GODERICH AIRPORT STRATEGIC PLAN

Professional Services Proposal | February 18, 2021

HM AERO
AVIATION CONSULTING

GODERICH
Canada's prettiest town

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1 INTRODUCTION

Goderich Municipal Airport is a registered aerodrome that is owned and operated by the Town of Goderich. The Airport supports daytime and nighttime aircraft operations with infrastructure that includes two paved runways, one turf runway, a terminal building, three taxiways, and an apron adjacent to the terminal building. Like many municipal and community airports across Canada, Goderich Airport faces a range of challenges, such as:

- The loss of a keystone aviation business;
- Planning applications that would remove prime airside development lands from future use;
- Aging capital assets that require rehabilitation;
- The operating deficit incurred by the facility and borne by the Town;
- An unclear understanding of future opportunities and the steps required to attain these opportunities; and
- The current operating model which sees the Airport being the sole responsibility of the Town, despite the facility functioning as a regional asset.

Despite these challenges, the Airport has numerous strengths and opportunities for the future. Goderich Airport benefits from its two paved runways, one of which exceeds 5,000 ft.; lighting for night operations; two Instrument Approach Procedures; terminal building; and other assets. Further, the Airport serves a critical role in supporting private and corporate intercommunity travel, handling air ambulance and government operations, and contributing to the regional economy. Opportunities may exist to increase the Airport's role by supporting major entities such as Bruce Power, for example.

Early in 2020, an Airport Task Force was formed by the Town of Goderich with representatives from the Township of Ashfield-Colborne-Wawanosh and Huron County to establish a clear strategy towards the growth and development of the facility. Specifically, the Task Force will prepare a strategy to overcome the challenges and threats faced by Goderich Airport and to capitalize on the facility's strengths and opportunities. In support of this mandate, HM Aero Aviation Consulting is pleased to submit the enclosed professional services proposal to continue providing support to the Town of Goderich through the preparation of an Airport Strategic Plan.

2 PROJECT TEAM AND FIRM EXPERIENCE

2.1 Corporate Profile

HM Aero is a boutique firm that was founded in 2018 with the aim of providing pragmatic aviation solutions supported by extensive experience and differentiated by considerable value. The firm has grown rapidly, and we are now comprised of a team of 10 full-time staff and second career senior aviation advisors. Our team of planners, engineers, project managers, and senior aviation advisors are passionate about what they do, and we enjoy working with our clients to provide recommendations that support sustainable and realistic airport development. Our firm has completed over 50 projects for a wide variety of clients in seven provinces and territories since our inception, and our work is always well received. We work exclusively on aviation-related assignments, many of which are similar in nature and scope to the subject assignment, as described below.

When pursuing projects, our priority is ensuring we have the capabilities to deliver complete client satisfaction. Our technical capacity to deliver the Airport Strategic Plan is demonstrated through the breadth of our experience, the qualifications of our team, and the tools that we leverage to conduct robust technical analyses. HM Aero's work extends across six primary areas of expertise which underly the services that we provide to airports, airlines, and clients across the country:

2.2 Project Team

HM Aero is pleased to propose a project team of five aviation industry experts, each with unique skillsets of value to the Town and the Airport Task Force. In addition to Adam Martin and Ben Crooks, who are currently providing consulting services to the Town of Goderich, the project team will be expanded to include Eric Hurley, Andrew Macdonald, and Dr. David Bell. Detailed CVs of each project team member are provided in Appendix A.

2.2.1 Adam Martin, M.Sc., PMP – Project Manager

As President of HM Aero, Adam has more than 19 years' experience in the aviation industry and is a qualified airport planner, commercial pilot and Project Management Professional (PMP). Adam is responsible for leading a team of full-time and part-time professional staff specializing in airport planning, project management, engineering, climatology, and other disciplines in support of HM Aero's assignments. Prior to co-founding HM Aero, Adam led a team of more than 20 aviation planning staff in his role of Manager, Aviation Planning at WSP Canada, where he was employed for more than 13 years and was involved in over 100 projects. Prior to joining WSP (formerly MMM Group and LPS AVIA) in 2005, Adam worked with the Greater Toronto Airports Authority, and Transport Canada.

Adam has overseen more than 70 airport master plans, strategic plans, economic impact assessments, business cases, and feasibility studies. Adam acts in both technical and project management roles for projects of varying scope and complexity; including recently where he acted as the Project Manager and technical lead while delivering a Feasibility Study and Business Case for Niagara District Airport and Niagara Central Airport. Adam also delivered the 2017 Peterborough Airport Strategic Plan to the City of Peterborough, acted as Owner's Representative for the City of Kingston's $16.1 Million Air Terminal and Runway Expansion Project in 2018, and led a specialized team of aviation planners working with KPMG to complete two parts of the Pickering Lands Aviation Sector Analysis – a study recently made public by Transport Canada.

2.2.2 Ben Crooks, MCIP, RPP – Project Planner

Ben Crooks is an experienced Registered Professional Planner (RPP) and Member of the Canadian Institute of Planners (MCIP). Ben is a licensed pilot, is actively involved in general aviation, and understands the economic value and importance of airports in Canada. Ben is passionate about Canada's regional airports and given his background in aviation and education as a planner, he is equipped to provide analytical solutions to issues being experienced at airports across the country.

Ben's professional experience extends across a wide range of project types, ranging from airport master plans to specialty assignments in air service procurement and climate-infrastructure risk assessments. Combining his aviation experience with his time practicing urban planning, Ben has become adept at supporting airport land development through projects in market research, land use planning, and marketing. He is also skilled in addressing off-airport land use compatibility through municipal plans and by-laws and understanding the relationship between airports and their surrounding communities. Lastly, Ben approaches each project with an environmental lens, identifying opportunities for sustainability and preparing strategies for climate change adaptation.

2.2.3 Eric Hurley, P.Eng. – Airport Infrastructure Lead

Eric Hurley is the Vice President of HM Aero and has spent his entire career in the field of airport planning and engineering. Eric is a professional engineer with a bachelor's degree in civil engineering and a master's degree from Carleton University where he obtained his Professional Certification in Critical Infrastructure Protection.

Eric has served as the lead planner and infrastructure lead for numerous airport master plans and business plans. Eric was also the project manager for the Erik Nielsen Whitehorse Airport 2040 Master Plan and the 2018 Ottawa Airport Master Plan. Eric played an integral role in the delivery of the Feasibility Study and Business Case for Niagara District Airport and Niagara Central Airport. Eric also served as the Airport Infrastructure Lead for the Golden Airport Viability Study and Prince Albert Airport Strategic Master Plan, and is also supporting the Columbia Shuswap Regional District in refining the operations and management of Revelstoke Airport.

2.2.4 Andrew Macdonald, B.Comm. – Airport Business Lead

Andrew Macdonald has led or participated in over 50 airport assessments, master plans, strategic plans, development and commercial plans, business plans, and marketing plans. He is a Commerce graduate of the University of Guelph, Aviation Management graduate of Georgian College, and graduate of the Pennsylvania State University post baccalaureate certificate program in Geographic Information Systems (GIS). Andrew is well known in the industry for his ability to work closely with stakeholders, clients, and project teams to deliver technically defensible and practical aviation planning assignments.

Andrew has participated in planning, design, and forecasting activities; Instrument Flight Procedure design; topographic survey coordination; airport business plans and business case studies; airport master plans and commercial plans; apron and gate designs, obstacle assessments, and specialized studies at numerous airports throughout Canada. These have ranged from the nation's largest airports, such as Edmonton, Ottawa, and Vancouver, to regional facilities such as Golden, Suncor Firebag, Lethbridge, and Lloydminster. Additionally, since joining HM Aero, Andrew has participated in the beta testing of industry software, made presentations to numerous industry groups, spoken at aviation conferences, and led the technical preparation of a detailed noise study.

2.2.5 Dr. David Bell, PhD, P.Eng. – Senior Governance Advisor

Dr. Bell was a senior transportation executive who played a key role in the privatization and transfer of some 100 airports to local airport authorities and other organizations across Canada. As Director General, Airport Programs and Divestiture, he was responsible for the National Airports Policy implementation. This included negotiating the commercialization and transfer of airports to local airport authorities, establishment of a privatized Air Traffic Services Provider (NAV CANADA), providing lease administration services, delivering Airport Capital Assistance Programs and managing post-transfer issues pertaining to NAV CANADA and airport authorities.

Dr. Bell is well-versed in the governance and ownership challenges faced by municipal airports, and has decades of experience assisting government staff in navigating the challenges of airport governance while trying to maximize the benefit of airports to the communities in which they serve. Dave is regularly asked to provide advice to senior government staff on federal aviation policy, and was an integral member of the project team that delivered the Feasibility Study and Business Case for Niagara District Airport and Niagara Central Airport. In addition, Dr. Bell has been involved in similar studies at Okotoks, Collingwood, Ponoka, Golden, and several other regional and municipal airports in Canada where he has provided strategic and sound advice to clients.

2.3 Select Firm Experience

We are pleased to provide four case studies of projects recently completed by our firm that demonstrate our ability to successfully complete the scope of work requested by the Town of Goderich:

1. Golden Airport Viability Study (2020 – ongoing);
2. Niagara Airports Feasibility Study (2019-2020);
3. Tillsonburg Airport Feasibility Study (2019-2020); and
4. Lloydminster Airport Master Plan (2019-2020).

2.3.1 Golden Airport Viability Study

Golden Municipal Airport | Town of Golden

Phase 1 – Airport Assessment Report

Golden Airport is a registered aerodrome owned and operated by the Town of Golden. In the first phase of the Airport Viability Study, HM Aero prepared a comprehensive Airport Assessment Report that encompassed all parts of the facility's current operation and management, and its future development and growth prospects. Examples of key analysis topics included the facility's regulatory obligations and certification challenges; aviation and non-aeronautical development opportunities; annual deficit and capital funding backlog; and the condition of its infrastructure assets.

Consultation efforts included over 50 stakeholder interviews, an online survey completed by over 600 respondents, a virtual public meeting attended by over 60 people, and the engagement of all levels of government. Research and consultations identified significant social impacts of Golden Airport to the region, including air ambulance, wildfire suppression, and search and rescue operations. The annual economic impact generated by tenants at the facility was estimated by HM Aero at almost $3 million in GDP contributions. The Airport Assessment Report was presented by HM Aero and unanimously accepted by Town Council in October 2020.

Phase 2 – Strategic and Tactical Plan

HM Aero is currently preparing a Strategic and Tactical Plan to provide a systematic guide to achieving the airport's objectives over the next 20 years. Based on the deficiencies identified in the Airport Assessment, this report will provide recommendations with respect to governance; operations and management; financial management; grant funding and intermunicipal collaboration; capital projects; and business development. The Draft Strategic and Tactical Plan was submitted on schedule in February 2021.

Golden Airport

2.3.2 Niagara Airports Feasibility Study

Niagara District Airport and Niagara Central Airport | Niagara Region

HM Aero was retained by the Regional Municipality of Niagara to prepare a Feasibility Study and Business Case examining the economic potential of two airports – Niagara District Airport (certified airport) and Niagara Central Airport (registered aerodrome). The objectives of the study were to: develop airport profiles for both facilities; complete infrastructure assessments of airport-owned facilities; identify airport roles within the southern Ontario context; review financial performance; identify business development opportunities to increase the economic potential of both facilities; develop Class 'C' cost estimates; and prepare 20-year business cases.

The study resulted in identification of several scheduled and charter passenger air service and general aviation commercial opportunities for Niagara District Airport within the next 20 years. Furthermore, through research, consultations and analysis, HM Aero identified more than six general aviation commercial and recreational opportunities for Niagara Central Airport. The Feasibility Study and Business Case also identified constraints and challenges related to the future economic success of both facilities that should be addressed by the Regional Municipality to better position the facilities as economic engines within Niagara, including the consideration of airport governance policy changes.

As a result of the success of this project, HM Aero continues to provide ad hoc consulting services to Niagara District Airport.

2.3.3 Tillsonburg Airport Feasibility Study

Tillsonburg Regional Airport | Town of Tillsonburg

Working closely with the Town of Tillsonburg, HM Aero was engaged to prepare an Airport Feasibility Study to assist the Town in further understanding their regional airport, the role the facility plays within the community, how it is governed, and how its operation, management and development processes and procedures compare to similar airports. Regulatory requirements applicable to registered aerodromes were also clarified for the Town as part of the study, including owner obligations as they relate to security, and land use planning and development.

An extensive stakeholder engagement program was completed to support the study and input received enabled the HM Aero project team to identify appropriate revenue generation strategies for the Airport, including negotiation methods for increased contributions by partner municipal governments, and through optimization of their current Airport rates and charges.

The study concluded that the Airport is an asset to the region, is performing well financially, and provides adequate facilities to attract additional aviation activity and business development. HM Aero provided recommendations within the study, including but not limited to: changes to the airport governance model; refinement of the airport development approval process; completion of an airport master plan; and establishment of a primary security line and related signage.

Tillsonburg Airport

2.3.4 Lloydminster Airport Master Plan

Lloydminster Airport | City of Lloydminster

Working closely with the City of Lloydminster's Economic Development Department, HM Aero prepared a Master Plan for Lloydminster Airport. The study involved many typical master plan elements, including the airport's economic impact; passenger, aircraft movement, cargo, and lot absorption forecasts; extensive stakeholder engagement (over 50 individuals and organizations); air service development; and development planning. The Master Plan identifies required airfield expansions within a 25-year planning horizon to support forecast demand, including but not limited to: the development of a parallel taxiway supporting the primary runway; the expansion and redevelopment of the terminal to accommodate increased peak hour passengers; parking lot expansion; and the provision of potable water and sanitary sewer services. The project team provided several innovative services such as:

- Preparation of scenario-based air carrier growth forecasts, as opposed to traditional forecasts correlated with socioeconomic indicators;
- Consideration of emergent business development opportunities, including photovoltaic (solar) power generation; and
- Extensive analysis and research on the state of Canada's regional air carrier industry, including fleet trends for sub-50 seat airliners and replacement aircraft.

HM Aero presented the Master Plan to City Council in June 2020, where it was adopted unanimously. As a result of the positive relationship developed with the client, HM Aero continues to provide consulting services to the City to assist in its regulatory obligations for maintaining a Safety Management System.

3 APPROACH AND METHODOLOGY

3.1 Project Management

Effective project management ensures that assignments can be delivered on-time while maximizing overall project value. Our mission is to ensure that the Town is entirely satisfied through the completion of this assignment with this goal being the Project Manager's top priority. The proposed Project Manager, Adam Martin, is a Project Management Professional who has been leading similar assignments for nineteen years and has an excellent reputation for client satisfaction. Adam will ultimately be accountable and responsible for the successful completion of the assignment and the issuance of all project deliverables to the Town.

Two types of task delegation will occur. On a monthly basis, a high-level review of project priorities is conducted to identify an action plan that considers staff availability. Weekly progress meetings are then conducted to track progress to each priority, as well as staff challenges. By taking a macro and micro-approach to task delegation, sufficient resources will be allocated to ensure the project proceeds on schedule.

3.2 File Management

A SharePoint file management system will be established for project documentation and the transmission of deliverables. The website will be maintained by project team with access granted to designated Town representatives participating in the assignment. At a minimum, the following will be posted on the project SharePoint:

- Meeting agendas and minutes;
- Draft and final deliverables;
- Stakeholder consultation log; and
- Requested background information list.

3.3 Quality Assurance and Control

The project team will employ Quality Assurance and Quality Control processes throughout the preparation of the Strategic Plan. These processes are fully supported by our senior staff and the values of Quality Assurance are instilled in all team members. Our Quality Assurance / Quality Control processes will limit omissions, errors, and technical mistakes by:

- Outlining the project deliverables and procedures to be applied by team members;
- Utilizing drawing and document standards;
- Conducting regular internal progress and review meetings;
- Completing and documenting technical peer reviews on project elements; and
- Specifying standards to be applied while completing the project.

3.4 Client Engagement

Regular and ongoing client engagement is key to ensuring project success. The Project Manager and Project Planner will be the primary points of contact for the Town throughout this assignment.

3.4.1 Project Start-Up Meeting

Following contract award, representatives of the project team will convene a start-up meeting via teleconference or videoconference with the Town and Airport Task Force to introduce the project team and confirm the work program, scope, budget, and reporting procedures. HM Aero will present a list of requested background materials, work with the Town to further develop the stakeholder engagement list and determine a suitable date for the site visit.

3.4.2 Progress Update Meetings

We propose to complete monthly update meetings over the course of the project via videoconference. Each meeting will include a discussion of progress made since the last meeting, issues encountered and proposed resolutions, client comments and questions, and planned progress for the next period.

4 WORK PLAN

We propose to complete the Airport Strategic Plan through a four-phased scope of work, as summarized below and described in detail in the following sections:

1. Phase 1 – Contextual Research;
2. Phase 2 – Airport Assessment and Profile;
3. Phase 3 – Airport Development Plan; and
4. Phase 4 – Airport Strategic Plan.

The proposed Work Plan aligns with the preliminary discussions and direction provided by the Town in February 2021, specifically through the preparation of a business development strategy and action plan.

4.1 Phase 1 – Contextual Research

4.1.1 Background Data Collection and Review

To gain a comprehensive understanding of the existing situation of the Airport, the project team will assemble and review all background information provided by the Town and available from public sources (e.g., Canada Flight Supplement, Canada Air Pilot, Aeronautical Charts).

4.1.2 Stakeholder Engagement

Effective stakeholder engagement is a cornerstone of HM Aero's project methodology – by gaining insights from parties with working experience and knowledge of Goderich Airport, the depth of analysis and value of the recommendations made can be maximized. The proposed engagement process is designed to minimize COVID-19 transmission risks while ensuring that all relevant parties are consulted. We propose to engage with stakeholders using the following techniques:

1. **Stakeholder Interviews:** The project team will interview key informants who have a vested interest in, or knowledge of, Goderich Airport by teleconference and videoconference. HM Aero will lead focussed consultations with each party to address the key items of the Airport Strategic Plan. An interview with the Chamber of Commerce, for example, could be focused on development opportunities; whereas an interview with ORNGE and other aircraft operators would address operational and infrastructure maters.
2. **Open House:** We propose to facilitate two virtual open houses via Zoom Webinar to gather feedback from the general public.
3. **Online Survey:** The project team will launch a digital questionnaire to receive feedback from a larger stakeholder group; support from the Town, Airport Task Force, Township, and County is requested through the advertising of this opportunity.

4.1.3 Regional Socioeconomic Review

The intent of the regional socioeconomic review is to define the demographics and the characteristics of major industries the region. As part of this task, HM Aero will conduct a comprehensive socioeconomic review by analyzing Statistics Canada's Census and Community Profile data from Ontario's population projections, and information provided from the stakeholder engagement program. Key metrics to be examined may include population, age profiles, household incomes, education levels, home ownership and domestic/international migration patterns. Furthermore, major economic trends affecting Goderich will be identified.

4.1.4 Aviation Industry Considerations

The Canadian aviation industry is characterized by considerable change over time; by understanding historical events and researching future trends, the role of Goderich Airport within the provincial and national aviation sector can be better understood. This research will be supported by stakeholder consultations and will be focussed on the impact of each trend on Goderich. Examples of industry considerations that will be analyzed include:

- 100 Low Lead (avgas) fuel availability and pricing;
- Regional air service vulnerability and the retirement of small airliners;
- Trends in charter air services;
- Air ambulance activities; and
- Diversified airport development, including non-traditional uses such as photovoltaic arrays.

4.2 Phase 2 – Airport Assessment and Profile

4.2.1 Airport Activity Review

Studying existing activities at the Airport will enable the project team to make informed conclusions with the current use of the facility, and related deficiencies and requirements to achieve future business development opportunities. The project team will review activity data and analyze and document the existing use of the Airport. This will include:

- A description of current Airport users;
- An inventory of Airport tenants and descriptions of their operations; and
- The analysis of aircraft movement data, if available.

4.2.2 Site Visit and Airport Infrastructure Assessment

During the site visit, HM Aero will perform a visual assessment of the Airport infrastructure and facilities and interview staff to identify deficiencies and requirements. We will identify each infrastructure asset and document its condition, capacity, and estimated remaining service life. The project team will also take photographs of Airport infrastructure and facilities during the inspection and provide the digital files to the Town. All assets will be assessed using a five-point rating system in alignment with industry accepted standards for asset management condition grading.

4.2.3 Regulatory Review

As a registered aerodrome, Goderich Airport is subject to the standards of Subpart 301 of the Canadian Aviation Regulations. The project team will conduct an audit of the Airport's compliance with the standards of Subpart 301 and provide an itemized table enumerating whether compliance has been achieved with each item. Additionally, the project team will identify opportunities to improve aviation safety by achieving compliance with targeted and practical provisions of Transport Canada's TP312 – Aerodrome Standards and Recommended Practices (5th Ed.). Recommended TP312 compliance opportunities will be identified based on their benefits to aviation safety, cost, and feasibility of implementation.

The project team will also provide a high-level overview of the benefits and costs of pursuing certification and make a recommendation as to whether this is an advisable strategy.

4.2.4 Governance Review

Town Council is the governing body that oversees Goderich Airport, supported by the recommendations of Town Staff and the Airport Task Force. This approach is common at municipal airports across Canada; however, opportunities for improvement may exist. The project team will first gain a detailed understanding of the strengths and weaknesses of the current governance model through stakeholder consultations, engagement with Town Council, and based on the professional experience of the project team. Our team will also examine the role of the Township and County and make recommendations for participation, where appropriate.

HM Aero will subsequently identify and summarize governance models commonly used by municipally owned airports of a similar type and scale to Goderich Airport across Canada. Based on the expansive description of governance models, the three systems with the most relevance to Goderich Airport will be advanced for detailed analysis by the project team. For example, a model advanced for in-depth analysis could include the formation of a Regional Airport Commission. The three short-listed governance models will undergo a comparative analysis that considers the advantages and disadvantages of each system, such as:

- Whether opportunities exist for the involvement of individuals with aviation expertise;
- Whether each model permits future involvement by the Township and County;
- The level of effort required to implement and maintain each model;
- Whether each model is right-sized to the requirements of Goderich Airport;
- The decision-making authority in each model; and
- Each model's overall efficiency and effectiveness.

This task will culminate in the recommendation of a governance model to be presented to the Town for consideration, as well as a detailed description of its strengths and weaknesses, an explanation of its functions, value for Goderich Airport, and next steps. This task will not include drafting Terms of Reference, outlining governing member qualifications, or other matters associated with the implementation of the recommended governance structure.

4.2.5 Operations and Management Review

The project team will undertake a review of the existing management and operation of Goderich Airport by the Town and the degree to which the Town's level of service goals are being met. This task will encompass three areas: 1) the management and operational structure; 2) the staff resources assigned to the Airport; and 3) the equipment that is available for use in maintaining the facility.

Based on the assessment of the existing Airport management and operational structure and processes, the project team will recommend a strategy for the future that provides an acceptable level of service, considers the financial capacity of the municipality, allows for the realization of efficiencies with other Town resources, and prioritizes aviation safety. The strategy will identify:

- Minimum service standards (e.g., hours of staffing, snow clearing response times);
- A recommended management model;
- Staffing requirements; and
- Equipment requirements.

An important consideration in this review will be minimizing the operating cost implications of recommended changes. A priority will be the identification of efficiencies in how Town resources are allocated, as well as new models for management and operations (e.g., contracted services).

4.2.6 Financial Review

The project team will analyze historical revenue and operational / capital expenditure data made available by the Town. This information will be used to identify the existing financial position of the Airport in terms of its cost-revenue gaps (deficit) and reliance on municipal subsidies. Revenue and expenditure trends will be analyzed and opportunities for operational savings will be identified.

4.2.7 Social and Economic Impact Analysis

The project team will analyze the existing social and economic impacts of Goderich Airport, and the extent to which these benefits are experienced regionally within the Town, Township, and Huron County more generally. The project team will rely on both quantitative metrics (e.g., annual property tax revenues, total annual air ambulance movements, etc.) and in-depth qualitative discussions to articulate the regional social and economic importance of Goderich Airport, and the potential for these impacts to increase in the future. The project team will also address how the social and economic benefits realized by the facility justify the continued operation of Goderich Airport.

4.2.8 Comparator Airport Review

Valuable information on recommended practices for the operation and development of Goderich Airport can be gained by reviewing comparable airports in terms of their operational structure, their ability to pursue business opportunities, and the strategies they have implemented to close cost-revenue gaps. The project team will identify up to three comparator airports that are in a similar situation to Goderich Airport. Comparator airports will be selected with similar activity levels, regulatory requirements, ownership and governance challenges, and regional contexts to ensure the transferability of all data.

4.2.9 Deliverable 1 – Interim Project Report

To ensure the Town and Airport Task Force have a clear understanding of the progress made by the project team, and that the project direction being taken by HM Aero is acceptable, we propose to submit an Interim Project Report documenting progress to-date. The Interim Project Report will document all progress made at the time of its preparation and is expected to include the findings of Phase 1 – Contextual Research and Phase 2 – Airport Assessment.

The timing and contents of the Interim Project Report can be adjusted through consultations with the Town and Airport Task Force after contract award, as it is anticipated that the Town may request the preparation of the Interim Project Report prior to Township Council's April 20, 2021 meeting.

4.3 Phase 3 – Airport Development Plan

4.3.1 Development Opportunities

The project team will identify potential development opportunities through an expansive research process. The intent of this task will be to identify aviation and non-aviation opportunities that represent the highest and best use of Goderich Airport, considering the facility's unique strengths and role in the region. All development opportunities will consider the feasibility of attainment given factors such as:

- Input gained through the stakeholder engagement process;
- The regional socioeconomic context;
- Broader trends in the provincial and national aviation industry; and
- The Airport's available land supply, infrastructure, and constraints.

The project team will document the potential opportunities and provide a narrative explaining their inclusion, potential timing, and social / economic benefits. Examples of development and growth opportunities that will be considered within the study include, but are not limited to:

- Hangar development;
- Attracting additional itinerant aircraft traffic;
- Increased flight training activity;
- Non-scheduled charter air services; and
- The pursuit of non-aviation opportunities such as commercial and industrial development.

Hangar construction (left) and a corporate Cessna Citation (right)

4.3.2 Infrastructure and Operational Requirements

For each of the development opportunities identified in the previous task, the project team will describe the projects required to facilitate their attainment. This will include both capital infrastructure projects and operational measures, as shown in the example in Table 4.1. For each project, the Airport Infrastructure Lead will prepare a Class 'D' Cost Estimate based on local unit rates, costs from comparable projects, and the professional experience of the project team. Identified capital projects will be integrated in the subsequent Airport Development Plan.

Table 4.1 - Example Infrastructure and Operational Requirements

Opportunity	Capital Requirements	Operational Requirements
New Hangar Construction	• Provision of new airside taxiway • Installation of utilities and services	• Snow clearing of new taxiway • Marketing of hangar lot availability • Integration of Transport Canada and NAV CANADA in approvals process

4.3.3 Airport Development Plan and Land Use Plan

Constraints Analysis

HM Aero will identify aeronautical and non-aeronautical constraints that will inform the subsequent Airport Development and Land Use Plans. Examples of constraints to be analyzed will include:

- Transport Canada TP312 (5th Ed.) Obstacle Limitation Surfaces, which will be modelled using HM Aero's Transoft SkySafe software platform;
- Transport Canada Advisory Circular 301-001 Instrument Approach Procedure clearance requirements;
- Topographic and hydrogeological constraints; and
- Off-site uses, permitted uses planned through the Official Plan and Zoning Bylaw, and associated compatibility requirements.

Airport Development Plan

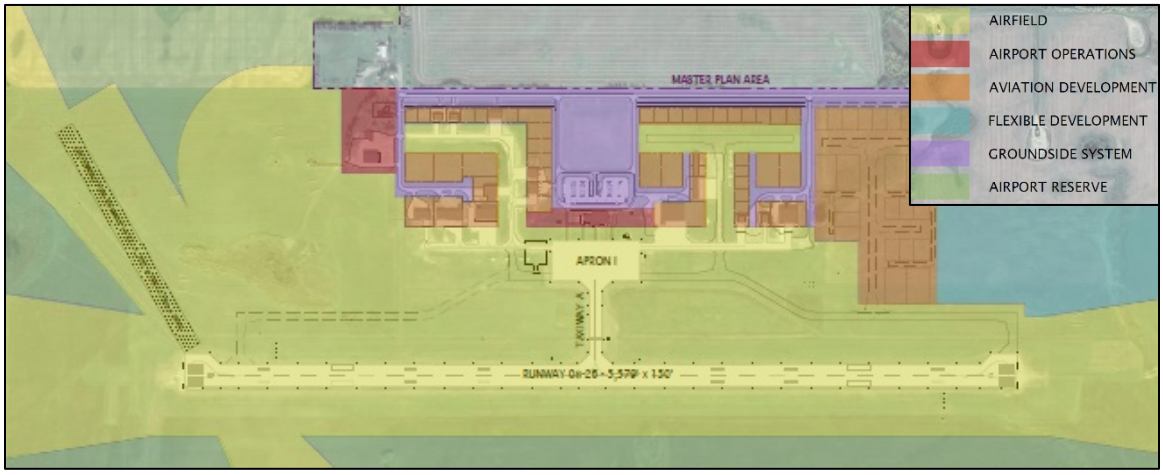
Based on the Infrastructure and Operational Requirements and Constraints Analysis tasks, HM Aero will prepare an Airport Development Plan that depicts the progressive development of the facility to maximize the value of infrastructure investments. Drawings will be provided at the Preliminary Design level of technical detail. Throughout the planning process, the project team will consider all configurations and related designs for their ability to maximize operational viability and safety, minimize costs to the Town, and enhance the competitiveness and economic development potential of Goderich Airport. The Airport Development Plan will propose leasehold lot configurations that will set the framework for long-term growth.

Airside infrastructure will be planned in accordance with TP312 – Aerodrome Standards and Recommended Practices (5th Ed.). The planning process will be supported by the use of the AviPlan Airside Pro software platform which will ensure that recommended infrastructure can be used by the identified design aircraft.

Land Use Plan

Based on the Airport Development Plan, the project team will prepare an Airport Land Use Plan. The Land Use Plan will be flexible to allow for a full range of airport development and revenue generation opportunities, but sufficiently prescriptive to protect for safe and efficient operations and to ensure that development will not preclude recommended capital projects.

The Land Use Plan will also consider appropriate land uses for the properties in the immediate vicinity of Goderich Airport to guide subsequent municipal land use planning and recommend amendments, if required, to Township plans and bylaws.



Example Airport Land Use Plan

4.3.4 20-Year Financial Projections

Pro-Forma Financial Projections

To illustrate the future financial position of Goderich Airport and the level of municipal funding that may be required, the project team will prepare pro-forma operating expense and revenue forecasts. The pro-forma financial projections will be provided at an annual level of detail over a 20-year horizon (2021-2040) and will account for:

- Historical operating revenue and expense trends;
- Operating cost implications of implementing staffing and management recommendations;
- Revenues that may be realized through the attainment of the development opportunities previously explored;
- Capital and operating costs of infrastructure projects (e.g. the capital cost of developing a new taxiway and the operating costs of maintaining it in subsequent years); and
- Assumed levels of inflation.

Grant Funding Opportunities

The project team will research and identify provincial and federal grant programs that can be pursued to reduce the municipal funding obligations of the Airport, both for the recapitalization of its existing assets and the development of recommended new facilities. Each grant opportunity will include a narrative explaining eligibility, funding implications, and examples of where the given program has been successfully implemented at comparable airports.

4.4 Phase 4 – Airport Strategic Plan

4.4.1 Business Development Strategy

While the identification of Development Opportunities in Phase 3 addresses the question of "*What* can happen here?", the Business Development Strategy will consider "*How* do we make that happen here?" HM Aero will prepare a Business Development Strategy for the pursuit of the opportunities identified in Phase 3. Specifically, for each commercial development and revenue generation opportunity, HM Aero will employ a five-step process:

1. Define the business development goals and objectives;
2. Identify partner stakeholders and organizations (e.g., Township, County, Chamber of Commerce);
3. Enumerate the target audiences and key messaging that considers the Airport's unique value proposition;
4. Select appropriate marketing methods; and
5. Prepare an implementation and monitoring strategy.

4.4.2 Action Plan

Where deficiencies and opportunities are identified in Phases 1-3, each recommendation will be clearly identified and consolidated in a 20-year Airport Action Plan, presented in table format for easy reference by the Town. Each project and recommended action will be assigned an implementation year that considers phasing requirements, forecast demand, the capital funding requirements, and other factors.

4.4.3 Deliverable 2 – Draft Strategic Plan

The findings of all preceding tasks will be compiled in the comprehensive Draft Airport Strategic Plan. Recommendations will be consolidated into a 20-year implementation strategy, presented in a tabular format for reference by the Town. Following the completion of HM Aero's Quality Assurance and Quality Control processes, the Draft Report will be submitted digitally for review and comment by the Town and Airport Task Force.

4.4.4 Deliverable 3 – Final Strategic Plan and Presentation

Within 14 days of the receipt of one set of consolidated comments from the Town, HM Aero will action all required changes and digitally submit the Final Airport Strategic Plan to the Town and Airport Task Force. The project team proposes to digitally present the findings of the Strategic Plan to a joint meeting of Council and the Airport Task Force at a date of convenience to the Town. Additional meetings to other parties (e.g., the Township, County) can be completed on a Time and Materials basis.

4.5 Project Schedule

The proposed Project Schedule is shown in Figure 4.1, with key dates summarized in Table 4.2. The project team is flexible in its implementation schedule and will work with the Town to the extent possible to advance the project expeditiously.

Table 4.2 – Project Schedule Key Dates

Key Project Deliverable	Target Submission Deadline
Deliverable 1 – Interim Project Report	April 15, 2021 (To Be Determined with Town)
Deliverable 2 – Draft Strategic Plan	July 7, 2021
Deliverable 3 – Final Strategic Plan	July 21, 2021
Presentation to Council and Airport Task Force	To Be Determined with Town

Figure 4.1 - Project Schedule

M = Meeting S = Site Visit D = Deliverable	March					April				May					June				July			
	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26
Contract Award (Assumed)																						
Phase 1 - Contextual Research																						
Background Data Collection and Review																						
Stakeholder Engagement																						
Regional Socioeconomic Review																						
Aviation Industry Considerations																						
Phase 2 - Airport Assessment and Profile																						
Airport Activity Review																						
Site Visit and Airport Infrastructure Assessment				S																		
Regulatory Review																						
Governance Review																						
Operations and Management Review																						
Financial Review																						
Social and Economic Impact Analysis																						
Comparator Airport Review																						
Deliverable 1 - Interim Project Report							D															
Phase 3 - Airport Development Plan																						
Development Opportunities																						
Infrastructure and Operational Requirements																						
Airport Development Plan and Land Use Plan																						
20-Year Financial Projections																						
Phase 4 - Airport Strategic Plan																						
Business Development Strategy																						
Action Plan																						
Deliverable 2 - Draft Strategic Plan																			D			
Deliverable 3 - Final Strategic Plan and Presentation																					D	
Project Start-Up Meeting		M																				
Progress Update Meetings						M				M					M				M			M

5 PRICING

HM Aero proposes to complete the scope of work described in this document, excluding applicable taxes and inclusive of eligible disbursements, for a fixed fee (upset limit) of **$64,670 CAD**. The detailed cost breakdown by relevant subsection is provided in Table 5.1 below. We propose to invoice the Town monthly based on percent project completion.

Table 5.1 - Professional Fees

	Project Manager	Airport Infrastructure Lead	Project Planner	Airport Business Lead	Senior Governance Advisor	CAD Technician	Disbursements	Total Hours	Total Fees
Project Team Member	Adam Martin	Eric Hurley	Ben Crooks	Andrew Macdonald	Dr. David Bell				
Hourly Rate	$125	$120	$95	$110	$110	$90			
Phase 1 - Contextual Research and Analysis									
Background Data Collection and Review	1.0	1.0	5.0	3.0				10.0	$1,050
Stakeholder Engagement	7.5		37.5	7.5				52.5	$5,325
Rregional Socioeconomic Review	2.0		7.5	2.0				11.5	$1,183
Aviation Industry Considerations	2.0		7.5	4.0				13.5	$1,403
Phase 2 - Airport Assessment and Profile									
Airport Activity Review	1.0		5.0	5.0				11.0	$1,150
Site Visit and Airport Infrastructure Assessment	22.5	7.5	22.5	2.0			$2,475	54.5	$8,545
Regulatory Review	3.0	1.0	7.5	7.5				19.0	$2,033
Governance Review	2.0		7.5	7.5	15.0			32.0	$3,438
Operations and Management Review	2.0	1.0	7.5	7.5				18.0	$1,908
Financial Review	2.0	2.0	7.5	7.5				19.0	$2,028
Social and Econimic Impact Analysis	2.0		15.0	7.5				24.5	$2,500
Comparator Airport Review	1.0	1.0	7.5	7.5				17.0	$1,783
Deliverable #1 - Interim Project Report	2.0	4.0	7.5	15.0	2.0	7.5		38.0	$3,988
Phase 3 - Airport Development Plan									
Development Opportunities	4.0	7.5	7.5	7.5				26.5	$2,938
Infrastructure and Operational Requirements	4.0	7.5	4.0	7.5				23.0	$2,605
Airport Development Plan and Land Use Plan	4.0	2.0	4.0	7.5		37.5		55.0	$5,320
20-Year Financial Projections	4.0	1.0	4.0	7.5				16.5	$1,825
Phase 4 - Airport Strategic Plan									
Business Development Strategy	2.0		7.5	15.0				24.5	$2,613
Action Plan	2.0	1.0	4.0	7.5				14.5	$1,575
Deliverable #2 - Draft Strategic Plan	4.0	2.0	15.0	15.0	1.0	5.0		42.0	$4,375
Deliverable #3 - Final Strategic Plan and Presentation	4.0	2.0	15.0	15.0	1.0	2.0		39.0	$4,105
Project Management									
Project Management and Client Engagement Meetings	10.0	5.0	5.0	5.0	1.0			26.0	$2,985
Total Staff Hours	**88.0**	**45.5**	**211.0**	**171.0**	**20.0**	**52.0**		**587.5**	
Total Fees and Expenses	**$11,000**	**$5,460**	**$20,045**	**$18,810**	**$2,200**	**$4,680**	**$2,475**		**$64,670**

Appendix A - Curricula Vitae (CVs)

HM AERO
AVIATION CONSULTING

R. Adam Martin, M.Sc., PMP
President, Senior Project Director

KEY AREAS OF PRACTICE:

- Project Management
- Airport Business Case Development
- Strategic Planning
- Airport Operations and Governance
- Airport Land Use Planning
- Economic Impact Analysis
- Airport Licensing & Inspection
- Stakeholder Consultations

PROFILE:

As President of HM Aero, Adam has more than 19 years' experience in the aviation industry and is an experienced airport planner, commercial pilot and Project Management Professional. Adam is responsible for leading a team of full-time and part-time professional staff specializing in airport planning, project management, engineering, climatology and other disciplines in support of HM Aero's assignments. Prior to co-founding HM Aero Inc. in 2018, Adam led a team of more than 20 aviation planning staff in his role of Manager, Aviation Planning at WSP Canada, where he was employed for more than 13 years and was involved in more than 100 projects. Prior to joining WSP (formerly MMM Group and LPS AVIA) in 2005, Adam worked with the Greater Toronto Airports Authority, and Transport Canada. Adam is a commercial pilot, is active in the general aviation sector, and is the former Interim President of the Ottawa Flying Club.

Adam has overseen more than 60 airport master plans, strategic plans, economic impact assessments, business cases, and feasibility studies, in addition to several land use planning and development assignments for diverse clients such as the: Yukon Government, City of Lethbridge, Town of Golden, Government of Canada, and the Regional Municipality of Niagara. Adam acts in both technical and project management roles for projects of varying scope and complexity; including recently where he acted as the Project Manager and technical lead while delivering a Feasibility Study and Business Case for two regional and municipal airports in the Niagara Peninsula. Adam also delivered the 2017 Peterborough Airport Strategic Plan to the City of Peterborough, acted as Owner's Representative for the City of Kingston's $16.1 Million Air Terminal and Runway Expansion Project in 2018, and led a specialized team of aviation planners working with KPMG to complete two parts of the Pickering Lands Aviation Sector Analysis – a study recently made public by Transport Canada.

EDUCATION:

▪ Project Management Professional (PMP), Project Management Institute	2013
▪ Commercial Pilot Licence, Seaplane Endorsement	2009
▪ M.Sc., Airport Planning & Management, Loughborough University, UK	2004
▪ Technical Diploma, Aviation Management (Honours), Georgian College	2003

PROFESSIONAL ASSOCIATIONS:

▪ Project Management Institute	PMI
▪ Ottawa Flying Club, Former Board Member and Interim President	OFC

CAREER:

▪ President and Senior Project Director, HM Aero Inc.	2018-Present
▪ Manager, Aviation Planning, WSP	2016-2018
▪ Manager, Aviation Planning, Ottawa, WSP	2016
▪ Senior Airport Planner, Aviation, LPS AVIA & MMM Group Limited (WSP Acquisition)	2005-2016
▪ Aviation Standards Officer, Noise Management Specialist, Greater Toronto Airports Authority (work term)	2005

- Data Analyst / Enforcement Assistant, Transport Canada (work term) 2002
- Maintenance Specialist, Niagara District Airport (Student) 1998-2000

PROFESSIONAL EXPERIENCE:

Select Experience

- **Golden Airport Economic Viability Study (2020 Ongoing**): Project Director. Adam played a key role in delivering an Economic Viability Study to the Town of Golden examining the current infrastructure, operations, and role of the facility in both a social and economic context within Area A of the Columbia Shuswap Regional District (CSRD). The study found that Golden Airport provides significant social and economic benefits to the town and the region by supporting air ambulance, search and rescue, heliskiing and back country lodge servicing, among others. The first phase of the study involved the delivery of a feasibility study recommending that the Town continue investing in infrastructure and operations at the facility. The study is planned to be delivered to Council in October, and HM Aero will be recommending that they proceed to the second phase of the assignment: preparation of a Strategic and Tactical Plan for the facility.
- **Niagara Airports Feasibility Study and Business Case (2019):** Project Director. Under contract with the Regional Municipality of Niagara, Adam was responsible and accountable for the delivery of a Feasibility and Business Case examining and quantifying the economic potential of two airports in the Niagara Peninsula – Niagara District Airport and Niagara Central Airport. The study resulted in the identification of more than four scheduled and charter passenger air service opportunities for Niagara District Airport, and six general aviation commercial and recreational opportunities for Niagara Central Airport within the next 20 years. The business case demonstrated that annual cost revenue gaps at both airports could be gradually decreased within the next 20 years if proper investment is made in the facilities and appropriate governance structures are put in place to better position the airports as stronger economic drivers within Niagara Region.
- **Lloydminster Airport Master Plan (2019-2020):** Project Director. Working closely with the City of Lloydminster's Economic Development Department, Adam was responsible and accountable for the delivery of the Lloydminster Airport Master Plan, delivered in early 2020. The study focussed on identifying the economic impact of the airport, preparation of activity forecasts, extensive stakeholder engagement, identifying air service expansion opportunities, and preparing development options. The Master Plan also identified required airfield expansions within a 20-year planning horizon to support identified demand, including but not limited to: development and provision for a parallel taxiway supporting Runway 08-26; modest air terminal expansion to accommodate 70 peak hour passengers; groundside parking expansion and relocations, and the provision of potable water and sanitary sewer services to the Airport.
- **Lethbridge Airport Financial Viability and Governance Study Update (2016):** Project Manager. Under the leadership of Adam Martin, a report was provided to City and County decision-makers that accurately reflected the economic and financial state of the airport, as well as a projection of annual investment that would be required to grow its viability based on the current regulatory environment, and future potential markets. Furthermore, the project included a five-year update to the 2011 Financial Assessment and Governance Strategy for Lethbridge Airport to reflect current market conditions and incorporate changes in economic conditions and air transport industry trends; including the entry of WestJet's Encore 78-seat Q400 into Canada's regional air service market.
- **CFB Greenwood General Aviation Business Case and Governance Study (2015-2016):** Project Manager. Adam was actively involved as the Project Manager and Lead Analyst for this study. The assignment involved preparing a Business Case and identifying an appropriate governance model for relocating general aviation facilities from Waterville Airport to CFB Greenwood. The study demonstrated that a positive business case could be realized for future operations at CFB Greenwood by creating a not-for-profit incorporated entity (airport board) comprised of individuals with the necessary skills to design, develop, construct and manage infrastructure at the new general aviation site at CFB Greenwood.

Other Relevant Experience:

- Baker Lake Airport Master Plan
- Camrose Airport Master Plan
- Edmonton Regional Airports Master Plans (Villeneuve, Cooking Lake, City Centre)
- Gander Airport Master Plan
- Gillam Airport Master Plan
- Grande Prairie Airport Master Plan
- Iqaluit Airport Master Plan
- Iroquois Falls Airport Master Plan
- Lethbridge Airport Master Plan
- Lloydminster Airport Master Plan
- Peterborough Airport Master Plan
- Prince Albert Airport Master Plan
- Rankin Inlet Airport Master Plan
- Swift Current Airport Master Plan
- Waterloo Airport Master Plan
- Windsor Airport Master Plan
- Bonnyville Airport Development Plan and Certification
- Calgary - Springbank Airport Vicinity Land Use Study
- CFB Greenwood: General Aviation Business Plan
- Confidential LNG: Fort Nelson Airport Requirements Study
- Dawson Airport – PAPI and Approach Assessment
- Debert Airport Business Plan
- Devon Energy Terminal Capacity Analysis
- Devon Kirby Lake
    - Aerodrome Compliance Review
    - Aerodrome Development Plan
- EDF – Romney Wind Farm Aeronautical Impact Assessment
- Edmonton Airport Energy Resource Terminal Business Case
- Edmonton International
    - Core Infrastructure Study
    - General Aviation Infrastructure Plan
- Fredericton Air Terminal Expansion Study
- Gillam Airport: Airport Availability Assessment
- Government of Nunavut
    - Kitikmeot Air Ambulance Review
    - Qikiqtaaluk Air Ambulance Review
    - Transportation Strategy Update
- High Level Airport
    - ACAP Application, Runway Rehabilitation
    - Airport Management Assistance
- Iqaluit Airport
    - Aeronautical Study and Zoning Implementation
    - Airbus A380 Cold Weather Testing Support
    - ICAO Type A Obstacle Chart Preparation
    - First Air Apron III Aircraft Parking Plan
- Kingston Airport
    - Owner's Representation
    - Airport Operations Manual Review and Update
- Kuujjuarapik Airport - Zoning/Approach Study

- Lethbridge Airport
  - Financial Assessment and Governance Study
  - Safety Management System QA Audit
  - Ultra Low Cost Carrier Accommodation Plan
  - Financial Assessment and Governance Study Update
- Lloydminster Airport – Land Lease Review
- Lublin Air Terminal (Poland): Design Competition
- Manitoba Infrastructure and Transportation: Poplar River Airport Relocation
- Mayo Airport
  - Air Terminal Conceptual Plan
  - Airport Site Plan
- Nexen Aurora LNG: Aviation Risk Assessment
- Nexen Liard North: Greenfield Aerodrome Development Study
- Niagara District and Niagara Central Airports – Feasibility Study and Business Case
- Niagara District Airport – Rates and Charges Review
- North Bay Airport - Land Use Plan
- Ottawa Airport
  - 2018 Master Plan
  - Runway 07-25 Expansion Study
  - Runways Expansion AZR Impacts Studies
  - Taxiway Bravo and Alpha Civil Design Coordiation
- Pangnirtung Airport
  - Phase 3 Relocation Study
  - Aeronautical Study and APAPI Installations
- Peace Region Economic Development: Airport Financial Feasibility Study
- Peterborough Airport
  - Airport Marketing Implementation
  - Airport Strategic Plan
  - Apron Management Plan
  - CBSA Services Investigation
  - Commercial Development
  - Comparative Standards Study
  - Highway115/7 Interchange Obstacle Assessment
  - Noise Abatement Study
  - Obstacle Identification Study
  - Project Management Services
  - Development (Seneca) – Project Management Services
  - Airfield Marking Review and Interpretation
  - Taxiway India/Taxiway Bravo Interface Solutions
- Pickering Airport Aviation Sector Analysis
- Rankin Inlet Apron Management Plan
- Sandspit Airport – Infrastructure Vulnerability Assessment
- Saskatchewan Air Transportation Strategy
- Shell Albian Sands Aerodrome Safety Management Systems Audit
- Shell Fox Creek Aerodrome Development Feasibility Study
- Shell Peace River Airport Development Plan
- Slemon Park Airport Climatology Study
- South River/Sundridge Strategic Plan and Development Plan
- St. Thomas Air Terminal and FBO Study
- Sudbury Air Terminal Expansion Plan
- Suncor Aerodrome Airside Expansion and Conceptual Design

- Suncor Air Terminal Replacement Study
- Suncor Greenfield Aerodrome Development (B767 capable)
- Swift Current Airport
    - Management Assistance
    - Air Terminal Development Study
    - Runway Extension Design
- Tillsonburg Airport
    - Feasibility Analysis Study
    - Airport Development Guidelines and Process Guide
- Toronto – Downsview
    - Aeronautical Zoning and Site Analysis
    - Airport Commercial Development Planning and Review
    - Airport Land Use Plan
- Toronto - New Pickering Airport Land Use Planning
- Toronto - Ontario Place Zoning Assessment/Optimal Use Study
- Toronto Pearson
    - Air France Crash Investigation
    - Master Plan, Airline Support Facilities Study
    - Woodbine Development Review
- Whitehorse
    - 2040 Master Plan
    - Airport Operations Manual Review and Update
    - Airport Zoning Regulations Mapping
    - Airside Access and Vehicle Control Plan
    - Alaska Highway Obstacle Assessment
    - Conceptual Groundside Design Study
    - Emergency Response Grid Maps
    - LiDAR Survey Analysis
    - Master Site Plan
    - Passenger Boarding Ramp Procurement
    - Runway 14L-32R Obstacle Analysis
    - Subdivision Plan
    - Taxiway Golf Options Analysis
    - Wayfinding and Signage Study

HM AERO
AVIATION CONSULTING

Eric Hurley, P.Eng
Vice President, Senior Project Manager

KEY AREAS OF PRACTICE:

- Airport Master Planning
- Stakeholder Consultations
- Apron and Taxiway Geometric Design
- Project Management
- Construction Management
- Airport Land Use Planning
- Airfield Pavement Conceptual Design
- Airport Terminal Building Space Planning
- Design Review and Construction Planning
- Contract Administration

PROFILE:

Eric Hurley is the Vice President of HM Aero and has spent his entire career in the field of airport planning and engineering. Eric is a professional engineer with a bachelor's degree in civil engineering and a master's degree from Carleton University where he obtained his Professional Certification in Critical Infrastructure Protection.

Eric has served as the lead planner and infrastructure lead for numerous airport master plans and business plans. Eric was also the project manager for the Erik Nielsen Whitehorse Airport 2040 Master Plan and the 2018 Ottawa Airport Master Plan. Eric also played an integral role in the delivery of the Feasibility Study and Business Case for Niagara District Airport and Niagara Central Airport. Eric is currently serving as the Airport Infrastructure Lead for the Golden Airport Viability Study and Prince Albert Airport Strategic Master Plan, and is also supporting the Columbia Shuswap Regional District in refining the operations and management of Revelstoke Airport.

EDUCATION:

▪ Master of Infrastructure Protection (Civil Engineering), Carleton University	2012
▪ Bachelor of Civil Engineering, Carleton University	2010

PROFESSIONAL ASSOCIATIONS:

▪ Association of Professional Engineers of Ontario – Professional Engineer	PEO
▪ Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists – Professional Engineer	NAPEG
▪ Engineers Yukon – Professional Engineers	YG
▪ Critical Infrastructure Institute – Certified Professional in Critical Infrastructure Protection	CII

CAREER:

▪ Vice President, HM Aero Inc.	2018-Present
▪ Senior Project Engineer – Aviation, WSP	2017-2018
▪ Project Engineer – Aviation, MMM Group	2015-2016
▪ Airport Engineer, LPS AVIA Consulting	2010-2014

PROFESSIONAL EXPERIENCE:

Select Experience

- **RFP Support – Revelstoke Airport (2020 – ongoing):** Civil Engineer

  Eric is currently assisting the Columbia Shuswap Regional District (CSRD) in the preparation of two Request for Proposal (RFP) documents for the procurement of an Airport Service Provider (A.S.P) and an Aviation Fuel Cardlock System. As part of this assignment, Eric is also assisting the airport in the development of Standard Operating Procedures (SOPs) for Winter Maintenance Activities through the preparation of a Snow Removal and Ice Control Plan (SRICP).

- **Prince Albert Airport Strategic Master Plan (2020 – ongoing):** Civil Engineer

  Eric is currently involved in preparing a 20-year Strategic Master Plan for Prince Albert Airport, including the analysis of all airport infrastructure, air terminal building space planning, and preparing cost estimates to be included in a 20-year airport capital plan.

- **Golden Municipal Airport Viability Study (2020 – Ongoing):** Airport Infrastructure Lead

  In support of the Golden Municipal Airport Viability Study, Eric is currently responsible for the airport infrastructure assessment component of the study as well as serving the role of deputy project manager. The study kicked off in May of 2020 and is expected to be complete by February 2021. The project will assess whether the potential economic impact and business case for the Airport outweighs the benefit of closing and redeveloping the facility which will allow the Town to make informed infrastructure spending decision making within the community.

- **Niagara Airports Feasibility Study and Business Case (2019):** Lead Airport Planner/Engineer

  Under contract with the Regional Municipality of Niagara, Eric was responsible for the airport infrastructure assessment component in support of the Feasibility and Business Case examining and quantifying the economic potential of Niagara District Airport and Niagara Central Dorothy Rungeling Airport. The study resulted in the identification of more than four scheduled and charter passenger air service opportunities for Niagara District Airport, and six general aviation commercial and recreational opportunities for Niagara Central Airport within the next 20 years. The business case demonstrated that annual cost revenue gaps at both airports could be gradually decreased within the next 20 years if proper investment is made in the facilities and appropriate governance structures are put in place to better position the airports as stronger economic drivers within Niagara Region.

- **Lloydminster Airport Master Plan (2019-2020):** Lead Civil Engineer

  Eric was responsible for preparing the Airport Capital Plan and Rough Order of Magnitude (ROM) cost estimates for the Lloydminster Airport Master Plan. This information was fed into a 20-Year Pro Forma Financial Statement that was prepared to illustrate the financial position of the airport over the 20-year planning horizon. Eric also assisted the project team in reviewing the airport infrastructure and providing a condition assessment of all assets, including airside and groundside pavements.

- **Erik Nielsen Whitehorse International Airport (ENWIA) Master Plan (2017-2018):** Lead Airport Planner

  While employed with a previous firm, Eric led the technical airport planning component of a comprehensive Airport Master Planning study at ENWIA to respond to changes in air carrier trends, regulatory conditions, and the territory's economic environment. The project team collaborated with Yukon Government staff to create innovative development options to optimize land use while minimizing impact to existing leases and tenants. The study also involved extensive consultation with more than 70 stakeholders, the preparation of detailed passenger and aircraft movement forecasts, 20-year Development Plan identifying infrastructure requirements, ROM cost estimates, a governance study, and a detailed staffing plan.

- **Iroquois Falls Airport Master Plan (2019-2020):** Project Manager

  Eric was accountable to the Town of Iroquois Falls to prepare an Airport Master Plan, Business Case, and Marketing Plan for the aerodrome. Eric was responsible for the condition assessment of all airport assets, and for making recommendations for the future management of each infrastructure element. Eric also led the preparation of a comprehensive development plan. The Master Plan identified the airport's primary infrastructure to be in good condition, with minimal short-term investments required to maintain a long-term economic asset for the community. Small and incremental business development opportunities were identified for the facility within the next 20 years, and the Master Plan emphasized the importance of the Airport in attracting future business to the municipality – a community that suffered a significant decline in activity when the Resolute Forest Products newsprint mill closed in 2015.

OTHER RELEVANT EXPERIENCE

Airport Taxiway, Apron, and Runway Rehabilitation and Expansion

- Erik Nielsen Whitehorse International Airport – Taxiway G Options Analysis (2019)
- Ottawa Macdonald-Cartier International Airport – Taxiway Rehabilitation Program Rehabilitation (2017-2018). $5.0 million rehabilitation project for Taxiways B, A, E, and M.
- Ottawa Macdonald-Cartier International Airport – Airfield Pavement Rehabilitation (2016). $5.0 million Apron I rehabilitation and Taxiway E reconstruction project.
- Fox Creek Aerodrome – Aerodrome Expansion Design Study (2012 – 2013). $38 million aerodrome expansion design feasibility study for Shell Canada with a 5,000' runway, taxiway, and terminal.
- Toronto Billy Bishop Airport – Runway Extension Analysis (2013). An analysis to determine the feasibility of extending the airport's primary runway to support Bombardier CSeries (Airbus A220) operations.

Air Terminal Buildings

- Mayo Airport – Air Terminal Development Concept Plan (2019)
- Peace River Airport – Air Terminal Building Expansion (2014-2015). $2.1 million Air Terminal Building capacity expansion, modifications, and Maintenance Building expansion for Shell Canada.
- Lethbridge Airport – Air Terminal Building Conceptual Design (2015)
- Kirby Lake Aerodrome – Air Terminal Building Capacity Analysis (2014)
- Swift Current Airport – Air Terminal Building Development (2013)

Conceptual Design and Development Plans

- NEXEN – Prince Rupert Liquid Natural Gas Plant (2014). Site selection, conceptual design, and costing for a new $142 million airport option and $13 million airport expansion option.
- Erik Nielsen Whitehorse International Airport – Air Tanker Base Business Case (2013)
- Peace River Airport – Shell Canada Development Plan (2013)
- Kirby Lake Aerodrome – Devon Energy Development Plan (2012)

Andrew Macdonald, B.Comm
Manager, Aviation Planning

KEY AREAS OF PRACTICE:

- Airport Geometric Design
- Apron and Gate Planning
- Obstacle Assessments
- Activity Forecasts
- Survey Coordination
- Geographic Information Systems (GIS)
- Strategic Planning
- Stakeholder Consultations

PROFILE:

Andrew Macdonald has led or participated in over 40 airport master plans, development plans, gating and apron plans, commercial plans, business plans, marketing plans, noise, and de-icing studies. He is a Commerce graduate of the University of Guelph, Aviation Management graduate of Georgian College, and graduate of the Pennsylvania State University post baccalaureate certificate program in Geographic Information Systems (GIS).

Andrew has participated in planning, design, and forecasting activities; Instrument Flight Procedure design; topographic survey coordination; airport business plans and business case studies; airport master plans and commercial plans; apron and gate designs, obstacles assessments, and specialized studies at numerous airports throughout Canada including Tillsonburg, Toronto Pearson, Ottawa Macdonald-Cartier International, Vancouver International, Edmonton International, London International, Greater Moncton International, Halifax Stanfield International, and Iqaluit. Andrew specializes in aircraft maneuvering modelling, airfield geometric design, and Obstacle Limitation Surface generation and analysis.

EDUCATION:

- Airside Planning with Transoft AviPLAN Airside Pro – Toronto 2018
- Airside Planning with Transoft AviPLAN Airside Pro – Vancouver 2017
- AutoCAD Civil 3D 2015 - Fundamentals, SolidCAD Solutions 2015
- Post Baccalaureate Certificate in GIS, Pennsylvania State University 2013
- Diploma in Aviation Management (with Honours), Georgian College 2010
- Bachelor of Commerce, University of Guelph 2007

CAREER:

- Manager, Aviation Planning, HM Aero, Ottawa, ON 2019 - present
- Senior Planner, Aviation, WSP, Ottawa, ON 2016-2019
- Senior Planner, Aviation, MMM Group Limited, Ottawa, ON 2009-2016
- Assistant Airport Planner, Pryde Schropp McComb, Inc., Toronto, ON 2008

PROFESSIONAL EXPERIENCE:

Tillsonburg Regional Airport Projects

- Airport Development Design Guidelines (2019-2020)
- Airport Feasibility Analysis Study (2019)

Airport Planning Projects

- Golden Municipal Airport Viability Study (2020 – present)
- Prince Albert Airport Strategic Master Plan (2020 – present)
- Lloydminster Airport, Master Plan (2019-2020)
- Iroquois Falls Airport, Master Plan (2019)
- Lethbridge Airport, Master Plan (2017-2018)
- Erik Nielsen Whitehorse International Airport, Master Plan (2017-2018)
- Ottawa Macdonald-Cartier International Airport, Master Plan (2017)
- Peterborough Airport, Strategic Development Plan (2016-2017)
- Kimmirut Airport Relocation Study, Kimmirut, NU (2015)
    - Pangnirtung Airport, Pangnirtung, NU
    - Relocation Study (2015 – Present)
    - Runway Expansion Options (2014)
- Suncor Firebag Airport, Core Area Master Plan and Air Terminal Development (2014)
- Gillam Airport, Master Plan, Gillam, MB (2013-2014)
- Rankin Inlet Airport, Master Plan, Rankin Inlet, NU (2010-2011)
- Baker Lake Airport, Master Plan, Baker Lake, NU (2010)

Apron and Gate Planning Projects

- Toronto Pearson International Airport (2015-2019)
    - Planning, design and simulation of the proposed Multiple Aircraft Ramp System (MARS) Gates at Terminal 1 and 3
    - Planning for the T1 – Pier ‘F’ East-side Reconfiguration study, including the upsizing of existing gates to Full Code ‘C’ capability and potential Code ‘E’ aircraft operations at Gate 191/193
    - Conceptual planning for the T1 Apron Planning Study, including the upsizing of existing Gates 244 through 260 to accommodate Full Code ‘C’ aircraft, Code ‘E’ aircraft along the east side of Pier ‘F’, and Code ‘E’ aircraft parking along the Pier ‘E-F’ liner (Gates 151 through 157)
    - Conceptual planning for the accommodation of Code ‘E’ and ‘F’ aircraft in the Infield Terminal including the alteration of paint markings
- Remote MARS Stand Design Quality Assurance, Hammad International Airport, Doha (2018)
- Conceptual Gate Planning, Terminal Expansion Program, Winnipeg (2019)
- Gate Reconfiguration in support of Terminal Expansion Program, Halifax Stanfield International Airport (2017-2018)
- Gating Reconfiguration, Fort McMurray Airport (2017)
- Apron Planning Exercise, Greater Moncton International Airport (2016)
- Gating Reconfiguration, London International Airport (2016)
- Airport Expansion Vision, Maurice Bishop International Airport, Grenada (2015)
- Rankin Inlet Airport, Apron Management Plan (2009)

Instrument Flight Procedure Design

- IFP Design, Various Airports, Newfoundland and Labrador (2019)
- Gillam Airport IFP Feasibility Analysis and LPV Design (2015-2017)

Commercial Development Initiatives

- Feasibility Study and Business Case, Niagara Region (2019)
- Lethbridge County Airport, Commercial Aviation Market Assessment + PPP Project Application (2011-2012)
- Peterborough Airport, Peterborough, ON
    - Noise Exposure Study (2013)
    - $30M Expansion Business Case (2008-2009)
    - Airport Marketing Plan (2009-2010)
- Whitehorse International Airport, Wildfire Tanker Base Expansion Business Case (2013)
- Kirby Lake Aerodrome, Business Plan, Air Terminal Building Capacity Analysis (2012)
- Edmonton International Airport, General Aviation Expansion Plan (2009)
- Saskatchewan, Provincial Air Transportation Strategy (2009)
- Pickering Airport, Noise Projections (2013, 2014)

Aerospace Industrial Development Initiatives

- Kingston Airport, Business Case for Expansion (2012)
- South River-Sundridge District Airport, Airport Development Plan and Business Case (2011)
- Nakina Airport, Commercial-Industrial Development Strategy (2013)
- Peterborough Airport, Peterborough, ON
- FCC Hangar Siting Concepts (2014)
- Comparative Standards Study (2015)

Presentations and Publications:

- Presentation: Airport Planning Primer for the Ontario Professional Planners Institute, November 25, 2020
- Presentation: Transoft Solutions SkySAFE Users Conference Seminar: Grise Fiord – An Investigation of TP312 Certification, November 9, 2020
- Publication: Y Magazine – Airport planning in a pandemic world: October 1, 2020
- Presentation: Airport Airfield Components, Carleton University, Ottawa, ON, October 13, 2016

HM AERO
AVIATION CONSULTING

Ben Crooks, RPP, MCIP
Aviation Planner

KEY AREAS OF PRACTICE:

- Airport Planning
- Air Terminal Planning
- Commercial Land Development
- Airport Land Use Compatibility
- Climate Change and Environmental Impacts
- Municipal Planning
- Stakeholder Consultations
- Air Service Development and Procurement

PROFILE:

Ben Crooks is an experienced Registered Professional Planner (RPP) and Member of the Canadian Institute of Planners (MCIP). Ben is a licensed pilot and is actively involved in general aviation. Ben is passionate about Canada's regional airports and air carrier services to these communities, and continually researches trends relating to air service vulnerability and fleet decision-making. Given his background in aviation and education as a planner, he is equipped to provide analytical solutions to issues being experienced at airports across Canada.

Ben's professional experience extends across a wide range of project types, ranging from airport master plans to specialty assignments in air service procurement and climate-infrastructure risk assessments. Combining his aviation experience with two years of practice in urban planning, Ben has become adept at supporting airport land development through projects in market research, land use planning, and marketing. He is also skilled with addressing off-airport land use compatibility through municipal plans and by-laws, understanding the relationship between airports and their surrounding communities. Lastly, Ben approaches each project with an environmental lens, identifying opportunities for sustainability and preparing strategies for climate change adaptation.

EDUCATION:

- Bachelor of Environmental Studies – Planning, University of Waterloo 2019
- AutoCAD Training, Algonquin College 2018
- Private Pilots License, Sky Wings Aviation 2013
- Glider Pilots License, Air Cadet League of Canada 2012

PROFESSIONAL ASSOCIATIONS:

- Canadian Institute of Planners, Candidate Member 2014 - present
- Ontario Professional Planners Institute, Candidate Member 2014 - present

CAREER:

- Aviation Planner, HM Aero, Ottawa, ON 2019 - present
- Aviation Planner, WSP, Ottawa, ON 2018 - 2019
- Assistant Planner, Holzman Consultants, Ottawa, ON 2018 - 2019
- Assistant Planner, City of Ottawa, Ottawa, ON 2017
- Assistant Planner, Oldman River Regional Services Commission, Lethbridge, AB 2016

PROFESSIONAL EXPERIENCE:

Airport Planning

- **Golden Municipal Airport Viability Study (2020 – ongoing):** Aviation Planner
  Ben is currently involved in the preparation of a viability study for Golden Municipal Airport. Ben's responsibilities include leading the stakeholder consultation program; analyzing the airport's finances; operations, and infrastructure; identifying revenue generation and development opportunities; and preparing a feasible business case to improve economic and social impacts.
- **Prince Albert Airport Strategic Master Plan (2020 – ongoing):** Aviation Planner
  Ben is integrally involved in preparing a 20-year Strategic Master Plan for Prince Albert Airport, including the analysis of all airport infrastructure, the identification of future development and growth opportunities, the completion of activity forecasts, and the preparation of a comprehensive development and land use plan. Ben also led consultation efforts with industry, regional, and governmental stakeholders.
- **Lloydminster Airport Master Plan (2019-2020):** Aviation Planner
  Ben was the lead planner for the preparation of a 25-year master plan for Lloydminster Airport. Ben interviewed a range of multidisciplinary stakeholders, met with airline executives, studied movement and activity data, and prepared activity forecasts across three planning horizons using several augmented air carrier scenarios. Ben was responsible for the assessment of all elements of the Airport to identify deficiencies and future requirements, including the groundside, airside, and terminal systems. Leveraging his environmental and ecological knowledge, Ben completed preliminary desktop reviews of the externalities and mitigation measures required for each capital expansion project.
- **Iroquois Falls Airport Master Plan (2019-2020):** Aviation Planner
  In support of a master plan for Iroquois Falls Airport, Ben led the analysis of existing municipal planning policies for their ability to facilitate Airport land development and off-site land use compatibility. Ben was also responsible for the identification of aviation and non-aviation revenue generation and development opportunities, and the preparation of an accompanying marketing plan.
- **Lethbridge Airport Master Plan (2018):** Aviation Planner
  Assisted in the development of a comprehensive 20-year master plan, with a specific focus on future land use compatibility issues with the nearby municipality. Prepared conceptual terminal building floor plans and a standalone air terminal development study.

Land Use Compatibility

- **County of Paintearth Land Use Guidance (2020):** Aviation Planner
  The County of Paintearth, in central Alberta, includes several Registered Aerodromes and increasingly is being chosen for new wind power projects, with accompanying land use compatibility concerns and legal challenges. Ben served as the Aviation Planner on behalf of the County to study their obligations to provide land use protection to private aerodromes and potential involvement in the approval of new aerodromes. Leveraging his professional experience in both airport and municipal planning, Ben also assisted the County with the revision of their Land Use Bylaw airport policies and commented on third-party legal submissions.
- **Stonelake Lands Airport Land Use Compatibility Report (2019):** Aviation Planner
  Led a study on the compatibility of future residential development on a 190 hectare land assembly with the nearby Government of Canada Pickering Airport Lands. Analyzed provincial, regional, and municipal planning policies for compatibility considerations. Applied the Pickering Airport Site Zoning Regulations, TP1247, and TP8240 to determine development height limits, noise exposure constraints, restrictions to visibility, bird hazardous land uses, and electronic interference matters.
- **Vulcan County / Town of Vulcan Intermunicipal Development Plan (2019):** Aviation Planner
  Developed representative Obstacle Limitation Surfaces for two aerodromes in Vulcan County in support of new municipal planning policies for aerodrome protection.

- **Cypress Wind Turbine Aeronautical Assessments (2019):** Aviation Planner
  Responsible for the preparation of aerodrome identification reports and impact assessments in support of multiple wind power projects in the vicinity of Medicine Hat, AB. Completed consultations with and aerodrome operators to determine existing aircraft operations, prepared impact assessments for wind turbines located near aerodrome traffic patterns, and identified mitigation strategies.

Land Development Planning

- **Tillsonburg Airport Development Design Guidelines (2019-2020):** Aviation Planner
  Ben led the preparation of a Development Process Guide and Development Design Guidelines for Tillsonburg Regional Airport. The intent of this project was to create a harmonized process to facilitate future hangar development and ensure that all subsequent projects are of a high standard that aligns with the strategic direction of the Airport.
- **Ottawa Airport Gateway Lands Highest and Best Use Analysis (2019):** Planner
  Ben was the lead planner and assistant project manager for a study on the future use of two prestige development parcels with a combined area of 63 hectares. As an Aviation Planner, Ben studied the aeronautical constraints applicable to the Gateway Lands as a result of the operations and infrastructure of Ottawa International Airport. In his capacity as a Municipal Planner, Ben led the preparation of a multidisciplinary existing conditions report, including hydrogeological, geotechnical, servicing, transportation, and environmental constraints. Ben also participated in market research and recommended a series of land development scenarios that would generate the highest return to the client.
- **Lethbridge Airport Area Structure Plan (2018-2019):** Aviation Planner / Municipal Planner
  Led the preparation of an Area Structure Plan for 570 hectares of Airport lands. The planning process included stakeholder consultations, the creation of a project website, and an open house attended by over 50 residents. Ben led the analysis of all applicable opportunities and constraints and prepared all policies for the development of the subject property.

Specialty Aviation Projects

- **Government of Nunavut Airport Capital Plan (2019):** Aviation Planner
  In support of a 20-year capital plan for 23 territorial airports, Ben researched and analyzed federal and private capital funding options, including grants and Public Private Partnerships. Studied the potential implementation of a standard Airport Pavement Management System across the airport portfolio.
- **Government of Manitoba Air Services Procurement (2018-2019):** Aviation Planner
  Evaluated over 20 wildfire, justice, and air ambulance service proposals on mission delivery, safety, and corporate strength. Prepared a series of research reports, including: the use of single versus twin-engine turbine aircraft to fulfill provincial air service needs; the ongoing pilot shortage; aircraft basing strategies; and the relative strengths of different mission platforms.
- **Sandspit Airport Climate Impact Assessment (2018):** Aviation Planner
  Assisted with the preparation of a climate projection report, developed stakeholder materials for the risk assessment workshop, and became well-versed in the Engineers Canada Public Infrastructure Engineering Vulnerability Protocol.

PUBLICATIONS AND MEDIA:

- OPPI Airport Planning Primer Webinar – November 25, 2020
- Y Magazine – Airport planning in a pandemic world: October 1, 2020
- Aviation Careers Podcast – Airport Planning Profile: August 3, 2020
- CBC News – COVID-19 and Air Travel Recovery: May 27, 2020
- Ontario Provincial Policy Statement (2020) and Airports: March 11, 2020
- Impact Assessment Act and Airport Development Projects: February 5, 2020

HM AERO
AVIATION CONSULTING

Dr. David Bell, PhD, P.Eng.
Senior Governance Specialist

KEY AREAS OF PRACTICE:

- Institutional and Government Advisory
- Strategic Planning
- Governance
- Airport Policy
- Capital Planning
- Organizational Review

PROFILE:

Dr. Bell was a senior transportation executive who played a key role in the privatization and transfer of some 100 airports to local airport authorities and other organizations across Canada. As Director General, Airport Programs and Divestiture, he was responsible for the National Airports Policy implementation. This included negotiating the commercialization and transfer of airports to local airport authorities, the establishment of a privatized Air Traffic Services Provider (NAV CANADA), providing lease administration services, delivering the Airports Capital Assistance Program, and managing post-transfer issues.

As an Assistant Deputy Minister with Transport Canada, Dr. Bell was responsible for internal auditing, program evaluation, and management consulting. He led the Department through the re-engineering and streamlining of all the business processes. As Director of Program Evaluation, he carried out reviews of all departmental programs to provide advice to the Deputy Minister on their ability to deliver expected outcomes, efficiency, and effectiveness. In the position of Executive Director of Transition, Dr. Bell was responsible to the Deputy Minister for all aspects of the restructuring of Transport Canada as a result of significant program review decisions.

Dr. Bell specializes in program review and organizational restructuring; policy and regulatory reform; and transportation planning and management. During his second career in aviation consulting, Dr. Bell has been involved in a variety of transportation assignments, including: facility engineering reviews, governance studies, strategic advisory services, territorial transportation planning, and servicing as an expert witness. Dr. Bell is recognized as an expert in governance, change management, and airport operations. This expertise was developed early in his career as the Central Region Manager for Airports, where Dr. Bell was responsible for a staff of 350 persons, an annual operating budget of $20 million, and a capital budget of $20-30 million.

EDUCATION:

- PhD, Civil & Environmental Engineering, Carleton University, Ottawa, ON
- MASc, Civil Engineering, University of Toronto
- BASc, Civil Engineering, University of Toronto

PROFESSIONAL ASSOCIATIONS:

- Association of Professional Engineers of Ontario — PEO

CAREER:

- Senior Aviation Advisor, HM Aero Inc., Ottawa, ON — 2018 - Present
- Senior Aviation Advisor, WSP Canada, Ottawa, ON — 2003 - Present
- Adjunct Professor, Civil Engineering, Carleton University (Graduate courses Airport Planning) — 1990 - present
- Director General – Airport Programs & Divestiture, Transport Canada. — 1997 - 2002
- Assistant Deputy Minister – Review, Transport Canada — 1991 - 1997

- Executive Director – Inquires Secretariat, Transport Canada 1989 - 1991
- Director General – Public Affairs, Transport Canada 1985 - 1989
- Director – Program Evaluation Branch, Transport Canada 1981 - 1984
- Regional Manager – Airport Operations & Property, Transport Canada 1976 - 1979
- Manager – Corporate Planning, Transport Canada 1974 - 1976
- Planning Officer – Corporate Planning, Transport Canada 1972 - 1974

PROFESSIONAL EXPERIENCE:

Select Experience

- **Golden Airport Viability Study (2020 – ongoing): Senior Governance Advisor**
  Dr. Bell is currently supporting the project team in identifying a recommended future governance model for Golden Airport as part of the Strategic and Tactical Plan phase of the Airport Viability Study.
- **Niagara Region Feasibility Study and Business Case (2019): Senior Governance Advisor**
  This project involved a significant review of Niagara District Airport and Niagara Central Dorothy Rungeling Airport to position both facilities for future growth and development. As the project team's Senior Governance Advisor, Dr. Bell addended meetings with senior leaders from the 12 municipalities in Niagara Region to discuss the governance models of both airports. Dr. Bell also provided strategic recommendations on opportunities to improve the economic contribution of these facilities to the Region.
- **Tillsonburg Regional Airport Feasibility Study (2019): Senior Governance Advisor**
  In support of a comprehensive review of Tillsonburg Regional Airport, Dr. Bell actively supported the stakeholder engagement process and assisted with the identification of challenges, constraints, and opportunities with the current governance model. Dr. Bell recommended changes to the governance of the airport to maximize its future viability and participated in Town of Tillsonburg Council meetings to offer his considerable expertise.
- **Lethbridge Airport Master Plan (2018): Senior Governance Advisor**
  During the preparation of a 20-year Master Plan for Lethbridge Airport, the decision was made to transfer ownership of the facility from Lethbridge County to the City of Lethbridge. Building on his work in the 2016 Financial Viability and Governance Study Update, Dr. Bell provided strategic recommendations to the City for steps to take during the transition in ownership. Dave was also responsible for profiling the Airport Commission model of governance and preparing recommendations on the composition and operations of a future Lethbridge Airport Commission.
- **Pickering Lands Aviation Sector Analysis (2018): Senior Governance Advisor**
  The 18,600-acre Pickering Lands have been owned by the Government of Canada since 1972 for the purpose of developing a new airport to serve the Greater Toronto Area. Transport Canada commissioned KPMG to complete an Aviation Sector Analysis to determine the need and potential future type and role of a new airport on the Pickering Lands. Dr. Bell was a member of the aviation project team sub-consulted by KPMG; in this role, Dr. Bell engaged with federal, provincial, and municipal governments, attended coordination meetings with KPMG, and provided quality assurance services for project deliverables.
- **Lethbridge Financial Viability and Governance Study Update (2016): Senor Governance Advisor**
  Dr. Bell oversaw a consulting team that provided City and County decision-makers with an accurate report of the economic and financial state of Lethbridge Airport, as well as a projection of annual investment that would be required to improve its viability based on the current regulatory environment and future potential markets. Dave served as the Senior Governance Advisor and provided specialized technical input by:
  - Reviewing the economic context, infrastructure condition, and financial status;
  - Developing a governance workshop for the mayor, council, and stakeholders;
  - Identifying governance and operational options; and
  - Providing recommendations on governance and policy actions.

- **Collingwood Airport Business Development Study (2014): Senior Governance Advisor**
  Dave assisted the Town of Collingwood in identifying options for the Town to participate in the ownership and operation of the Collingwood Airport. The provided recommendations on the development of a business plan; governance; nearby wind turbines; and land development on adjacent properties. Three appropriate governance models were identified, including the status quo, developing a regional airport authority, and divesting the airport. Dave's role included:
  - Facilitating a stakeholder open house;
  - Reviewing governance and policy issues;
  - Developing governance options;
  - Evaluating the economic and policy implications of each option; and
  - Making recommendations for the future airport role.
- **Ponoka Airport Business Review (2014): Senior Governance Advisor**
  On behalf of the Town of Ponoka, Dr. Bell was involved in a review of the Ponoka Airport socioeconomic context and the preparation of a business plan and land use plan. The intent of this project was to position the Airport as an important transportation link and economic catalyst. This included a governance report based on the airport business plan and stakeholder inputs, and recommendations were provided for the most appropriate form of governance and management. In his capacity as Senior Governance Advisor, Dave:
  - Examined the regional context to identify the potential role of Ponoka Airport;
  - Developed a business and funding plan;
  - Identified governance options; and
  - Engaged with stakeholders and local government officials.
- **Nunavut Transportation Strategy Update (2006): Senior Governance Advisor**
  Dr. Bell led a team to develop a vision of the Nunavut transportation system that would support the improvement of socioeconomic conditions for Nunavummiut, as well as a strategic plan for the realization of that vision. This landmark study, prepared in 2000-2001 after the founding of Nunavut, was updated in 2006. Dave served as the Transportation Systems and Policy Advisor for the Nunavut Transportation Strategy Update, which included:
  - Developing policy approaches, issues, and solutions;
  - Preparing and analyzing transportation system options; and
  - Developing financial strategies for a future system.

Other Relevant Experience

- Government of Nunavut Airports Capital Plan (2019)
- CFB Greenwood Business Case and Governance Study (2014)
- Nunavut Airport Facilities Engineering (2014)
- Nunavut High Arctic Transportation Analysis (2009)
- New Aerodrome Siting, Ferguson Lake, Nunavut (2006)
- Nunavut Deep Sea Port Strategy (2006)
- Transport Canada, Fractional Ownership Programs and General Aviation Study