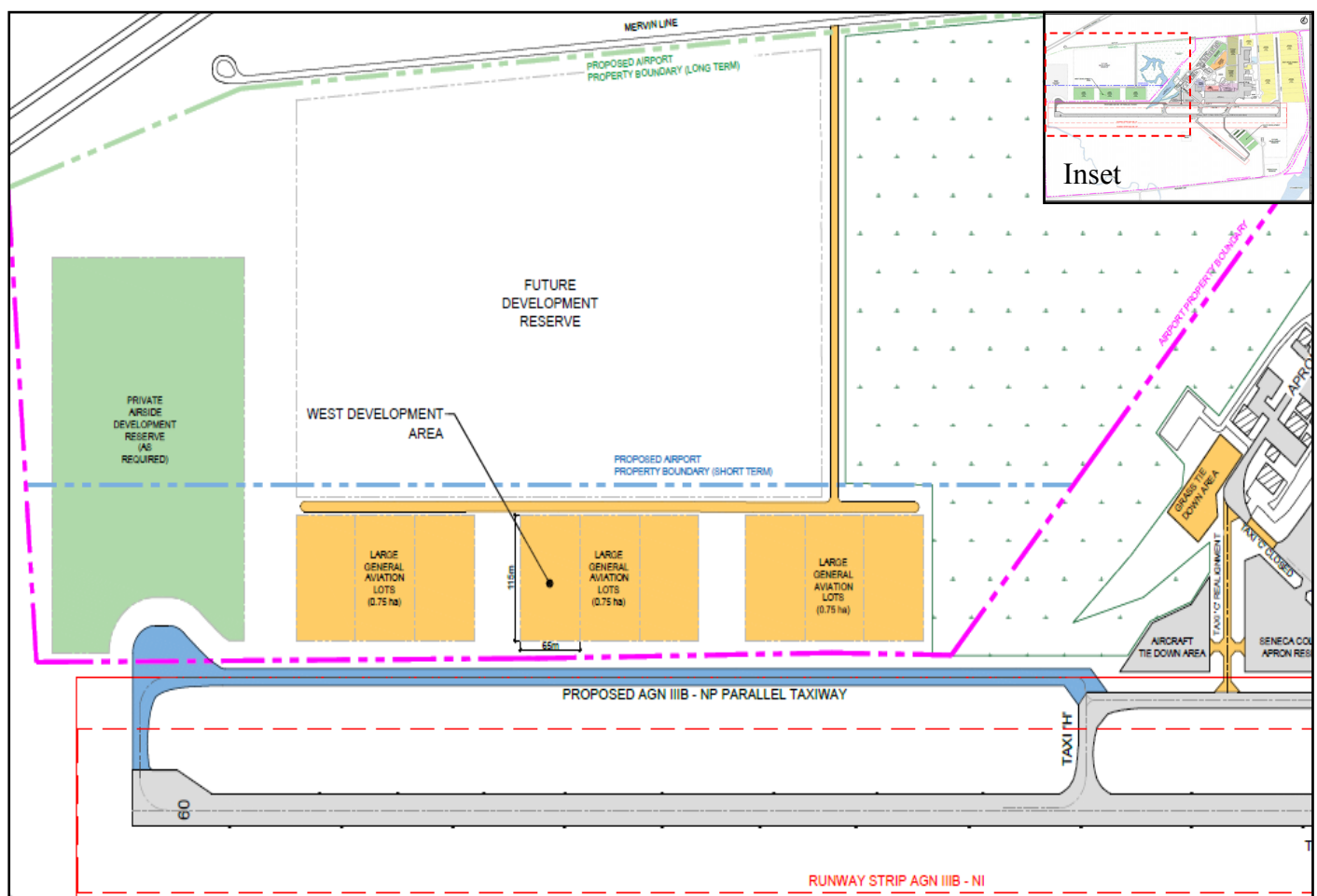
The Airport operating environment is heavily regulated by Transport Canada. Changes in the regulatory environment which came into effect in September 2015 (TPT312 5th Edition) will need to be respected with any significant change in usage, levels of service or development going forward.

3. The Westward Extension of the Taxiway "B":

The westward extension of the main taxiway to the west end of the main runway was envisioned in the Master Plan as a long-term improvement. With the rapid growth in air traffic Nav Canada has suggested that the extension of Taxiway B to the threshold of Runway 09 (the west end of the main runway) as illustrated in Figure 4 would be the most influential infrastructure addition to improve the safety of Airport operations. Nav Canada will likely require the City to make recommended safety improvements before

committing to provide Air Traffic Services in Peterborough such as a control tower. The extension of Taxiway B has the benefit of providing airside access to several new General Aviation lots, also envisioned by the Master Plan. Additional property to the north will be required; however securing the property also resolves a long-standing obstacle height limitation.

Figure 4: West Airport Airside Improvements



Source: Airport Strategic Development Plan, November 2017

4. Capacity Enhancements to Serve General Aviation and Seneca Traffic:

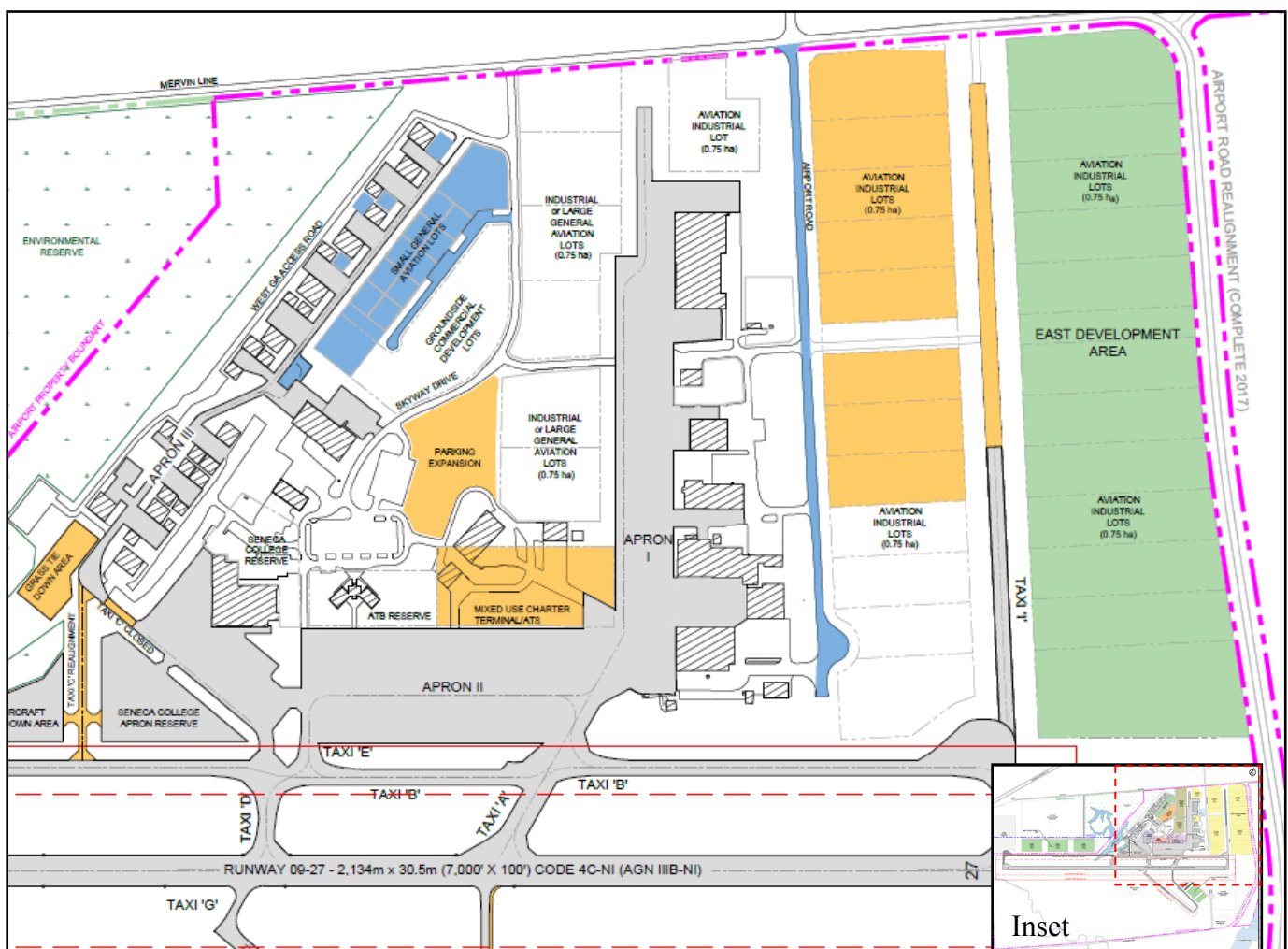
Apron III serves the General Aviation area north-west of the Seneca College campus. All traffic from this expanding area presently connects to the main Runway through Taxiway “C” which also serves Seneca College and the existing tie-down area. On busy days the congestion is significant. Seneca College has a large dedicated Apron which on normal operating days is fully occupied by the Seneca fleet. Seneca College will continue efforts to expand its program and will be encouraged to do so by the City. As the program grows so will the fleet requirements and additional dedicated apron space will be required to support College operations. The existing Tie-down area adjacent to the Seneca apron is under-utilized, in part due to the surface conditions.

Figure 4 illustrates a relocation of Taxiway C through the existing Tie-down area and a closure of a small portion of the existing Taxiway C to ensure General Aviation and Seneca traffic are separated. A portion of the existing tie-down area can then be dedicated for Seneca growth and additional tie down capacity can be created utilizing the new Taxiway C. The Strategic Development Plan recommends that this project be advanced due to the rapid growth in GA traffic.

5. Protection for a Future Traffic Control Facility:

Based on the projections of air traffic growth and the anticipated mix of industrial, corporate and general aviation traffic it is presumed that the Airport will warrant the installation of an Air Traffic Control Service in the not to distant future which would be situated in the vicinity of the ATB Reserve in Figure 5. Accordingly, the Strategic Development Plan recommends that the preferred location for a Control Tower be protected east of the current Air Terminal Building.

Figure 5: East Airport Airside Improvements



Source: Airport Strategic Development Plan, November 2017

6. Air Terminal Building and Passenger Processing:

The updated Strategic Development Plan has spent considerable effort to understand the potential of the Charter market using the Peterborough Airport. Stewart Travel has proven that even an underdeveloped Airport can support destination travel with a committed operator. There is however, a practical limit an operator can grow this business without a facility base that is capable of supporting the business. The Airport and local market, with investment and support by businesses such as Stewart Travel has made a compelling business case. It is now in the hands of the City to establish if growing the leisure passenger charter service function of the Airport is desirable.

The Loomex Group conducted a survey in the fall of 2017 to explore the local interest in securing a commuter service from the Peterborough Airport to Downtown Toronto and other destinations. The response to the survey was positive with approximately 1,650 individuals participating expressing a strong interest in being a regular user of the service particularly if the service allowed connections to other destinations. The data collected will be useful for any potential operator to evaluate. A commuter service can effectively utilize the existing Air Terminal building as a base for operation or could utilize the same passenger handling facilities as a larger Leisure Charter Service.

The Strategic Development Plan supports the cultivation of both of these services in the long-term future of the Airport. The core infrastructure of the Airport is already in place. Many of the recommendations of the Strategic Development Plan have found that the same investments that support the Airport's high potential markets also allow new opportunities, such as the Leisure Travel and Commuter markets to succeed by qualified operators.

The Development Plan recommends that charter terminal development options be studied and that land be reserved for a future charter passenger facility, as illustrated on Figure 5, at the intersection of Aprons 1 and 2.

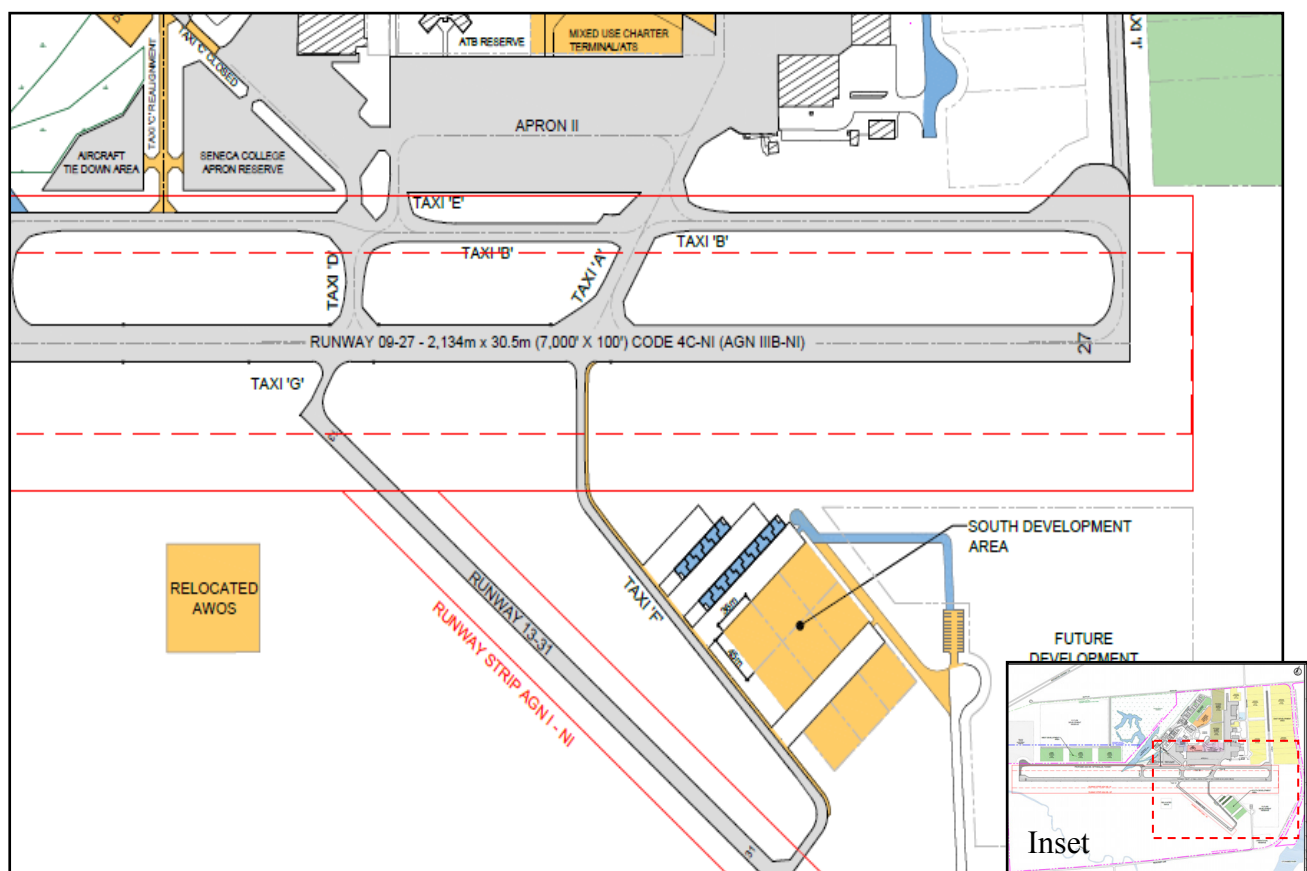
7. Increase Servicing Capacity:

The onsite population of the Airport has exceeded the pace of growth projected approximately 18 years ago when municipal services were first extended to the Airport. At that time the greatest concerns about servicing such a remote location was the possibility that the quality of water would be degraded before it could be consumed and that sewage would become septic before reaching the sewage treatment plant. Accordingly a servicing scheme was designed to provide an affordable solution from day 1 but recognizing that it would need to be reinforced one day. Council has, through the 2018 Capital Budget, provided funding for that capacity enhancement to occur. In doing so, Council has resolved the largest impediment to employment growth facing the Airport.

8. Consider the Opportunity of the South Development Area:

The airside infrastructure that was constructed in 2013 to support Seneca College's arrival (the cross wind runway and taxiway) together with the reconnection of Airport Road around the east end of the runway has opened a new opportunity for additional General Aviation building sites on the south side of the airfield. This area, as illustrated on Figure 6, is sufficiently large to introduce, for the first time at the Airport, the entry of "T" hangars. This type of hangar arrangement is ideally suited to provide affordable single aircraft storage. Given that the existing GA Area is reaching full build out, the updated Airport Development Plan recommends that South Development Area be pursued in the short-term.

Figure 6: The South Development Area



Source: Airport Strategic Development Plan, November 2017

Implementation Considerations:

The 2016 Strategic Development Plan provides a cost estimate for the studies and capital projects that are recommended over the next 20 years. The cost estimate, which is broken down into short, medium and long-term phases, exceeds \$47.5 M including design and a 15% contingency.

The short-term improvements are envisioned to occur until 2022 and total \$12.5 million including design, administration and contingency. The major works such as the water and sewer servicing upgrades were already approved in the 2018 budget (\$5 million) and design has commenced. Other significant capital components include the extension of Taxiway 'B' adjacent the main runway (\$3.4 million), and groundside preparation for Aviation lots (\$1.1 million). The former is required by Nav Canada as infrastructure needed to improve the safety of Airport operations.

Figure 7: Short Term Developments	
Airside Developments	
Extend Taxiway "B to Runway 09 Threshold	\$3,370,000
Construct Passing Area on Apron III	\$60,000
Upgrade Designation of Runway 09-27 to Non-Precision	Cost subject to findings of Non-Precision Operating Study
Remove Temporary Runway 27 Threshold Displacement (including tree clearing and new IFPs)	\$100,000
Groundside Developments	
Prepare General Aviation Lots East of Apron III	\$700,000
Prepare General Aviation Lot for T-Hangar Development in South Development Area	\$360,000
Construct Access Road and Parking to Serve Small General Aviation Lots East of Apron III	\$20,000
Construct Access Road to Serve T-Hangars in South Development Area	\$30,000
Rehabilitate Airport Road (Between Mervin Line and Runway 09-27)	\$180,000
Servicing Upgrades - Watermain and Sanitary Forcemain	\$5,000,000
ATB and Other	
Continue non-Precision Operations Study	\$60,000
Commission Charter Terminal Development Study	\$50,000
Initiate Environmental Assessment for Short and Medium Term Developments	\$50,000
Subtotal	\$9,980,000
Engineering Design and Contract Administration	\$998,000
Contingency 15%	\$1,497,000
Total Estimated Cost of Work - Short Term	\$12,475,000

Medium-term improvements are expected to occur between now and 2030 and total \$20.5 million with including design, administration, and contingency. The largest capital component of this (\$13.5M) is the preparation of additional lots to support the industrial development east of Airport Road. These lot developments will ultimately involve Council approval, however it is anticipated that the demand for ground leases and this

land development may occur sooner than anticipated. The other notable medium-term initiatives relate to Airside Developments totalling \$1.5 million.

Figure 8: Medium Term Developments	
Airside Developments	
Realign Taxiway "C"	\$250,000
Widen Taxiway "F" to 10.5 m (AGN II)	\$620,000
Establish Grass Tie-Down Area	\$70,000
Extend Taxiway "I"	\$540,000
Groundside Developments	
Prepare General Aviation lots in South Development Area	\$720,000
Prepare general Aviation lots in West Development Area	\$3,910,000
Construct New Access Road to serve West Development Area	\$120,000
Service West Development Area	\$2,200,000
Prepare Industrial Lots West of Taxiway "I"	\$6,400,000
Expand Public Parking Lot	\$150,000
ATB and Other	
Relocate AWOS (including hydro, road and telecom)	\$500,000
Update Forecasts	\$30,000
Commission Master Plan Update	\$130,000
Subtotal	\$15,640,000
Engineering Design and Contract Administration	\$1,564,000
Contingency 20%	\$3,128,000
Total Estimated Cost of Work - Medium Term	\$20,332,000

The only Long-term initiative which is envisioned to occur within the next several decades is the preparation of Industrial Lots east of Taxiway "I" with a total cost of \$10.9 million. An additional \$3.8 million is identified for design, administration and contingency, bringing this total to \$14.7 million.

Figure 9: Long Term Developments	
Groundside Developments	
Prepared Industrial Lots east of Taxiway "I"	\$9,970,000.00
Service Industrial Lots east of Taxiway "I"	\$940,000.00
Subtotal	\$10,910,000.00
Engineering Design and Contract Administration	\$1,091,000.00
Contingency 25%	\$2,727,500.00
Total Estimated Cost of Work - Long Term	\$14,728,500.00

From an implementation perspective the Strategic Development Plan focuses solely on Capital budget items. The sustainability of the Airport also involves Administration to monitor operations and realize efficiencies. This includes factors such as marketing, lease rates, fees, contracts, alternative revenue opportunities, encouraging further investment and development. It is envisioned this review would be conducted by staff and could be reported back to Council at a later date.

Summary

The Airport Master Plan, adopted in 2009, continues to provide an effective and market relevant long-range vision for the Airport. The updated Airport Strategic Development Plan represents a mid point pause in the planning horizon of the Master Plan to ensure that emerging opportunities in the marketplace are evaluated and investment priorities are aligned with the needs of current and future airport users.

The Southern Ontario Airport Network, arising out of Pearson Airport's mandate to be largely focused on international markets has presented unique opportunities for the Airport that align with the high potential markets Peterborough's airport investments have supported. The recommendations of the 2017 Strategic Business Plan are intended to prepare the Airport for ongoing success in an ever-changing economic environment.

Submitted by,

Jeffrey Humble, MCIP, RPP
Director, Planning and Development Services

Contact Name:

Nancy Hewitt, Airport Administrator
Phone: 705-743-6708 Ext. 2171
Toll Free: 1-855-738-3755
Fax: 705-743-4129
E-Mail: nhewitt@peterborough.ca

Attachments:

Appendix A – 2016 Airport Strategic Development Plan