HURON PERTH AG SCIENCE CENTRE

Feasibility Study: Final Report

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Study Leader: Ted Silberberg, Senior Principal, Lord Cultural Resources
Tel: (416) 928-9292 ext. 225; tsilberberg@lord.ca

Lord Cultural Resources

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EXECUTIVE SUMMARY

A Children's Museum Committee, in collaboration with the Municipality of North Perth, issued a Request for Proposals (RFP), funded by the Ontario Trillium Foundation, to explore the feasibility of a proposed Huron Perth Children's Museum to be located in North Perth. Its mission was set out "to provide a creative, hands-on opportunity for children and their families in an area of Ontario that has few year-round activities beyond sports for children ages one to twelve to enjoy. Themes and activities would encompass the areas of Science, Technology, Engineering/Ecology, Arts/Agriculture, and Mathematics (STEAM)."

The RFP for the feasibility study requested an objective analysis of the opportunities and constraints of the children's museum. Lord Cultural Resources, the largest museum planning firm in the world, was selected to conduct the feasibility study with a commitment to identify opportunities to increase the likelihood for implementation of the capital project and its operational sustainability.

This study recommended a modification to the concept to instead be an agriculture-focused science centre. The rationale for the Huron Perth Ag Science Centre is that it will be unique in southwestern Ontario by not duplicating existing cultural resources such as the London Children's Museum and THEMUSEUM in Kitchener. A science centre will attract a wider age range of visitors, including tourists. Interviews conducted in the study confirmed that an agriculture-focused science centre is likely to gain much more substantial support for the capital project and ongoing operating costs from the private sector, especially from the agriculture industry. And a science centre will also generate a higher percentage of earned income than other museum types.

Contextual, comparables and market analyses and an interview process led to a series of recommendations that were approved to become assumptions underlying the capital cost estimate and projections of attendance, operating revenues and expenses for the Huron Perth Ag Science Centre. These assumptions include:

- A municipally owned site/building in North Perth, ideally to include outdoor opportunities. Although a variety of sites were reviewed, a specific site has not yet been confirmed by the Municipality.
- The building will be 21,000 gross sq. ft. in size, within which there will be 15,000 net sq. feet of useable space, of which 8,500 sq. ft. will be exhibition space. The exhibition space includes 5,500 sq. ft. for core science centre exhibitions, 1,500 sq. ft. of space oriented to young children aged 2-6, and a flex or temporary exhibition space of 1,500 sq. ft. that will allow the Centre to rent exhibitions to offer regular change for visitors.

- Agriculture themes with linkages to science may include the farm to table food process, farm safety, environmental agriculture, indigenous agriculture, careers, art and agriculture, and other themes to be developed in collaboration with the Listowel Agricultural Society, Ontario Federation of Agriculture, and the agriculture industry.
- The Centre will operate with a staff of 10.5 full-time equivalent personnel. Six will be full-time, supported by part-time staff, project-funded students, and volunteers.
- Admission will be charged and other sources of earned income will include membership, retail sales, birthday parties and other venue rentals, as well as charged public programs.
- The Huron Perth Ag Science Centre will operate as a not for profit organization. It is recommended that the Municipality of North Perth own the building but not own the Ag Science Centre. The Huron Perth Ag Science Centre would enter into a long term lease of the space with the Municipality of North Perth, at one dollar per year. In the event that the Centre is not viable operationally, the Municipality of North Perth, as the owner of the building, would determine its future use.
- To support the Science Centre operationally it is assumed that, as owner of the building, the Municipality of North Perth will pay the occupancy costs, similar to its support for the operating costs of public library and recreational facilities. Occupancy costs refers to utilities, repairs and maintenance, insurance and security systems.
- Capital costs for the building and exhibitions are estimated at about $13.8 million, based on new construction, and assuming an opening to the public by April 2024. Capital funds are assumed to be from federal and provincial funding programs and from private sources, with no request for capital funding from municipal or County governments. Local government support for the project by means of providing the land and supporting operating costs will increase the likelihood of federal and provincial capital funding.

The on-site attendance level for an implemented Huron Perth Ag Science Centre is projected to stabilize at 42,000 visitors in Year 3 with Year 1 attendance at about 48,000. The total operating budget will be in the range of $1.0 to $1.1 million. Earned income levels will stabilize at about 55% of the operating budget, which is in the range of earned income levels for the average children's museum (52%) and science centre (57%). For purposes of comparison, earned income levels regionally are about 10% for the Huron County Museum, 17% for the Stratford Perth County Museum, 50% for the London Children's Museum and 70% for THEMUSEUM in Kitchener. The remainder of the operating funds will be needed from a combination of government and private supporters. The agriculture focus of the Huron Perth Ag Science Centre should help to lead to higher-than-average support from private funders.

The table that follows concludes with a scenario for how the gap between earned income and expenses might be filled for the Huron Perth Ag Science Centre. It assumes that the Municipality of North Perth will pay for building occupancy costs for a building it owns, just as it does for a municipally owned public library or arena. The amount is estimated to be in the range of a rounded $130,000 to $140,000 per year. The scenario also assumes $50,000 per year from Huron County, $100,000 per year from Perth County, and $130,000 to $150,000 per year from private donations and sponsorships,

including sponsorship of temporary exhibitions brought into the Centre twice per year. There are also senior government student and project funds the Science Centre will apply for each year and assumed at $50,000 per year.

It must be emphasized that the definition of operational feasibility for museums and science centres is not profitability. While they seek to maximize income from earned sources (admissions, retail, venue rentals, public and educational programs and memberships), they are not businesses. Their missions relate very much to education and so they merit financial support from government and private sources.

A first step leading to potential implementation of the Huron Perth Ag Science Centre is a conditional municipal commitment to the land and to support part of the operating costs of the Centre. Such a commitment would be contingent on their being federal, provincial and private funding for the capital project. If there is no capital project there would be no need for land in North Perth or for operational support from the Municipality of North Perth, Perth County and Huron County.

Summary of Attendance, Operating Revenue and Expense Projections	Year 1	Year 2	Year 3	Year 1 %	Year 2 %	Year 3 %
Annual Attendance	**48,000**	**44,000**	**42,000**			
Projected Operating Revenues						
Admissions	$262,831	$272,085	$259,718	25.2%	25.6%	24.3%
Retail Sales	$72,000	$68,200	$67,200	6.9%	6.4%	6.3%
Membership	$70,125	$67,750	$65,375	6.7%	6.4%	6.1%
Educational and Public Programs	$50,000	$55,000	$60,000	4.8%	5.2%	5.6%
Birthday Parties and Other Rentals	$37,500	$42,750	$43,750	3.6%	4.0%	4.1%
Fundraising Events (net)	$60,000	$75,000	$75,000	5.7%	7.1%	7.0%
Other Earned Income	$12,000	$14,000	$15,000	1.1%	1.3%	1.4%
Total Earned Revenue	**$564,456**	**$594,785**	**$586,043**	**54.0%**	**56.0%**	**54.8%**
Projected Operating Expenses						
Salaries, Wages, Benefits	$572,300	$575,162	$578,037	54.8%	54.2%	54.1%
Building Occupancy	$131,250	$138,600	$141,750	12.6%	13.1%	13.3%
Exhibitions	$90,000	$120,000	$120,000	8.6%	11.3%	11.2%
Public and Educational Programs	$75,000	$68,750	$72,000	7.2%	6.5%	6.7%
General & Administrative	$74,399	$69,019	$69,364	7.1%	6.5%	6.5%
Marketing	$62,400	$52,800	$50,400	6.0%	5.0%	4.7%
Retail Cost of Goods Sold	$39,600	$37,510	$36,960	3.8%	3.5%	3.5%
Total Expenses	**$1,044,949**	**$1,061,841**	**$1,068,512**	**100.0%**	**100.0%**	**100.0%**
Amount Required to Break Even from Private and Government Sources	**($480,493)**	**($467,056)**	**($482,469)**	**-46.0%**	**-44.0%**	**-45.2%**
Scenario of Filling Gap						
North Perth Pays for Occupancy Costs	$131,250	$138,600	$141,750	12.6%	13.1%	13.3%
Funding from Perth County	$100,000	$100,000	$100,000	9.6%	9.4%	9.4%
Funding from Huron County	$50,000	$50,000	$50,000	4.8%	4.7%	4.7%
Funding from Federal/Provincial Programs	$50,000	$50,000	$50,000	4.8%	4.7%	4.7%
Funding from Private Donations/Sponsorships	$150,000	$130,000	$140,000	14.4%	12.2%	13.1%
Total	**$481,250**	**$468,600**	**$481,750**			

1. INTRODUCTION

This chapter outlines the background to and purpose of the study and the methodology to carry it out.

1.1 BACKGROUND TO AND PURPOSE OF THE STUDY

A Parks and Recreation Services Master Plan report commissioned by the Municipality of North Perth in 2017 identified a wide variety of existing sports, recreational and park opportunities but limited other things to do for children. Referenced was a community survey of 710 members of the interested public (not random survey) that indicated a more substantial satisfaction with recreational opportunities, especially those outdoor, compared to cultural opportunities. More residents were utilizing cultural opportunities outside North Perth. The reasons stated were that facilities/programs were not available in the Municipality (53%), the quality of the facility/program elsewhere is superior (22%) and they felt connected to another community/used to live there (21%). As noted in the study there are no museums, art galleries or historic sites in North Perth.

Early in 2020 a Children's Museum Committee in collaboration with the Municipality of North Perth issued a Request for Proposals (RFP), funded by the Ontario Trillium Foundation, to explore the feasibility of a proposed Huron Perth Children's Museum to be located in North Perth. Its mission was set out "to provide a creative, hands-on opportunity for children and their families in an area of Ontario that has few year-round activities beyond sports for children ages one to twelve to enjoy. Themes and activities would encompass the areas of Science, Technology, Engineering/Ecology, Arts/Agriculture, and Mathematics (STEAM)."

The RFP for the feasibility study requested an objective analysis of the opportunities and constraints and potential viability of the children's museum. Lord Cultural Resources, the largest museum planning firm in the world, was selected to conduct the feasibility study with a commitment to identify opportunities to increase the likelihood for implementation of the capital project and its operational sustainability. This included identifying the appropriate site, size, features and operational parameters of the children's museum. The study would end with a capital cost estimate and credible projections of attendance, operating revenues and expenses.

In order to increase the likelihood for implementation and sustainability, this study identified the need for a shift in concept from a children's museum to an agriculture (ag) focused science centre that would also include a zone for very young children. The rationale for doing so is set out in this report. This study therefore refers not to the Huron Perth Children's Museum but rather to the Huron Perth Ag Science Centre.

It must be noted that while the current COVID-19 pandemic has had a negative impact on all museums, especially those like children's museums and science centres that offer strong levels of hands-on, interactive opportunities, it is assumed that the Huron Perth Ag Science Centre will not be open to the public for 3-4 years and that there will be a substantial return to normalcy by that time.

1.2 SCOPE OF WORK AND METHODOLOGY

The scope of work and methodology for this feasibility study includes the following work elements. We:

- Reviewed background material as well as additional data that was gathered.
- Toured potential sites for the children's museum/science centre and participated in a Vision/Assumptions Workshop on September 2, 2020.
- Took part in various Zoom, phone and email conversations over the course of the study.
- Collected and analyzed data pertaining to the following museum-related subsets, which help to provide a context and parameters for the conclusions and recommendations and the subsequent attendance and financial projections:
    - Museums in Ontario, Canada and the United States.
    - Children's museums and science centres compared to other museum types.
    - Agriculture-focused children's museums and science centres.
    - A focus on the London Children's Museums and The Museum in Kitchener and other selected museums in the region.
- Conducted interviews with 15 market-knowledgeable persons to help develop the concept and explore more opportunities and constraints. Please see Appendix A, which acknowledges those interviewed
- Analyzed data regarding potential resident, school, and tourist markets for Listowel, North Perth, Perth and Huron Counties compared to provincial and national averages.
- Prepared a Phase 1 report which included analyses, recommendations and assumptions. Client review and finalization of the assumptions formed the basis for the capital cost estimate and projections of attendance, operating revenue and expense projections that were added in a Draft Final Report.
- Modifications to the Draft Final Report are reflected in this Final Report, including an Executive Summary.

In this report key issues, conclusions and recommendations are set out in bold italics.

2. CONTEXTUAL AND COMPARABLES ANALYSIS

This chapter sets out benchmarks useful for development of attendance, operating revenue and expense projections for the Huron Perth Ag Science Centre and the recommendations/assumptions that underlie them.

2.1 REALITIES OF THE MUSEUMS MARKETPLACE

As will be shown in the following section of this report, children's museums and science centres are two of the most successful museum types as measured by attendance and earned income. Neither is focused on the preservation of collections, but both are museum-related institutions. It must also be emphasized that museums are not businesses and that there can be no expectation that "feasibility" means profitability for any museum. All museums rely on a combination of income from earned sources (admissions), retail, rentals, public and educational programs, memberships, etc.), endowment, private and government sources.

As shown on the following table, earned income levels in Canada and the United States for museum averages are in a similar range, generally 30-40% of total operating revenues. Museums in the United States generate more financial support from private sources whereas Canadian museums require more financial support from governments. This reflects different tax laws and traditions in the two countries. ***While the Huron Perth Children's Ag Science Centre will need to maximize earned income, it will also require substantial financial support from government and private sources to support ongoing operating costs as well***.

Realities of the Museums Marketplace	Small Ontario Museums (avg.)	Medium Ontario Museums (avg.)	Large Ontario Museums (avg.)	All Ontario Museums (avg.)	All Canadian Museums (avg.)	All US Museums (median)
Sample Size	253	160	41	454	1,088	867
On-Site Attendance	4,063	17,869	206,535	27,213	23,019	26,500
Sources of Operating Revenues						
Earned Income as % Total	47.3%	33.3%	39.1%	38.6%	37.0%	35.0%
Government Sources %	27.1%	45.9%	45.8%	45.4%	49.4%	19.0%
Private Donations %	24.6%	18.4%	13.3%	14.2%	11.4%	35.0%
Interest/Endowment %	1.0%	2.4%	1.7%	1.8%	2.3%	11.0%
Total Operating Revenue	$45,838	$423,913	$11.5M	$1.2M	$663,290	$1,168,599
Sources of Operating Expenses						
Staffing	30.7%	50.8%	44.5%	45.0%	47.3%	49.9%
Occupancy	12.6%	10.0%	11.8%	11.6%	13.1%	N/A
Collections Care	N/A	N/A	N/A	N/A	N/A	8.0%
Marketing	3.9%	3.3%	3.8%	3.7%	3.5%	4.1%

Sources: 2015 Canadian Heritage Survey; 2017 and 2009 Financial Survey of American Alliance of Museums

Note: Ontario small museums have annual revenue under $100,000; medium $100,000 to $999,999; large $1 million+

2.2 CHILDREN'S MUSEUMS AND SCIENCE CENTRES COMPARED TO OTHER MUSEUM TYPES

The table that follows is from surveys of the American Alliance of Museums (AAM) that allow for a comparison of the performance of various museum types. There is no equivalent data in Canada. Among the highlights of the data and the experience of Lord Cultural Resources are the following points:

- **Children's Museum and Science Centre Attendance Levels are Much Higher than Average: O*n average both attract more visitors than most other museum types because they tend to have a wider mass market appeal***, especially with respect to the young family market. Science Centres attract more visitors than children's museums because they tend to be larger and most importantly have a wider age focus, including attendance by adults not accompanying children.
- **Admissions are More Likely to be Charged at Children's Museums and Science Centres**: Almost all charge admission, while only about half of museums at other museum types charge. Admission charges for science centres tend to be higher than for children's museum because of their larger size and greater focus on technology. ***A phenomenon specific to children's museums is that child admission charges for children's museums tend to be identical to adult charges***. That is not the case for science centres because they also appeal to adults.
- **Science Centre and Children's Museum Earned Income Levels are Higher than Average**: Children's museums reported about 52% earned income with science centres at 57% compared to an average of 35% for all museum types. These are median figures, and many perform even better, as is the objective for the Huron Perth Ag Science Centre.
- **As with Other Museum Types, Staffing Costs are the Primary Operating Expense for Children's Museums**: Such costs generally account for about half of the operating costs of museum-related institutions including children's museums and

science centres. ***The Huron Perth Ag Science Centre will need an adequate professional staff to be able to achieve its mission and mandate, but ongoing operational sustainability will depend very much on the ability to control staffing levels***.

Latest Data Comparing Sources of Operating Income by Museum Type	Art Museums	Children's Museum	History/ Historic House/Site	Natural History/ Anthropology	Science/ Technology Centre/ Museum	Multi-Disciplinary	Arboretum/ Botanic Garden/ Nature Center	Zoo/ Aquarium	Total Sample/ Weighted Average
Sample Size	209	36	408	31	31	100	27	15	**857**
Earned Income	26%	52%	35%	42%	57%	33%	45%	59%	**35.1%**
Private Donations/ Sponsorships	42%	33%	33%	28%	31%	35%	31%	25%	**35.0%**
Investment/Endowment Income	16%	2%	12%	9%	2%	8%	10%	4%	**11.4%**
Government Income (All State)	17%	13%	21%	22%	10%	24%	14%	12%	**19.3%**
Source: American Alliance of Museums, Museum Board Leadership 2017: A National Report									
Sample Size	156	18	279	32	25	71	N/A	17	**671**
Reported Attendance	44,878	130,870	11,500	58,176	357,103	58,500	N/A	208,574	**26,500**
Source: Financial Survey of the American Alliance of Museums, 2009									

2.3 CHILDREN'S MUSEUMS AND SCIENCE CENTRES WITH STRONG FOCUS ON AGRICULTURE

There are no children's museums or science centres in Canada with a particularly strong focus on agriculture as a theme for substantial exhibitions and programs. It would be unique in Canada. There is, however, a collections-focused national museum, the Canada Agriculture and Food Museum in Ottawa, which includes science related exhibitions and programs for children. It is discussed below along with examples from the United States.

2.3.1 National Ag Science Centre, Modesto, CA

The National Ag Science Centre has operated for several years as a mobile science lab focused on agriculture for school groups, largely in grades 7 and 8. Since March of 2020 the Museum has been affiliated with Stanislaus State University in Modesto. The plan to have the Centre benefit from access to offices and students and to help develop an agriculture focused program at the University has been delayed by the COVID-19 pandemic. It is an objective of the Centre Director to establish the originally planned exhibitions-focused agriculture science centre at the University to be accessible not only to school groups but also University students and the general public.

The mobile ag science lab serves about 20,000 students per year in the schools. The program is at capacity as it is free to the schools. The program operates with a staff of two full-time and one part-timer. Its operating budget has been about $285,000, mostly from the agriculture industry. This should increase with the relationship to the University and plans to develop a museum offering exhibitions.

2.3.2 Canada Agricultural and Food Museum, Ottawa

The Canada Agricultural and Food Museum was established in 1983 and is part of the national museum system and therefore substantially funded by the federal government. It is located on a national heritage site and markets itself as the world's only working farm in the heart of a capital city. Visitors are able to see diverse breeds of farm animals and to learn about the food they eat. Animals include Holstein dairy cows and Angus beef cows, Milking Shorthorn dairy cows, and Tamworth pigs as well as other breeds of dairy and beef cattle, pigs, sheep, horses, poultry, goats, rabbits and honeybees.

Museum programs and exhibitions are related to Canada's agricultural heritage, food literacy, and the benefits and relationship of agricultural science and technology to Canadians' everyday lives.
Seasonal events include Easter on the Farm, the Sheep Shearing Festival, the Ice Cream Festival, and the Thanksgiving Harvest Weekend. Public programming also includes school programs, summer day camps, interpretive tours, demonstrations, and joint undertakings with community groups and associations.

Permanent exhibitions that include a science focus include:

- **Food Preservation: The Science You Eat** - Highlights the role science plays in delaying food decay and keeping food nutritious and safe from farm to fork.

- **Space to Spoon**, which demonstrates how space technology benefits Canadian farmers and sustainable agriculture.

There is also an Agricultural Hall of Fame and an outdoor Discovery Park.

Admission charges are as follows, plus tax:

- Adult $12.25
- Senior (age 60+) / Student $10.25
- Youth (ages 3-17): $10.25
- Child (age 2 and under) Free
- Family (6 persons with a maximum of 2 adults) $34

The Museum rents out traveling exhibitions. These include *A Taste of Science*, a 1,000 sq. ft. exhibition which highlights the role science plays in delaying food decay and keeping food nutritious and safe for us to eat. Visitors immerse themselves in an oversized “pantry” and discover what makes food spoil, and different food preservation techniques. The rental charge is very reasonable at $2,700 for 12 weeks plus shipping costs.

There are also plans for *Soil Superheroes* for very young children. It will “introduce visitors to the league of superheroes who live beneath our feet and make life on earth possible. Colourfully illustrated characters speak directly to visitors, making the science of soil fun and relevant. Earthworms, sand particles, and decomposing poop explain how their superpowers not only provide humans with food and medicine, but also clean the water we drink and help us fight climate change.” The Museum is therefore a good source of future temporary exhibitions for an agriculture focused science centre in Huron Perth.

Attendance in 2018/19 was reported at a very substantial 202,000 visitors. Combined admissions and programs revenues were reported in 2019 at $882,000. Other revenues are not separated from the other two museums that are part of Ingenium: Canada’s Museums of Science and Innovation. These are collections-focused museums that are very different from science centres.

2.3.3 Once Upon a Farm Exhibition, Omaha Children's Museum

This is an example of a children's museum that developed a special exhibition to enable children to explore the world of agriculture and focused on agriculture literacy. It was on display from October 2014 to April 2015.

The 10,000 sq. ft. exhibit included a kids-sized irrigation system where kids learned about water and irrigation, a dairy exhibit that included a cow to milk, a grocery store, where kids learned about corn and wheat products and other foods that come from the farm, as well as grain bins, where kids used the conveyor belt to distribute 'crops' into the proper bin, and a down-sized combine where kids climbed in and explored what it would be like to drive one. Other fun activities included playing in the crop fields, taking care of baby piglets, and broadcasting a forecast to farmers at the Weather Station.

Outdoor features at the Once Upon a Farm Exhibition included a real combine and real tractor. In addition, the educational centre focuses on ag-based, hands-on educational activities. The exhibit focused on 2-8 year olds and attracted about 150,000 visitors.

2.3.4 Farm to Fork Exhibit, Explore and More Children's Museum, Buffalo

The exhibit emphasizes that "on our farm you can plant, grow and harvest your crops, as well as care for a milking cow and some chickens. Load your produce onto a small-scale huckster truck and sell it at the farmer's market. If all that work builds up your appetite, cook your farm-fresh finds in our farmhouse play kitchen". Features include:

- The Barn: Put on your boots and get to work in our miniature dairy. Milk the cow and discover all the amazing foods that come from milk.
- Farmer's Market: See what's fresh! You can be the seller or the buyer in this year-round pretend farmer's market, where everything is always in season.
- Farmhouse kitchen: Take turns cooking, serving, and eating the pretend food.
- Hoop House and Crop Beds: Pick your own crops straight off of the plants and discover how food grows. These crops showcase produce that thrives in our climate and how different types of produce grow differently.

2.3.5 Grow Pavilion, St. Louis Science Centre

The Grow Pavilion offers 5,000 sq. ft. of indoor space and one acre outdoors and is the largest gallery of its kind in the United States that focuses solely on the science of agriculture. It is included in the regular price of admission. The Pavilion seeks to respond to questions like where does food comes from? How does it grow? How far does it travel to get to us? And how can each of us ensure that everyone has delicious, nutritious food to eat?

Exhibits include a play tractor, dress up costumes, water play, the stages of food from seeds to plants, livestock and farm machinery.

2.4 EXPERIENCE OF MAIN EXISTING MUSEUMS IN REGION

It is important to establish benchmarks to help guide the planning of and projections for the Huron Perth Ag Science Centre. This section focuses on the experience of:

- THEMUSEUM, Kitchener
- Stratford Perth Museum
- London Children's Museum
- Huron County Museum, Goderich

2.4.1 THEMUSEUM, Kitchener

THEMUSEUM is located in downtown Kitchener in an adaptively reused former department store. The capital cost was $17 million. ***The building originally opened in 2003 as the Waterloo Region Children's Museum. It attracted about 40,000 visitors per year but was not operationally viable.*** In 2010 it changed to become an eclectic experiential museum with a pop culture focus that has elements of arts and science and brings in major temporary exhibitions. The temporary exhibitions have helped lead to strong levels of repeat visitation and membership and have ranged from dinosaurs to the art of Yoko Ono, Bob Marley, James Cameron's Avatar, and from Holocaust Remembered to Muslim Women's Art. A Rolling Stones exhibition is planned for November 2021.

There is no dedicated parking but more than 400 covered paid parking spaces with direct access to THEMUSEUM are available and free on Sundays.

The mission of THEMUSEUM is to "scan the globe for fresh cultural content and use it to stage experiences that stimulate transformative connections for our audiences." It seeks "to attract a full range of visitors from children through adults and seniors and brings art and science together". THEMUSEUM emphasizes pop culture as well as branded exhibitions, family experiences and STEAM programming. Despite the name, there are no collections, so it shared a number of characteristics of a science centre.

The facility offers a very substantial 55,000 sq. ft. of exhibition space, including a small 1,600 sq. ft. Tot Space for very young children, and a maker space with the age orientation of the space increasing the higher one goes in the four floor building. There is no outdoor space.

In 2019 THEMUSEUM attracted about 100,000 visitors per year, of which 45,000 are paid visitors to exhibitions, with most of the remainder as indirect paid member, programs and venue rentals visitors. There are 1,000 memberships, whose benefits include member only periods along with common membership benefits. School groups account for about 18% of all visitors. A variety of public programs are offered including day camps for 5-9-year olds and 10-14-year olds. Birthday parties are popular.

In 2019 admission charges were $14 for adults and seniors and $9 for youth and children.

About 200 venue rentals are achieved each year, causing this revenue source to be almost as important as admissions to support operating costs.

In 2019, THEMUSEUM operated with a staff of 19 full-time employees, supported by part-time staff and volunteers. Its operating budget was about $2.2 million, of which about 70% is from earned sources (admissions, retail, rentals, programs, memberships). This is much higher than average. About $600,000 was received from regional and municipal government funding. Limited private support for operating costs is received but private funders have been supportive of the capital costs associated with a planned acquisition of an adjacent property to allow an expansion to be implemented. The expansion is focused on increasing opportunities for venue rentals and to add a theatre. Plans also include tripling the size of Tot Space and other exhibition space enhancements.

2.4.2 Stratford Perth Museum

The Stratford Perth Museum is a history museum on a five-acre site that began in Victorian era buildings and was expanded in 2009 to total 100,000 sq. ft. of space. About 20,000 sq. ft. is collections storage and 65,000 sq. ft. is exhibition space. There are important collections and exhibitions that focus on the agricultural heritage of the region. An electronic Agriculture Hall of Fame Wall and an annual induction ceremony and fundraising dinner are well supported by the agricultural sector in the region as some 600 tickets are sold.

In 2017 the Museum attracted only 6,000 visitors. In 2018 an exhibition was developed called Justin Bieber Steps to Stardom. It caused an increase to 20,000 visitors and will be retained as a permanent exhibition. In 2019 attendance levels at the Museum totaled about 16,000. The increase also reflects collaboration with the Stratford Festival in which traveling exhibits are rented to correspond to plays at the Festival, for example a play about Anne Frank at the Playhouse and an exhibition about her in the Museum. The increase in attendance was despite a decline in school field trips generally due to job actions or the threat of job actions, funding cuts and other factors. As a consequence, the Museum has shifted to more programming for adults.

In 2019 admission charges were $7.00 per adult, $6.00 for seniors and youth and $5.00 for children. The Museum had about 160 memberships and 220 members.

Some 60% of Museum visitors are in Stratford specifically to attend the Festival, and because of the popularity of Justin Bieber, about 30% of all visitors are international. These two elements, Festival and Bieber, contribute to attendance levels not commonly found at local or regional history museums.

The Museum operates with a staff of three full-time supported by one part-time person and grant funded students, generally seven in the summer and one during the other months. The Museum is supported by about 40 volunteers. ***Its 2019 operating budget***

was about $495,000, of which about $148,000 was from the City of Stratford and $99,000 from Perth County, with $32,000 from the federal government and $24,000 from the province of Ontario. Government funds combined to total about 61% of operating revenues. Donations, sponsorships and fundraising combined to account for about $103,000 or 22% of the total, with admissions, retail and other earned sources at 17% of the total.

2.4.3 Huron County Museum and Historic Gaol (Jail)

The Huron County Museum is focused on the history of the County. It occupies a 3-story building in Goderich and operates a satellite historic jail site. ***About one-third of its 10,000 sq. ft. of exhibition space, directly or indirectly, relates to agriculture. This reflects the history and economy of the region and why an agriculture-focused children's museum or science centre would be appropriate***. There are good opportunities for collaboration.

In 2019 the Museum opened to the public daily during the warmer April through November months from 10 a.m. to 4:30 p.m. and from 1 to 4 p.m. on Sundays. During the rest of the year the Museum was closed on Sundays and the Jail is fully closed. The Museum attracted about 19,800 visitors in 2019, while the Jail attracted 14,400. Many visitors, especially tourists, attend both. About 80% of Museum visitors are tourists from outside the region while it is 90% tourists for the Jail. School groups accounted for about 6% of visitors.

There are admission charge options for attending a single site at a modest $6.00 per adult or combination tickets for both at $10.00. There is a family rate of $20. School groups are charged $3.50 per student for both. Admission is free to children under six and to library card holders, which helps to justify substantial County financial support at one million dollars out of a $1.37 million operating budget. About $63,000 was received from the Community Museum Operating Grant. There is limited private financial support and the rest is earned income, primarily from earned income and venue rentals. The free admission to library card holders has resulted in a limited membership base and will not be recommended for the Huron Perth Ag Science Centre.

2.4.4 London Children's Museum

The London Children's Museum opened in 1982 as Canada's first children's museum. It has remained located in a renovated former public school but is in the midst of an

expansion in the former Kellogg cereal factory that will increase the size of the building from the current 27,000 sq. ft. to 35,000. Of particular importance is that the exhibition space will increase from 9,000 sq. ft. to close to 20,000 sq. ft. because of an open concept of a former factory compared to using an old school. The new site will have much more substantial parking.

Capital costs for renovation of the former factory and the new exhibits, in addition to those that will be refurbished, is $14 million. Government funding has been applied for and the expectation is that one-third to half of the funds will need to be from private sources. The new children's museum is expected to open sometime in 2022.

The London Children's Museum originally opened with a 1-12 age focus. Peak attendance is 2-6 year olds. The age focus of the new exhibits will be age 0-9, but some older children are anticipated as well.

The existing children's museum has attracted 65,000 to 90,000 visitors per year with 88,000 achieved in 2019. Attendance in the new facility is projected to stabilize in the 110,000 to 120,000 range. Admission charges will increase to the $11-$12 range compared to the 2019 charge of $9.00 per person, whether child and adult/senior. Toddlers (12-23 months) are charged $4.50 and infants under one are free.

In 2019 the children's museum opened from 10 a.m. to 5 p.m. and received a $50,000 per year grant from TD bank to remain open with free admission to all from 6 to 8 p.m. every Thursday. In 2019, about 6,500 persons attended during the free Thursday evenings, averaging about 135 per night, but up to 300 have attended. It is generally older children and their families who attend because of sleep time issues. This study has not recommended free admission periods for the Huron Perth Ag Science Centre because they train people to wait for them. A better alternative is that the London Children's Museum offers lower income persons the opportunity to apply to free admission day passes or memberships.

The most popular thematic features of the existing children's museums will remain in the new building, only larger and more contemporary in design. These include how things work, nature, dinosaurs and space. There is currently a small science in your world gallery and a STEM lab. There is no focus on agriculture. Its vision is "igniting curiosity through the power of play". Its mission is to "provide children and their grown-ups with extraordinary hands-on learning experiences in a distinctly child-centred environment."

There are about 1,100 memberships in the children's museum generating about $120,000 per year in revenue on an operating budget of about $1.2 million. Admissions generate about $300,000, birthday parties $65,000, retail sales $30,000, snacks $15,000 and other earned income bringing the total to about 50% of the operating budget. About 10% is from private sources and the remaining 40% from government sources, including the City of London at 10-15% of the total.

3. MARKET ANALYSIS

This chapter sets out our analysis of potential resident, school and tourist markets for the Huron Perth Ag Science Centre.

3.1 RESIDENT MARKETS

Although children's museums and science centres will also attract tourists, the resident market is far more important for the following main reasons:

- Residents are available on a year-round basis and tourists are less likely to travel with younger children.
- Residents can be made aware more easily and economically than tourists.
- Residents are most likely to become repeat visitors, members, and donors; and
- Residents influence visiting friends and relatives and often accompany them.

The data here include the size and growth patterns of the overall population and its demographic and socioeconomic characteristics.

3.1.1 Population Levels and Projections

Size of population is central to any analysis of market demand because the greater the resident population, the greater the number of potential visitors. In 2016 the population of Perth County was close to 76,800 and for Huron County was about 59,300. The combined population was over 136,000 but projected to grow to 154,600 by 2031. These figures are relatively modest. ***In order to attract visitors from both Counties the Science Centre/Children's Museum will need to be of a sufficient size to make the round trip travel time worthwhile. From Goderich to North Perth the round trip travel time is about two hours. This factor has influenced the recommended size of the building set out in the following chapter of this report.***

Resident Population	2006	2011	2016	% Change 2011-2016
Listowel	6,303	6,867	7,530	9.7%
North Perth	12,254	12,631	13,130	4.0%
Perth County	74,344	75,112	76,796	2.2%
Huron County	59,325	59,100	59,297	0.3%
Ontario	12,160,282	12,851,821	13,448,494	4.6%
Canada	31,612,897	34,532,400	35,151,728	1.8%
Source: Statistics Canada, 2016 Census				

Population Projections	2016	2031	2041	% Change 2016-2031	% Change 2016-2041
Listowel	7,530	N/A	N/A	N/A	N/A
North Perth	13,130	17,700	17,900	34.8%	36.3%
Perth County	76,796	88,400	93,300	15.1%	21.5%
Huron County	59,297	66,200	68,500	11.6%	15.5%
Ontario	13,448,494	16,982,600	18,818,400	26.3%	39.9%
Canada	35,151,728	42,271,000	45,843,900	20.3%	30.4%
Source: Ministry of Finance, Ontario Population Projections 2018-2046; Statistics Canada, Projected Population; Weston & Associates, Official Plan Update Perth County 2019					

3.1.2 Gender and Age

Women represent a slightly higher percentage of the general population but often account for 60% of total non-school attendance at children's museums and science centres because they are more likely to accompany children. Women are particularly important for the following reasons:

- Women tend to make the decisions regarding the educational experiences of children.
- They are more likely to select the attractions to visit on family vacations.
- They represent the large majority of elementary school teachers making the decisions on field trips.

Women tend to have particular concern with visitor amenities such as accessible, safe and convenient parking, adequate restrooms, including nursing stations, and child-friendliness.

With respect to age, the peak ages for children's museums are 9 and under, so the data indicate relatively few children in that age range for Perth and Huron Counties combined. A science centre will have a much wider age focus. Of note as well is the much higher percentage of seniors in both counties.

Key Age Distribution, 2016	Listowel #	North Perth #	Perth County #	Huron County #	Ontario #	Canada #
0-4 years	3,385	950	4,445	3,385	697,360	1,898,790
5-9	3,325	895	4,675	3,325	756,085	2,018,130
10-14	3,280	825	4,680	3,280	754,530	1,922,645
15-29	9,935	2,460	13,885	9,935	2,580,410	6,554,840
30-49	12,085	3,010	17,735	12,085	3,516,510	9,232,860
50-64	13,825	2,630	17,060	13,825	2,891,950	7,588,825
65 years and older	13,455	2,345	14,320	13,455	2,251,655	5,935,630
Source: Statistics Canada, 2016 Census						

Key Age Distribution, 2016	Listowel %	North Perth %	Perth County %	Huron County %	Ontario %	Canada %
0-4 years	5.7%	7.2%	5.8%	5.7%	5.2%	5.4%
5-9	5.6%	6.8%	6.1%	5.6%	5.6%	5.7%
10-14	5.5%	6.3%	6.1%	5.5%	5.6%	5.5%
15-29	16.8%	18.8%	18.1%	16.8%	19.2%	18.6%
30-49	20.4%	23.0%	23.1%	20.4%	26.1%	26.3%
50-64	23.3%	20.1%	22.2%	23.3%	21.5%	21.6%
65 years and older	22.7%	17.9%	18.6%	22.7%	16.7%	16.9%
Median Age	46.3	38.8	42.4	46.3	41.3	41.2
Source: Statistics Canada, 2016 Census						

3.1.3 Education and Income

Numerous studies have shown that of the various socioeconomic characteristics, level of educational attainment is the variable with the closest correlation to museum and other cultural attendance. The higher the level of education the more likely that a person will attend. This is somewhat less so for children's museums and science centres, which are more mass-market institutions and therefore able to attract more visitors than other museum types.

Like education, household income is an important indicator of potential attendance, but it is not as significant an indicator as education. That is, high education, low-income persons are more likely to attend than are persons of high income, low education. Where income levels are of particular importance is in relation to admission charges.

The available data regarding **educational attainment** indicate levels within both Perth and Huron Counties that are substantially lower than the provincial and national averages.

With respect to **income**, median household levels are about the same as the provincial and national averages for Huron County but about the same for Perth County. Per capita incomes are in the same general range. Our recommended admission policies and charges are set out in Chapter 4.

Educational Attainment and Income, Population 15+	Listowel	North Perth	Perth County	Huron County	Ontario	Canada
University diploma or degree	11.1%	8.8%	13.6%	11.1%	26.0%	23.3%
Median household Income	$66,672	$70,077	$70,336	$65,944	$74,287	$70,336
Median per capita Income	$35,883	$35,115	$35,670	$33,305	$33,539	$34,204
Source: Statistics Canada 2016 Census						

3.1.4 Ethnicity

The experience of children's museums and science centres across the country and around the world confirms that they offer a substantial level of appeal to all ethnicities or races. Ethnicity is not a significant issue in the region as less than 4% of Perth County residents and less than 2% of Huron County residents are visible minorities. Similarly, relatively few residents have a non-English mother tongue.

Of particular note is the large number of Mennonite families in the region, generally with large families.

Immigrant, Ethnicity and Related Data	Listowel	North Perth	Perth County	Huron County	Ontario	Canada
% First Generation Canadians (15 and older)	8.3%	9.4%	9.6%	7.7%	31.1%	23.9%
% Visible Minority	4.1%	2.5%	3.6%	1.5%	29.3%	22.3%
Source: Statistics Canada, 2016 Census						
% Non-English Mother Tongue	8.6%	13.8%	11.2%	9.1%	33.1%	44.0%
Source: Statistics Canada, 2016 Census						

3.2 SCHOOL MARKETS

Depending on the age focus of a children's museum, school groups may represent between 5% and 20% of total attendance at children's museums and science centres. The number of school children who will attend a science centre is far more substantial than a children's museum because of the wider age focus and a desire by the schools and parents to facilitate more STEM education. In any event it is important for the future Huron Perth Ag Science Centre to offer programming of particular interest to school groups for the following reasons:

- Education is part of the mandate of all children's museums and science centres.
- School groups represent a substantial source of visitors.
- For children in lower income households, attending on a field trip may be the only opportunity to visit; and
- Children brought as part of school field trips often convince their parents to take them again, although school field trips can be rationalized as why parents need not attend.

The key determinants for schools to attend on field trips are the size of the student population within a convenient distance, relationship to curriculum, student enjoyment, and proximity, cost and access.

3.2.1 Enrollment Levels

The following table shows the size of the enrolled population at both elementary and secondary levels in the large Avon Maitland District school board and the Huron Perth Catholic District School Board. Given issues of travel time and cost for school groups the vast majority of school visits will be from these school districts. Within them it is at the elementary level in which the large majority of field trips take place for science centres and all field trips to children's museums.

Public and Private School Enrollment by School Board	Elementary	Secondary	All Schools
Avon Maitland District School Board	10,073	5,338	15,411
Huron-Perth Catholic District School Board	3,258	4,578	7,836
Total Public Enrollment	**13,331**	**9,916**	**23,247**
Available Data on Private Enrollment	177	170	347
Total Public and Private Enrollment	**13,508**	**10,086**	**23,594**

Sources: Avon Maitland District School Board, Preliminary Accommodation Analysis Report for 2017/2018; Huron-Perth Catholic District School Board, 2019-2020 Budget Package.

3.2.2 Curriculum Links and Student Enjoyment

Science related field trips may take place at a variety of grade levels and offer strong curriculum links. This was confirmed in an interview with the Superintendent of Education at the Avon Maitland School District, who indicated very strong support for either a children's museum or a science centre with a strong focus on agriculture. There would, however, be a greater likelihood of school field trips to a science centre with a young children's zone.

Both children's museums and science centres offer a very high level of student enjoyment, which helps to influence field trip selection.

3.2.3 Other Influences on Field trip Selection

In addition to curriculum links and student enjoyment, other factors influencing field trip selection include proximity/distance and cost. Both of these factors are inter-related. That is, the greater the distance the higher the cost of bus transportation. There is also an issue of the time away from school that influences field trip selection. School buses that transport children to and from school are usually also used to take the students on field trips.

The window of opportunity for school field trips is often limited to about 4-5 hours so the longer the trip the less likely that a field trip will be taken. In the case of Listowel, the limited nearby population will limit potential school attendance. This can be mitigated by a wider age focus offered by a science centre relative to a children's museum, and also a larger building that can offer the critical mass to make longer travel time worthwhile.

3.3 TOURIST MARKETS

Both a children's museum and science centre will naturally attract more residents and school groups than tourists, but tourists traveling from outside Perth and Huron Counties, especially those with children, even to visit friends and relatives, do represent an important potential market segment. Huron and Perth counties are part of Tourism Region # 4, which also includes Waterloo and Wellington Counties and therefore both Kitchener and Cambridge. The available data are from 2017.

As seen in the following table, there were around 10.1 million tourist visits to Region #4, of which about 75% were day trips and 25% overnight and primarily from within Ontario.

	2017		
Visitors to Region #4	**Overnight**	**Day Trip**	**Total**
Ontario	2,289,776	7,588,514	9,878,289
Other Canada	159,354	7,199	166,554
Overseas	73,166	22,624	95,790
Total Visitors	**2,522,296**	**7,618,337**	**10,140,633**

Source: Regional Tourism Profile 4; Ontario Ministry of Tourism, Culture and Sport, 2017

Among the key data are the following points:

- **Average Length of stay** among overnight visitors is 2.99 nights. The longer the length of stay the greater likelihood to find time to attend a science centre.

- **Main Purpose of Trip**: The main purpose is to visit friends and relatives among all visitors. They will be influenced by the residents they are visiting and often accompanied by them. Pleasure travelers are also more likely to attend.

	2017							
Main Purpose of Trip (Person Visits)	**Ontario**	**Other Canada**	**Overseas**	**Total**	**Ontario**	**Other Canada**	**Overseas**	**Total**
Pleasure	2,744,441	21,832	12,076	2,778,349	27.8%	13.1%	12.6%	27.4%
VFR	5,258,457	88,707	49,336	5,396,500	53.2%	53.3%	51.5%	53.2%
Shopping	460,629	241	N/A	460,870	4.7%	N/A	N/A	4.5%
Conventions (Personal)	135,775	N/A	N/A	135,775	1.4%	N/A	N/A	1.3%
Business	844,532	52,283	16,651	913,466	8.5%	31.4%	17.4%	9.0%
Other Personal	434,455	3,491	17,726	455,672	4.4%	2.1%	18.5%	4.5%
Total	**9,878,289**	**166,554**	**95,790**	**10,140,633**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: Regional Tourism Profile 4; Ontario Ministry of Tourism, Culture and Sport, 2017

- **Seasonality**: Not surprisingly, the summer months are the peak months with the winter as the slowest.

- **Traveling with Children**: Only about 11% of visitor parties included children. The data emphasize the advantage of a science centre overa children's museum because a science centre will appeal to adults not accompanying children.

North Perth is already a strong sports tourism destination. Having an attraction like the Huron Perth Ag Science Centre will help to motivate more tournaments and also increase length of stay and therefore expenditures in the region.

4. KEY RECOMMENDATIONS/ ASSUMPTIONS UNDERLYING PROJECTIONS

Although no one can predict the future with certainty, the assumptions that underlie attendance, revenue and expense projections must be considered reasonable at the time the projections are prepared. The preliminary assumptions set out here reflect both consultant recommendations and client direction. It must be noted, however, that it is the role of consultants to recommend, but finalization of assumptions is the responsibility of the client, while projections are then prepared independently by the consultants. It must also be noted that all assumptions are presented as planning tools that are subject to modification in the future as circumstances change.

4.1 AGRICULTURE SCIENCE CENTRE CONCEPT

Rather than a children's museum it is assumed that the **concept will be of a science centre** for the following main reasons:

- The age at which children are defining themselves as children has been declining. Children 11 and 12 are much less likely to attend a children's museum today than in the previous generation. An increasing number of children's museums in the United states now have a 0-8 age focus.
- Although children's museums have a high level of repeat visitation, and it is appropriate to focus on the resident, school and tourist markets of both Perth and Huron Counties, the regional population is too small to support a museum whose age focus is likely to be 10 and under and those accompanying them.
- The London Children's Museum is about 100 kilometers away and is in the process of being expanded with an expectation of a wider catchment area. There is also a children's museum in Hamilton. THEMUSEUM in Kitchener began as the Waterloo Region Children's Museum in 2003 and was not particularly successful. In 2010 the concept was changed to have a much wider age art/science/exhibitions focus to include adults not accompanying children.
- Free admission EarlyOn programs and other free admission play-based and parenting programs offered by the North Perth Public Library for infants and very young children will make it more difficult for a charged admission children's museum to compete. The EarlyOn program is funded entirely by the province of Ontario and attracts about 1,500

per year to its Listowel location in about 500 sq. ft. of space in the childcare wing of Westfield public school. Attendance grows to about 3,000 when the public library and arena sites are used.

- A science centre would be of greater appeal to an age cohort that is mentored by Big Brothers/Big Sisters.

- A science centre has a much wider age focus among families, school groups and adults not accompanying children. The closest science centre is in Toronto and very substantial in size. A science centre located in North Perth is also more likely to receive financial support from private sources than a children's museum, especially if there is a strong thematic focus on agriculture, as discussed further below.
- A variety of science centres include zones for younger children. These include Kidspark in the Ontario Science Centre. It is thus possible for a science centre to meet many of the objectives associated with a children's museum by having a young kids zone within it.

Another concept-related issue is the thematic focus of the science centre. While the original concept for a Huron Perth Children's Museum included agriculture as part of a focus on STEAM (science, technology, engineering, arts/agriculture, mathematics) this study has recommended a **substantial focus on agriculture.** Interviews conducted have confirmed that the agricultural focus will resonate with many residents and businesses in the region. The rationale is as follows:

- North Perth is at the centre of agriculture in Ontario. A study of the importance of agriculture to the regional economy in 2000 indicated that 29% of the employment in Perth County was tied to agriculture[1]. The Business Plan for Economic Development and Tourism reported in 2017 that there were 2,631 businesses in agriculture, forestry, fishing and hunting.
- There are no children's museums or science centres in Canada with a strong focus on agriculture. There is a National Ag Science Centre in the United States which has been functioning as a mobile lab, with an objective for an exhibitions focused facility in the future. There are existing children's museums and science centres in the United States which have substantial exhibition areas themed to agriculture.
- The municipality is the heart of agriculture in Ontario, including machinery dealerships, food processing, robotics, and other contemporary technology.
- An agriculture-focused science centre is consistent with an objective for North Perth to be an agricultural innovation hub.
- It is an objective of the Listowel Agricultural Society, a non-profit organization, and the Ontario Federation of Agriculture to educate residents and visitors about agriculture and community traditions. The Society has run an agricultural fair on its site since 1856. It seeks to encourage pride in the agricultural heritage of the region and encourage careers in agriculture by emphasizing the strong elements of science and technology in modern agriculture. The Society is supportive of the concept of an agriculture focused science centre with a zone for young children in North Perth. Also

[1] The Economic Impacts of Agriculture on the Economy of Perth County, (Harry Cummins and Associates, March 2000).

supportive was the regional representative of the Ontario Federation of Agriculture, who expressed the likelihood for strong financial support for the Huron Perth Ag Science Centre from the agricultural industry.

- Potential themes for the science centre include the farm to table food process, farm safety, environmental agriculture, indigenous agriculture, careers including skilled trades related to agriculture, and other opportunities to be developed in future exhibition design.

4.2 SITE CONSIDERATIONS

The consultant team toured potential sites for consideration on September 2, 2020. A variety of sites of different size, configuration, location, existing occupancy and ownership were visited. Excluded from the following high-level overview of the strengths and weaknesses of the sites are those that would likely require allocation of capital funds for acquisition from private owners. This is because an agreed objective is that as much of the available capital funds for implementation of the Huron Perth Ag Science Centre should be allocated to the building and the exhibitions and not spent on site acquisition. This means a preferred site should either be government owned or gifted to the Centre. Accordingly, the recommended key criteria for site evaluation are as follows:

- Government owned land/building or gifted to the Centre.
- Adequate size of at least three fourths of an acre to accommodate a building, on-site parking, and outdoor exhibition/play area.
- Downtown or else offering good access and ideally visibility from Highway 86 or Highway 23.
- Synergy with nearby land uses.
- Ability to meet wider community needs including support for agriculture.
- Timeliness for availability assuming an opening within three years.

In the context of these criteria the advantages and disadvantages of the government owned sites reviewed are as follows:

- Former Listowel Memorial Arena
- Listowel Pumping Station
- North Perth Public Library, Listowel Branch
- Steve Kerr Memorial Complex

Another site considered, although not government owned and not likely to be gifted, is potential land on the site of the Listowel Agricultural Society. This is because of direct linkages to agriculture and other specific strengths.

In any event, ***no specific site for the Huron Perth Science Centre will be assumed in this feasibility study. Rather, it has been assumed that a site owned by the Municipality of North Perth will be offered by the Municipality on condition that the Huron Perth Ag Science Centre is successful in obtaining needed capital funds from federal, provincial and private sources to construct the facility. It has also been assumed as reasonable that if the Ag Science Centre building is developed entirely with federal, provincial and private capital funds, that the Municipality of***

North Perth will own the building and contribute to some of its annual operating costs.

It must also be emphasized that a municipally owned site and building and municipal contributions toward operating costs are subject to approval by the elected Council of the Municipality of North Perth.

4.2.1 Former Listowel Memorial Arena

Located at 380 Maitland Ave North, the Listowel Memorial Arena is a 60-year-old block and steel structure. It was built on the site of the original Listowel Arena, the location of the tragic 1959 collapse that took the lives of seven children and their coach. The building is currently shuttered from use and is set to be demolished sometime in 2020.

The site has several advantages including:

- Municipal ownership.
- Timely availability.
- Large site of about two acres to also allow for purpose-built science centre, outdoor opportunities and parking, as well as potential mixed use opportunities.
- Direct proximity to Listowel Park and other natural / cultural / sport amenities.
- Short walk from elementary school.
- A way to help overcome the tragedy of the site by providing a cultural resource focused on children.

Disadvantages of this site include:

- Not downtown or on/near a highway
- Within a residential neighbourhood means limited awareness and visibility relative to other civic amenities.
- Community memory and association with the 1959 tragedy may be an obstacle to future development.
- Uncertainty regarding the compatibility of other potential land uses on the site.
- If demolition does not occur, the infrastructure is aging and has significant deferred maintenance issues.

4.2.2 Listowel Pumping Station (Chamber of Commerce) Site

The former water pumping station at 580 Main St West is currently the home of the North Perth Chamber of Commerce. The building is also home to the Listowel Public Works garage (accessible from the rear of the site) and the Listowel water tower.

Detailed information about this building is not known, but research and anecdotal observations indicate that the building was constructed in 1903 and is approximately 6,000-8,000 sf.

It was also learned that, in 1991, a Notice of Intention was filed by the Council of the Town of Listowel to designate the property, (indicated as The Pump House), as a property of architectural value or interest, under Part IV of the Ontario Heritage Act.

Despite some public objections, supporters noted that the building represented a very early, and unique example of a public works facility designed to improve municipal health. Ultimately, the Conservation Review Board approved the application and noted the site as being of architectural and historical value and interest to ensure its preservation. It is not confirmed if the site is in fact designated as a search on the Canadian Register of Historic Places website did not return any results.

The site has several advantages including:

- Understood to be municipally owned land/building.
- Prominent location within the downtown and on Main Street (Highway 86) means high visibility and presence.
- Access to on-site parking (and potentially bus queuing).
- Building of distinct character, style and architectural significance and that there are no other examples of this type of public works structure in the region.
- Represents (for the most part), the community sentiment and image of Listowel as a municipality, that places great importance on the public health of its citizens.
- Opportunities for extended outdoor programming.

Disadvantages of this site include:

- Uncertainty regarding availability or timelines of occupancy.
- History of public sentiment towards buildings that are perceived as “old” and not maintenance-free, although public perception may have shifted since 1991.
- Annual maintenance costs for the existing building would likely be somewhat higher than a new / contemporary structure.
- Insufficient area in existing buildings to meet proposed program / space needs of the Centre.

4.2.3 North Perth Public Library, Listowel Branch

The Public Library is located in the heart of downtown Listowel/North Perth at 260 Main Street West. Given deficiencies of the building, plans are in place to retain and renovate part of the public library and demolish another part to lead to a new “community hub” that would include the public library and various community service organizations. The current plan is for a two-storey building to accommodate the public library and community hub, but there is an opportunity to add a third floor to potentially be used by the Huron Perth Ag Science Centre.

Advantages of this site option are reflected in the following points:

- A municipally owned site and building.
- Downtown location to allow for crossover visits with the public library and other downtown amenities, including food and retail.
- Contributes to downtown revitalization.

Disadvantages include:

- Limited downtown parking and the need for the Centre visitors and staff to compete for the on-site parking with library patrons and staff as well as the staff and visitors to the Community Hub.
- Only 5,000 nsf is available on the third floor, which is substantially smaller than the 14,500 nsf space for the Huron Perth Ag Science Centre recommended below.
- The capital cost to add the third floor is reported to be $2.25 million for a relatively small space.
- On the third floor, the Centre would not be easily identifiable.
- It is difficult for a charged admission attraction to share a space with a free admission public library.
- No likelihood for outdoor opportunities.

4.2.4 Steve Kerr Memorial Complex

It is unknown whether land could be made available at this municipally owned site or nearby privately owned land on Binning Street West that might or might not be gifted to the Centre.

Advantages include:

- Proximity to Westfield Elementary School and Daycare (EarlyOn program)
- Visibility from both Highway 86 and Highway 23, but not on either highway.
- Proximity to food and retail
- Critical mass with proximity to the Arena

Disadvantages include:

- Uncertainty regarding potential gifting of private land.

4.2.5 Agricultural Society Site / Building

Located at 699 Perth County Line 86, the Agricultural Society site contains the 1919 brick Armory building and an adjacent one-storey Family Services Administration building (approximately 4,000sf). The size of the Armory building is unknown, but estimated also at approximately 4,000-5,000sf. Equally, the site area is not known. The provincial government owns the 1914 Armory Building and a smaller building leased to Community Living organizations for $500 per year but the land is owned by the Agricultural Society.

The site is also the location of the annual Listowel Agricultural Fair. The Fair is held each July from Thursday through Sunday. Admission is free on Thursday evening with common attendance of about 500 persons. Friday evening is popular and attracts about 2,000 to 2,500 persons, while Saturday is peak, usually attracting about 2,500 to 3,000 persons. Sunday attendance drops to the 2,000 – 2,500 level. About 75% of attenders are from Perth County, 20% from Huron County and 5% from elsewhere primarily Kitchener.

The Society has a total operating budget of about $350,000. Fair admissions and other earned income accounts for about 60% of operating revenues, including rentals of the

former Armory Building at 7%, while donations and sponsorships account for about 20% while a grant from the Ministry of Agriculture providing the remaining 20%.
The site has several advantages including:

- Substantial size of site to allow for building, parking and outdoor opportunities.
- Site is already serviced.
- High visibility for vehicles entering town via Main Street (Highway/County Line 86).
- Strong programmatic relationships with the Agricultural Society and the Agricultural Fair.
- Potential to offer shared programming / space with the Agricultural Society.
- Opportunities for live farm animals on site.

Disadvantages of this site include:

- Not government owned and unlikely to be gifted but should be pursued further.
- Noise from Main Street (Highway 86) traffic, which includes heavy transport vehicles, if Centre too close to highway.
- Unknown facility condition / deferred maintenance of the Armory building or Family Services Administration if to be made available and expanded.

4.3 SPACES AND FACILITIES

A science centre will require a larger facility than a children's museum. Our preliminary estimate is for about 5,500 net useable sq. ft. of "permanent" science centre exhibition space, 1,500 sq. ft. allocated to a zone for very young children, and 1,500 sq. ft. designated as flex space to allow small temporary exhibitions to be brought into the Centre from other science centres or children's museums. This leads to a total of about 8,500 net sq. ft. of exhibition space. Such a space should be large enough to attract visitors from throughout the region and those passing through on their way to or from cottages and be large enough to encourage repeat visitation.

Other spaces for lobby, admissions/retail. classroom/birthday parties, storage, offices etc. at 6,500 sq. ft. would bring the preliminary total to approximately 15,000 net useable square feet.

With a grossing factor to account for circulation, mechanical and electrical spaces and wall thicknesses, the preliminary size of the building would be in the range of 21,000 gross square feet (gsf).

Other assumptions for the building are as follows:

4.3.1 Facility Assumptions

This section provides a high-level descriptive summary of the major components, listed in the space program. It is organized according to major functional areas - groups of spaces that work together to house and facilitate specific activities or functions.

Lobby and Visitor Amenities

- A modest lobby space has been included. The lobby will serve as the main point of entry and include admissions/ticketing functions, information displays, proximity access to washrooms and the group marshalling area. The lobby is intentionally sized modestly to allow for greater space allocation for exhibits and interactive activity areas.
- The retail component will include 400 sf of public space integrated with admissions and other services in the lobby and include limited grab and go food and beverage opportunities. This reflects a trend in cultural facilities looking to reduce the overall retail area and also the need to control staffing needs if retail is integrated with admissions.
- A multi-purpose, shared classroom / activity space has been provided. This space should be a flexible "clean", smart workroom for 25-30 students for interactive activities including presentations, discussions, class-based learning such as roleplay or event recreations, birthday parties, school lunches, periodic rentals, and potentially EarlyOn programs. Natural light is required in this space.
- Assuming that the Ag Science Centre will attract large volumes of school-aged children visiting from neighbouring communities by bus, the Centre includes a generous marshalling area. This space will include capability for temporary storage of boots, coats and bags in either locker or cubby format.
- Comfort and wellness is also an important element in defining the overall staff and visitor experience. The final design should consider the needs of both young mothers, people with special needs (i.e. autistic children) or staff who simply need a break. As such opportunities for rest and recharge such as small niches with benches, quiet areas for respite, a lactation / staff wellness room have been incorporated into the program.

Exhibit and Display

- The 8,500 sf indoor exhibition space will have the ability to support a range of exhibits, displays and hands-on activities. Of this total, 5,500 sf will be dedicated to permanent science centre space, 1,500 sf will be for temporary or flex space, and 1,500 sf will be for hands-on kid’s zone / play zone for younger children.
- It is assumed that the Ag Science Centre will create many of its own exhibitions internally. The creation of various exhibits and displays, or to prep exhibits on loan will require dedicated prep area. This small, generic work room would be reserved for necessary exhibit related work such as ongoing repair, maintenance, or remounting. This should be a dust-free space for the safety and preservation of any collections handled in this space.

Building Support

- The program assumes that no permanent “collections” will be required for the exhibits or stored on site. There may be the need to store education program related items such as costumes, small farm implements, fire safety items etc. To meet this need, a general education program storage room has been included.

- Administrative functions have been included for five full time employees, distributed between private offices and systems workstations. Open work areas, and a lounge area for other staff and volunteers, and student co-op placements has also been included. These open areas are also conceived as a place to prepare for the day's events or to retreat and meet for group activities.
- Exterior activities may include water play areas, farm equipment displays (e.g. tractor), social areas for group lunches and a working / demonstration garden. No net building area for this has been included in the program, although it is noted for reference to overall institutional needs.
- Parking and bus drop off is also an important consideration to the design (and site selection) process. The site should be able to accommodate sufficient parking for visitors and staff. Additionally, the site should be able to provide safe space for unloading of school buses for school groups visiting the Centre, as well as tour buses.
- A small shipping/receiving area, including a separate disposal and recycling area is also recommended. A rear service area will provide a secure entry area for vehicles of contractors and suppliers, with access to the building via the loading dock. Once inside the shipping and receiving area, lockable cages may be required to temporarily hold deliveries until they can be dispatched to the various locations.
- Security spaces will also be required, particularly to monitor the shipping and receiving areas. These may include a security station and a building-systems monitoring room. Small but essential operations support spaces also include:
    - Housekeeping and custodial closets are to be located near toilets, near break rooms and kitchenette areas. Storage for cleaning supplies and equipment needs to be close to work sites.
    - Maintenance storage for maintenance supplies, moving equipment, tools and equipment, workshop or setup area.
    - General storage for supplies and equipment. Hazardous materials and flammables storage should be located close to outdoors, i.e. at the service loading dock.
    - IT and telecommunications closets.

4.3.2 Net and Gross Area

Space programming is based on the identification of:

- Net area: a calculation of the usable interior space required for museum functions or activities (Represented as NSF).
- Gross area: a calculation based on a multiplier of the net square footage (represented as GSF).
- Total building area: The sum of net and gross areas.

Gross area is an area allowance to account for thickness of walls, mechanical/electrical service areas, restrooms, and both horizontal and vertical circulation space. The following shows a common breakdown of what gross square footage represents within the total building envelope in new construction.

- Wall Thickness and Structure: 10%-15%
- Horizontal Circulation: 10%-20%
- Vertical Circulation: 10%-15%
- Mechanical Rooms, Restrooms and Chases: 10%-15%

Gross area is not a constant and will vary depending on building type and architectural design efficiency. As the space program does not prescribe the final design characteristics, a magnitude assumption of this ratio must be made.

For planning purposes, a grossing factor of between 40% (1.4 x nsf) and 50% (1.5 x nsf) is common for new cultural institutions. In this case, where a large amount of exhibit space is required, the grossing factor will typically trend lower, taking into account large amounts of circulation through exhibit space. As such, a universal grossing factor of 40% (1.4 x nsf) has been used to estimate total building area.

4.3.3 Preliminary Space Program

The following preliminary space program is organized in tabular format describing the total net area for all required spaces. A sub-total net area for each major category is provided along with a concluding grand total net area and estimated gross building area. All net areas are listed in net square feet (NSF). The space program is subject to modification in detailed architectural design.

Huron Perth Ag Science Centre - Preliminary Space Program

Zone	Space Function	Area (NSF)	Description / Comments
Zone A	**Lobby and Visitor Amenities**	**2,200**	**Museum Welcoming & Free Zone**
A-1	Lobby, Admissions, Admission Support and Retail Kiosk	500	Ticketing, information and orientation, group marshalling, membership desk, integrated with retail, as well as lost and found and private nursing station and first aid. Retail space at 400 nsf to include limited grab and go food and beverages.
A-2	Group Marshalling Area	700	Open area, connected to Lobby for assembly and marshalling of school groups etc. Should include lockers, cubbies and seating if necessary.
A-3	Coat, Bag and Stroller Storage	300	Includes self lockers for families. Assumed to be unsupervised but with security camera.
A-4	Multi-Purpose Room	700	Educational and public programming, school lunch and birthday party room to accommodate up to 30 children and adults.
A-5	Public Washrooms	Not in Net Area	Male and female with baby change facilities in both.To meet all applicable codes.
Zone B	**Exhibit Areas**	**8,500**	**Public Access - Paid Zone**
B-1	Permanent Exhibition Space	5,500	To accommodate permanent exhibitions or displays of a variety of different themes and activities. Sub-allocation of specific space is to be determined as part of subsequent detailed exhibition planning and design.
B-2	Temporary (Flex) Exhibition Space	1,500	To accommodate temporary or changing exhibitions or displays of a variety of different themes and activities. Sub-allocation of specific space is to be determined as part of subsequent detailed exhibition planning and design.
B-3	Kids Play Zone	1,500	A highly durable, open area to accommodate a range of children's play activities. Events may include hands-on or climb-on interactives. Sub-allocation of specific space is to be determined as part of subsequent detailed exhibition planning and design.
Zone C	**Exhibit Support and Storage**	**1,500**	**Staff Workshop Area - No Public Access**
C-1	Covered Loading Dock	Not in Net Area	Exterior (covered) loading, shipping / receiving area for small to medium-sized van delivery.
C-2	Crating / Uncrating & Assembly Workroom	500	Packing / unpacking & exhibit assembly. Could be converted to crating / uncrating and assembly workroom if temporary exhibitions brought in.
C-3	Crate and Other Storage	300	Storage for crates of incoming exhibits and moving equipment when traveling exhibitions and otherwise general storage.
C-4	Exhibit Prep Room	700	Flexible exhibit prep / work room reserved for necessary exhibit related work such as ongoing repair, maintenance, or remounting.
C-5	Freight Elevator	0	Assuming two storey structure, elevator cab to accommodate forklift & crate. Elevator and related machine room accounted for in Gross Floor Area.
Zone D	**Administrative & Support Space**	**2,800**	**Staff Work Area - No Public Access**
D-1	Reception	100	Public control point for access to offices. Includes reception desk and visitor waiting area for 4-6 persons.
D-2	Museum Staff	900	The assumption is that there will be 10.5 FTE staff: 5 will require private offices @100sf each avg., and others will be in open office work areas or not require office space.
D-3	Volunteer Workroom / Lounge	300	Open, flexible work space for projects, program development. Natural light.
D-4	Conference Room	400	Staff and Board meetings; community meetings; teacher training workshops; small receptions; donor meetings. Equipped for multimedia presentations.
D-5	Lactation / Staff Wellness Room	100	Quiet room for nursing mothers, or staff. Eqiupped with comfortable seating and adjustable lighting.
D-6	Communications Centre & Office Supplies Storage	100	Mail room, copier, fax machine, paper and supplies storage, file storage and work area. Special ventilation required.
D-7	Technology Communications Centre	50	Contains network server and other AV equipment. Special ventilation required.
D-8	Staff / Volunteer Kitchenette	100	For meals, breaks and informal meetings. Natural light.
D-9	Education Prep Area & Storage	150	For education staff. Located near classrooms.
D-10	Program Supplies Storage	100	Supplies storage to support program activities.
D-11	Special Events Storage	200	Equipment storage (chairs, tables, easels, etc.).
D-12	Catering Kitchen & Servery	50	Food service support area. For birthday parties and other rentals and programs.
D-13	Security Room	50	Security equipment and monitors.
D-14	Gift Shop Storage	100	Gift store stock storage and administration, and merchandise receiving.
D-15	Custodial / Janitorial (x2)	50	Located on each floor as required.
D-16	Garbage and Recycling Bins	50	With access to the exterior service areas
D-17	Staff Washrooms	Not in Net Area	Male and female with baby change facilities in both.To meet all applicable codes.
Total		**15,000**	

Zone	Summary of Spaces
Zone A	2,200
Zone B	8,500
Zone C	1,500
Zone D	2,800
Net Square Feet	**15,000**
Net to Gross Ratio @ 40%	6,000
Estimated Total Area	**21,000**

4.4 VISITOR EXPERIENCE

Space allocations discussed above include 5,500 sq. ft. of core or permanent science centre exhibition space, 1,500 sq. ft of space oriented to young children aged 2-6, and a flex or temporary exhibition space of 1,500 sq. ft. to rent exhibitions from outside the Centre. Detailed exhibition planning and design should follow this feasibility study to determine the specific exhibits to be implemented. In general, whether in the core science centre exhibition area, the temporary or flex exhibition space of the kid zone, it is assumed that:

- Exhibits will link as much as possible to the science associated with modern agriculture and in general to STEAM education (science, technology, engineering, arts, mathematics.)
- Themes to be reflected will include the farm to table food process, farm safety, environmental agriculture, indigenous agriculture, careers, art and agriculture and other themes to be developed in collaboration with the Listowel Agricultural Society, Ontario Federation of Agriculture and the agricultural industry. This could include an integrated role-playing experience including a farm, market and restaurant to enable children to “play” and understand that food is grown, harvested, sold and consumed.
- Exhibits will be contemporary, hands-on, interactive and generally fun, including the use of multimedia opportunities. Consideration should be given to activities that feature both hands-on and climb-on opportunities. Other activities for consideration include dress-up and costume play, fire safety demonstrations, or Ag innovation / Ag safety activities.
- There will be an exhibit area open to all but offering features important to autistic children including a quite space for rest and recharge.

4.5 GOVERNANCE AND RELATIONSHIP WITH MUNICIPALITY

- There are essentially two governance options open to the Huron Perth Ag Science Centre. One is to be a line department of the Municipality of North Perth and the second to be a private, not for profit organization. It is assumed that the Huron Perth Ag Science Centre operate as a not for profit organization because private funders are less likely to provide donations and sponsorships to a municipal department.
- While the Municipality of North Perth would own the building, it would not own the Ag Science Centre. The Huron Perth Ag Science Centre will enter into a long term lease of the space with the Municipality of North Perth, at one dollar per year.
- In the event that the Huron Perth Ag Science Centre is not viable operationally, as the owner of the building, the Municipality of North Perth will determine its future use.
- In the same manner as it contributes to the operating costs of municipal public libraries and recreational facilities, the Municipality of North Perth will pay the occupancy costs associated with the building. This includes utilities, repairs and maintenance, insurance and security systems.

4.6 STAFFING AND VOLUNTEERS

Staffing costs are the single largest operating expense for any museum-related institution, including a science centre. The following staffing plan seeks to offer a balance between an adequate professional staff capable of meeting the objectives of the CMNC and an effort to control staffing levels and costs.

- Staffing positions will be as set out in the table below, totaling ***10.5 full-time equivalent (FTE) positions supported by volunteers and grant-funded students***. Of these, six are assumed to be full-time positions.

Huron Perth Ag Science Center Staff	Assumed FTE Staff	Responsibilities/Other Comments
Executive Director	1.0	Responsible for implementation policies of the Board, municipal liaison, planning and fundraising and supervising other staff.
Visitor Experience Director	1.0	Permanent and temporary exhibitions development, as well as public and educational programs. Supervises Exhibits/IT Technician and Programming and Education Animators.
Exhibits/IT Technician	1.0	Exhibit set up and maintenance (including AV and IT components)
Programming and Education Animators	1.5	To animate the visitor experience in the exhibition galleries for general public and school groups and birthday parties. Strong level of volunteer support likely.
Volunteer Coordinator/Bookings Clerk/Administrative Assistant	1.0	Attract and maintain volunteers and responsible for bookings and serve as reception and administrative assistant
Business and Operations Director	1.0	Business operations, earned income (admissions, retail, rentals, etc.), special events, corporate relations and sponsorships. Supervises Marketing/Development/Membership and other Assistants.
Marketing/Development/Membership Assistant	1.0	Focus on marketing, public relations, development and membership program. Responsible also for web site and social media
Admissions/Information/Retail Assistants	1.5	Assumes volunteer support as well
Janitorial/Maintenance	0.5	Part-time but could be contract
Weekend /Evening/Part-Time Allocation	1.0	Includes rentals fulfillment. Assumes support from volunteers
Total Staff	**10.5**	

- The Centre will be successful in attracting and maintaining ***volunteers*** for a variety of activities.
- A combination of dedicated private offices and open workstations have been provided for five staff, with shared / open workspace for others including volunteers and co-op students. See Section 4.3 Space and Facilities for additional details.

4.7 OPERATIONS AND REVENUE GENERATION

While the best form of marketing is the nature and quality of the visitor experience, other factors that impact attendance include various operational factors that may range from admission charges to operating hours. These and other related issues are addressed below through the following recommendations/assumptions.

4.7.1 Admission Charges

Our recommendations regarding admission charges take into account the following benchmarks:

- The London Children's Museum charged $9.00 per person in 2019. The same charge for adults and seniors is common in children's museums but not for science centres.
- In 2019 THEMUSEUM in Kitchener charged $14.00 for adults and seniors and $9.00 for youth and children.
- The Huron County Museum and the Historic Gaol (Jail) has separate admission charges of $6.00 per adult or combination tickets for both at $10.00. There is a family rate of $20. School groups are charged $3.50 per student for both. Admission is free to children under six and to library card holders.
- Admission charge categories are recommended to provide a price break to youth by defining an adult as aged 25-64. The youth category (aged 13-24) is recommended to offer the same discount as to seniors while the kid zone would allow the child admission category to be from 2-12 years old.
- Discounted group rates will be available to school and non-school groups.
- Free admission periods are not recommended. Rather ideally sponsored free admission tickets will be available to those who cannot afford admission through social service agencies, religious institutions and schools.
- Admission prices will be maintained during the opening two years and increased in Year 3. There will be no seasonal variation in admission prices.
- A family rate is not recommended because of issues associated with defining a family and the need to avoid asking for ID.
- Taxes will be additional to the posted prices, taking into account that the large majority of visitors will pay by credit card as opposed to cash.

The recommended/assumed admission charges for the Huron Perth Ag Science Centre are as set out in the following table and take into account these benchmarks as well as the assumed size of the exhibition space and an assumption of a high quality visitor experience including outdoor opportunities.

Admission Charges

	Year 1	Years 2-3+
Adult (25-64)	$9.00	$10.00
Senior (65+)/ Youth (13-24)	$8.00	$9.00
Child (2-12)	$6.00	$7.00
School Groups (avg. per person)	$4.00	$5.00
Non-School Groups (avg. per person)	$6.50	$7.50
Indirect Paid (members, programs, rentals) /Unpaid	$0.00	$0.00

- ***Admission will be described as a full-day pass*** to encourage visitors to feel free to leave to eat and shop elsewhere then return on the same day, thereby allowing the Centre to contribute to economic development.
- ***Traveling exhibitions to be brought to the Centre will be of reasonable cost*** and will not require a surcharge over the admission charges.
- We recommend ***half price admission from 2-5 p.m. on weekends during the school year.*** This recognizes that attendance during this period is not substantial and the limited time available to attend. It should be of particular appeal to seniors.

4.7.2 Membership

- The Huron Perth Ag Science Centre will operate with ***both a lower level and an upper level membership program***:
  - Lower level memberships will focus very much on "value for money" in unlimited free admission as well as discounts on retail sales, public programs, and birthday parties. As is common in science centres and children's museums, the vast majority of members will be in the lower level membership categories.
  - A discounted 2-year membership will be offered to retain members longer and reduce the time and costs associated with renewals.
  - The upper level membership program will be driven very much by altruistic support for the Centre, agriculture in general and civic pride. This will include corporate memberships, which should be of particular appeal to the regional agricultural industry.
  - Guest passes will be introduced for members above a basic family or household level. For upper level members there will be an option to retain the guest passes or return them to the Museum to be distributed to the disadvantaged through social service agencies, religious institutions, and schools. Those who do so will receive tax receipts.

4.7.3 Retail Store

- Retail sales in museums and bricks and mortar stores in general have been declining with the appeal of Amazon and other on-line retail opportunities, which have grown even more due to the impact of the COVID-19 pandemic. Centre staff and volunteers will operate the 400 nsf retail store. Its operations will be integrated with the admissions area to allow the same staff to handle both. There will be no food service opportunity within the Centre as visitors will be encouraged to eat and shop in Listowel and return if they so choose on the basis of the admission as a full day pass concept. However, there will be some "grab and go" sandwich and dessert and beverage opportunities integrated within the retail store.
- The retail product line will reflect the agriculture and STEAM-focused mission and mandate of the Centre and will include items that are not commonly found on-line and at commercial retail stores.

4.7.4 Birthday Parties and Other Venue Rentals

- While birthday parties should be popular, there will be opportunities for other types of venue rentals, particularly during the evening hours when the Centre is closed. The spaces available for other rentals are the lobby and the multi-purpose room, both with limited capacities.

4.7.5 Public Programs and Other Revenue Centres

- Specific public programs will be developed by senior management of the Huron Perth Ag Science Centre, many of which would be included in the basic admission charge while others would be charged. Among charged programs could be summer and school break camps for children and other registered programs as well as teacher training.
- One ***annual fundraising event*** is assumed***.***
- Other sources of earned income could include vending machines and interactive or tap to donate donation boxes.

4.7.6 Operating Schedule

- Assumed operating hours are as follows.

	Regular Hours
Tuesday through Saturday	10:00 a.m. to 5:00 p.m.
Sundays	Noon to 5 p.m.
Closed Monday	

- Opportunities for exclusive school use will be available on weekday mornings during the school year from 9-10 a.m. Advanced booking will be required.
- An evening opening to 9 p.m. will be an experiment starting at once per month and either expanded or terminated.

4.7.7 Other Assumptions

- An endowment to support operating costs is not assumed during the period to be projected in the study.
- Capital funds for construction and exhibitry will be generated exclusively through private and government sources. The project will be debt free, thus there would be no annual outlays for debt service in the operating budget.
- The Centre will not be responsible for payment of any property or business taxes.

It must be noted that attendance and financial projections are subject to modification in the future based on changed assumptions and circumstances and are thus subject to the inherent uncertainties of the future. There is no representation that the projections will be realized in whole or in part, but we believe the projections to be set out in Chapter 6 of this report are reasonable.

5. CAPITAL COST ESTIMATE

At this predesign stage of planning the capital costs are preliminary. They were prepared by capital cost specialists the Altus Group Limited (Altus) based on the preliminary space and facilities program prepared by Lord Cultural Resources, and other assumptions set out in Chapter 4 of this report. The following is a summary of the capital cost estimates with the detail set out in Appendix C.

The capital cost estimates for the Huron Perth Ag Science Centre are for an as of yet undefined site in North Perth assumed not to require acquisition costs. The study assumes new construction with a program area for the building of 15,000 net useable square feet (nsf) or 21,000 gross square feet (gsf) taking into account allowances for vertical and horizontal circulation, mechanical and electrical spaces, as well as wall thicknesses.

The order of magnitude estimate is intended to establish a realistic budget of the hard construction costs based on the limited design information provided. The estimate reflects our opinion as to the fair market value for the construction of this proposed project and is not intended to predict the lowest bid. It assumes that the quality of architectural building design will be moderate, and that the quality of exhibit design be of medium standard. At this pre-design stage the exhibition costs for the 5,500 net sq. ft. of permanent science centre exhibition space is estimated at $500 per sq. ft. while exhibition costs in the 1,500 nsf children's gallery are calculated on the basis of $300 per sq. ft.

From the functional program information provided, Altus developed elemental quantities where possible and applied unit rates for the specific items based on historical and current cost data for this type of project. Where design information was limited, we have made assumptions based on our experience with projects of a similar type, size, and standard of quality.

The estimate includes all direct and indirect construction costs consistent with the information available and reflect exclusions and qualifications set out in Appendix C.

The estimate has been derived using generally accepted principles on method of measurement as per the Canadian Institute of Quantity Surveyors Elemental Cost Analysis and/or Method of Measurement of Construction Works.

Altus advises that the proposed Huron Perth Ag Science project can be realistically budgeted at a capital cost of about $13.8 million, including both construction and exhibit-related costs and assuming an opening in April 2024. Detailed capital cost estimates are set out in Appendix C to this report.

6. ATTENDANCE, OPERATING REVENUE AND EXPENSE PROJECTIONS

This chapter sets out our projections of attendance, operating revenues, and expenses for the opening three years of operation of the Huron Perth Ag Science Centre. The projections are based on the research, analyses and assumptions in the previous chapters of this report.

All financial projections are in 2021 constant dollars, which means the figures are assumed to change at whatever the prevailing rate of inflation is. Without certainty when the Centre will open, the projections refer to Year 1, 2 and 3 with Year 3 a stabilized year that is representative of subsequent years of operation.

Although no-one can predict the future with certainty, it is reasonable to assume that by the time the Huron Perth Ag Science Centre opens to the public the impact of the COVID-19 pandemic will have ended and there will largely be a return to normalcy.

6.1 ON-SITE ATTENDANCE PROJECTIONS

To prepare attendance projections first requires a reasonable definition of who would or would not be defined as a visitor. For the purposes of this analysis a visitor is someone who attends an exhibition or program at the Huron Perth Ag Science Centre. Persons who enter only to use the retail store are not included and neither are staff and volunteers, service and delivery people. While outreach and access through a web site are important, the attendance projections do not include outreach programs or web site hits/visits.

Important considerations in preparing the attendance projections are as follows:

- There is no simple computer formula that leads to accurate attendance projections because motivations to be first time and repeat visitors depend on the visitor experience, visitor service, perceived value for time and money, the weather, and other factors. Ratios and formulas have been used based on the experience of comparable or similar institutions. While each has weaknesses, the ratios help to inform our judgment and experience.

- The experience of comparable institutions is central to attendance projections but there is rarely exact comparability.
- In utilizing data from other museums there are a variety of definitions of what constitutes a visitor and no complete certainty that the comparative attendance figures reported are accurate.

6.1.1 Benchmarks

The most relevant benchmarks to help inform attendance projections for the Huron Perth Ag Science Centre are from other museums in the region. One is a children's museum (London Children's Museum), another a hands-on museum with characteristics similar to a science centre (THEMUSEUM, Kitchener) and two are county history museums. The Stratford Perth Museum attracts more visitors than most county museums because of a focus on popular culture in a Justin Bieber exhibition while the Huron Perth Museum in Goderich widens its audience with an historic jail.

Another ratio is based on average attendance figures per square foot from the Association of Science-Technology Centres. Data also set out in Chapter 2 regarding average attendance at science centres and children's museums indicates attendance levels far more substantial than realistic for a relatively small science centre in North Perth. However, the substantial attendance experienced by other science centres and children's museums is also taken into account in exploration of qualitative factors that follow the quantitative ratios below.

The benchmarks used to help inform attendance projections for a stabilized year of operation (Year 3) are as follows, based on the size of the exhibition space and the regional population of the selected museum-related institutions:

Based on a Ratio of Visitors per Square Foot of Exhibition Space

The size of the exhibition space available to visitors is a common method to estimate attendance. The following table sets out reported attendance levels and the size of the exhibition space at the four selected museum-related institutions in the region. The average figure is 3.46 visitors per square ft. of exhibition space. When applied to the assumed 8,500 sq. ft. of indoor exhibition space assumed for the Huron Perth Ag Science Centre, it suggests a rounded **29,400 visitors** in Year 3.

Attendance Extrapolations from Selected Museum-Related Institutions in the Region

	Reported Attendance	Estimated Size of Exhibition Space (nsf)	Visitors per NSF of Exhibition Space	2019 County Population Estimate	Visitors per 1000 County Population
THEMUSEUM, Kitchener	100,000	55,000	1.82	617,870	161.85
Stratford Perth Museum	16,000	65,000	0.25	82,146	194.78
Huron County Museum	19,800	10,000	1.98	59,297	333.91
London Children's Museum	88,000	9,000	9.78	506,008	173.91
Average	**55,950**	**34,750**	**3.46**	**316,330**	**216.11**
Assumptions for Huron Perth Ag Science Centre		8,500		145,000	

Based on a Ratio of Visitors per Thousand County Population

We have combined the population of Perth and Huron Counties as the population available to the Huron Perth Ag Science Centre. The table above also identified a ratio of visitors per thousand county population. The mid-point between the average and median figures that emerges is 216.11 and when applied to the combined population of Perth and Huron Counties leads to an attendance estimate of about **31,300**.

Based on Ratio of Visitors per Square Foot for Science Centres

Data from the Association of Science-Technology Centres indicates an average of 6.3 visitors per sq. ft. of indoor exhibition space. Applied to the 8,500 sq. ft. of exhibition space at the Huron Perth Ag Science Centre, this suggests a stabilized attendance of **53,600**.

Averaging the Methods

As stated, each of these methods used has weaknesses but are nonetheless helpful in establishing benchmarks. ***Averaging the methods leads to a rounded attendance figure of 38,100 visitors in the stabilized Year 3 of operation***.

Averaging the Methods	**Attendance**
Based on Size of Exhibition Space	29,400
Based on Population	31,200
Based on Science Centre Average	53,600
Average	**38,067**

6.1.2 Judgment Regarding Impact of Various Factors on Attendance

The quantitative methods above suggest stabilized (Year 3) attendance of about 38,100 visitors. Other largely qualitative factors set out in earlier chapters help to refine the analysis and point to somewhat higher stabilized attendance than indicated by the ratios above:

- **Uniqueness of the Concept**: The only other science centres in Ontario are in Toronto and Sudbury. This should help to encourage travel to North Perth from not only throughout Perth and Huron Counties but also tourists. Similarly, a focus on agriculture will resonate with many regional and other families and school groups.

- **High Levels of Repeat Visitation for Science Centres and Children's Museums:** The visitor experience offered by science centres and children's museums motivates a substantial level of repeat visitation by families.

- **The Potential for Outdoor Opportunities:** Although a municipal or gifted site for the Centre is not yet confirmed, there may be opportunities for the selected site to include outdoor exhibit and activity areas. This would increase length of stay and boost repeat visitation levels further.

- **Operational Factors**: The assumed admission charges are reasonable and a focus on birthday parties will help to increase attendance levels. Similarly, the assumed staffing and volunteer levels are adequate to provide a good visitor experience.

Taking these points into account it is our judgment that on-site attendance levels will be higher than the 38,100 visitors suggested by the ratios and rankings above. ***In the stabilized Year 3, we estimate 42,000 visitors.***

As is common, Year 1 attendance will be higher than the stabilized attendance to reflect the curiosity and novelty factors, including media attention and a grand opening ceremony, associated with a new attraction. We estimate that Year 1 attendance will be about 15% higher than the stabilized Year 3 and that Year 2 attendance will be closer to Year 3. This leads to the following final projected attendance projections.

Final Attendance Projections	Year 1	Year 2	Year 3
	48,000	44,000	42,000

6.1.3 Projected On-Site Attendance by Main Segments

The table below summarizes our estimates of total on-site attendance on weekdays and weekends, helping to lead to design day projections and projected attendance by the main resident and tourist market segments. The table also provides estimates by ticket category, including an indirect paid category of those who attend rentals and programs or are visiting as members. The projections are also based on the following estimates and assumptions:

- **Attendance by Weekdays and Weekend Days**: It is common for weekend days to account for about half of all visitors. We estimate that weekend attendance will be at a common 50% in the Huron Perth Ag Science Centre.

- **Design Day Calculation**: The Design Day (not peak attendance) calculation is of a higher than average weekend day in a higher than average attendance month. We estimate attendance levels during such a weekend day at 15% higher than average. This figure is used by architects to take into account how many people will be in the building at one time, which we estimate at about 35%.

- **Attendance by Main Resident and Tourist Segments**: As is common, regional residents will account for the large majority of visitors at opening, while tourist attendance should increase over time.

- **Attendance by Ticket Category**: A science centre attracts substantial numbers of children in family and school groups. There will also be substantial indirect paid (members, programs, rentals) visitors as well as unpaid visitors, especially members who will be motivated to join by high levels of repeat visitation.

The attendance projections are summarized in the following table. The admissions and other visitor-generated revenue categories that follow build upon these attendance estimates.

Attendance Projections (rounded)	Year 1%	Year 2%	Year 3%		Year 1	Year 2	Year 3
Projected Total Attendance					**48,000**	**44,000**	**42,000**
Attendance by Weekday/Weekend							
Weekdays	50%	50%	50%		24,000	22,000	21,000
Weekends	50%	50%	50%		24,000	22,000	21,000
Total					**48,000**	**44,000**	**42,000**
Design Day Calculation							
Total Projected Attendance					48,000	44,000	42,000
Total Weekend day Attendance					24,000	22,000	21,000
Average Weekend day Attendance					231	212	202
Weekend day Attendance in Higher Attendance Month (15% above average)					265	243	232
Maximum Number of People in Centre at the Same Time	35%	35%	35%		**93**	**85**	**81**
Attendance by Main Segment							
Residents (50 km. radius)	70%	65%	65%		33,600	28,600	27,300
Tourists	30%	35%	35%		14,400	15,400	14,700
Total	**100%**	**100%**	**100%**		**48,000**	**44,000**	**42,000**
Attendance by Ticket Category							
Adult (25-64)	30%	30%	30%		14,400	13,200	12,600
Senior (65+)	6%	6%	6%		2,880	2,640	2,520
Youth (13-24)	9%	8%	8%		4,320	3,520	3,360
Non-School Groups	1%	1%	1%		480	440	420
Child (0-12)	22%	22%	22%		10,560	9,680	9,240
School Groups	9%	10%	10%		4,320	4,400	4,200
Indirect Paid (Members, Programs, Rentals), Unpaid	23%	23%	23%		11,040	10,120	9,660
Total Attendance	**100%**	**100%**	**100%**		**48,000**	**44,000**	**42,000**

6.2 PROJECTED OPERATING REVENUES

This section sets out our projections of operating revenues during the opening three years of operation of the Huron Perth Ag Science Centre, assuming that Year 3 is the stabilized year and generally applicable to subsequent years. The earned income projections are in the following revenue categories:

- Admissions
- Retail Store
- Birthday Parties and Other Venue Rentals
- Membership
- Public and Educational Programs
- Fundraising Events (net)
- Other Earned Income

There is no attempt to estimate how much financial support for operations the Centre will receive from private and government sources. The bottom line of the projections is

therefore of operating expenses minus earned income, leaving a gap to be filled each year to break even on operations from private and government funders.

6.2.1 Admissions

Admissions revenue is based on the projected attendance levels applied to the assumed admission charges. We estimate that discounts offered in collaboration with CAA/AAA, Listowel Agricultural Fair and other partners will help to increase attendance levels but result in a reduction in admissions revenue of 3% per year.

These estimates lead to the following admissions revenue projections.

Admissions Revenue

Ticket Categories	Admission Charge Year 1	Admission Charge Year 2/3	Year 1 Attendance	Year 1 Revenue	Year 2 Attendance	Year 2 Revenue	Year 3 Attendance	Year 3 Revenue
Adult (25-64)	$9.00	$10.00	14,400	$129,600	13,200	$132,000	12,600	$126,000
Senior (65+)	$8.00	$9.00	2,880	$23,040	2,640	$23,760	2,520	$22,680
Youth (13-24)	$8.00	$9.00	4,320	$34,560	3,520	$31,680	3,360	$30,240
Non-School Groups (avg. per person)	$6.50	$7.50	480	$3,120	440	$3,300	420	$3,150
Child (2-12)	$6.00	$7.00	10,560	$63,360	9,680	$67,760	9,240	$64,680
School Groups (avg. per person)	$4.00	$5.00	4,320	$17,280	4,400	$22,000	4,200	$21,000
Indirect Paid/Unpaid	$0.00	$0.00	11,040	$0	10,120	$0	9,660	$0
Sub-Total			**48,000**	**$270,960**	**44,000**	**$280,500**	**42,000**	**$267,750**
Total (after discounts)				**$262,831**		**$272,085**		**$259,718**

6.2.2 Retail Store

It has been assumed that the Huron Perth Ag Science Centre will include a modest 400 nsf of public retail space integrated with admissions and to include limited grab and go café food and beverage opportunities within. Visitors who want more substantial meals will be encouraged to eat and shop elsewhere in North Perth.

The retail product line will reflect the agriculture and STEAM-focused mission and mandate of the Centre and will include items that are not commonly found on-line and at commercial retail stores. This should help to boost sales above what is common at science centres and children's museums, generally about $1.00 - $1.25 per visitor.

Taking the foregoing into account, as well as data from the Museum Retail Association, we estimate on-site retail sales applicable to a Huron Perth Ag Science Centre product line will average $1.50 per visitor at opening, including modest on-line sales. The estimated sales per visitor will increase somewhat each year on the basis of greater market and product knowledge by management over time balanced against the tendency for purchases to be most likely made on the initial visit.

The assumptions and estimates above lead to the following retail sales projections for the Huron Perth Ag Science Centre. (Costs of goods sold are included with the expense projections while staffing and other overhead costs are included within those expense categories later in this chapter.)

Retail Sales (400 nsf public space)	Year 1	Year 2	Year 3
Total Attendance	48,000	44,000	42,000
Sales per Visitor	$1.50	$1.55	$1.60
Total Retail Sales	**$72,000**	**$68,200**	**$67,200**
On-Site Sales per Sq. Ft.	$180	$171	$168

6.2.3 Birthday Parties and Other Rentals

Birthday parties should be very popular at the Science Centre. The main space to be available for birthday parties and other venue rentals is the 700 sq. ft. Multipurpose Room. Given other uses of the Multipurpose Room, including school and public programs, we assume birthday parties will be limited to afternoon hours on weekend days. The Multipurpose Room will be available for small venue rentals during evening hours when the Centre is closed to the public.

We estimate an average of about three birthday parties per weekend and that net income to the Centre will be $125 per party. Revenue from evening rentals is estimated to match the income from birthday parties at opening and grow modestly each year. This leads to the following projections.

Birthday Parties and Other Rentals	Year 1	Year 2	Year 3
Birthday Parties	150	150	150
Net Revenue per Party	$125	$125	$125
Sub-Total	**$18,750**	**$18,750**	**$18,750**
Other Rentals	$18,750	$24,000	$25,000
Total Revenue	**$37,500**	**$42,750**	**$43,750**

6.2.4 Membership

The key assumptions associated with the membership program are set out in Chapter 4.3.2 for lower and upper level membership categories. Our estimates for the number of memberships are guided by the general experience of other science centres and children's museums and the London Children's Museum and THEMUSEUM as the most relevant high repeat visitation attractions in the region.

The table that follows indicates ratios of memberships relative to attendance and to population. The rounded mid-point of the two ratios is 346 memberships in the stabilized Year 3. However, we believe the agriculture theme will lead to higher numbers of memberships. We estimate 400 lower levels memberships in Year 3 and higher numbers in the opening year to reflect attendance patterns.

Membership Ratios					
	Reported Attendance	Reported Memberships	Reported Memberships as % of Attendance	2019 County Population Estimate	Memberships per 1,000 Population
THEMUSEUM, Kitchener	100,000	1,000	1.0%	617,870	1.62
London Children's Museum	88,000	1,100	1.3%	506,008	2.17
Average	**94,000**	**1,050**	**1.1%**	**561,939**	**1.90**
Huron Perth Ag Science Centre					
Projected Stabilized Attendance	37,000				
Perth and Huron County Population				145,000	
Projected Memberships			**416**		**275**

Based on the admission charges, we estimate that average lower level revenue per membership will be $95 per year over the three years projected. Regarding membership revenues per membership, the presence of companies and families in the agriculture industry should lead to corporate and other upper level memberships, which are estimated to total $25,000 per year. These estimates and assumptions lead to the following projections.

Membership	Year 1	Year 2	Year 3
Lower Level Memberships	475	450	425
Average Membership Charge	$95	$95	$95
Total Lower Level Revenue	$45,125	$42,750	$40,375
Upper Level Membership	$25,000	$25,000	$25,000
Total Revenue	**$70,125**	**$67,750**	**$65,375**

6.2.5 Public and Educational Programs

Some public and educational programs will be free or free with admission and others charged. Among the charged programs could be registered science and agriculture programs, summer camps, periodic charged lectures and other opportunities developed by management.

Revenues may vary widely but are estimated as follows and assume revenue growth over time.

Public and Educational Programs	Year 1	Year 2	Year 3
Total Revenue	$50,000	$55,000	$60,000

6.2.6 Fundraising Events (net)

It has been assumed that there will be an annual fundraising gala dinner and the possibility of other fundraising events to support operation of the Huron Perth Ag Science Centre. This should be well supported by the agriculture industry and other supporters. The amounts that may be generated may vary widely but are estimated to grow after a lower revenue level in Year 1 to reflect donor fatigue associated with the capital campaign.

Fundraising Events (net)	Year 1	Year 2	Year 3
Total Revenue	$60,000	$75,000	$75,000

6.2.7 Other Earned Income

Other sources of income could include interactive donation boxes, with a tap to donate feature, pay for photo opportunities based on costume rental, vending machines, and other opportunities that might be developed by management at the time. Revenues have been estimated as follows.

Other Earned Income	Year 1	Year 2	Year 3
Total Revenue	$12,000	$14,000	$15,000

6.3 PROJECTED OPERATING EXPENSES

The categories of operating expenses projected for the Huron Perth Ag Science Centre are:

- Salaries, Wages and Benefits
- Building Occupancy Costs
- Exhibitions Costs
- Public and Educational Programs
- General and Administrative
- Marketing
- Retail Cost of Goods Sold

The bottom line of the projections is earned income minus expenses equals the amount that will need to be raised each year from private and government sources to break even on operations.

6.3.1 Salaries, Wages and Benefits

It is almost always the case that the largest operating cost of any museum-related institution is staffing, generally accounting for 40-60% of the total operating budget.

The staffing list assumed for the Huron Perth Ag Science Centre is for 10.5 full-time equivalent (FTE) positions, of which seven are full-time. Benefits are estimated to average 18% of the salaries and benefits for all staff. Although the projections are in constant 2021 dollars it is assumed that, on average, salaries and wages will increase at 0.5% above whatever the prevailing rate of inflation is each year. These estimates and assumptions lead to the following projections.

Huron Perth Ag Science Centre Staff	Full-Time Equivalent (FTE)	Year 1 Salary/ Wage per FTE	Year 1	Year 2	Year 3
Executive Director	1.0	$95,000	$95,000	$95,475	$95,952
Visitor Experience Director	1.0	$65,000	$65,000	$65,325	$65,652
Exhibits/IT Technician	1.0	$45,000	$45,000	$45,225	$45,451
Programming and Education Animators	1.5	$35,000	$52,500	$52,763	$53,026
Volunteer Coordinator and Bookings Clerk	1.0	$35,000	$35,000	$35,175	$35,351
Business and Operations Director	1.0	$65,000	$65,000	$65,325	$65,652
Marketing/Development/Membership Assistant	1.0	$35,000	$35,000	$35,175	$35,351
Admissions/Information/Retail Assistants	1.5	$30,000	$45,000	$45,225	$45,451
Janitorial/Maintenance	0.5	$35,000	$17,500	$17,588	$17,675
Weekend/Evening Allocation	1.0	$30,000	$30,000	$30,150	$30,301
Total FTE Staff	**10.5**		**$485,000**	**$487,425**	**$489,862**
Benefits (avg. 18%)			$87,300	$87,737	$88,175
Total Staffing Costs			**$572,300**	**$575,162**	**$578,037**

6.3.2 Building Occupancy Costs

Occupancy costs are generally defined to include all costs, excluding salaries, associated with building repairs and maintenance, utilities, security systems and building insurance. These costs may be calculated on the basis of the gross square footage of the building. The gross square footage takes into account circulation, mechanical and electrical spaces, as well as wall thicknesses. The gross square footage (gsf) assumed for the Huron Perth Ag Science Centre is 21,000 gsf.

Occupancy costs vary by the extent of the environmental controls required, the weather conditions, the extent of public use, and the condition of the building, with a new building requiring lower maintenance and utilities costs. Since a specific site or building has not yet been assumed, we have utilized close to the mid-point of the common $6.00 to $8.00 per gross square foot in the stabilized Year 3, with lower costs in the opening year under warranty. This leads to the following projections.

Building Occupancy	Year 1	Year 2	Year 3
Total Space (gross sq. ft.)	21,000	21,000	21,000
Utilities Cost per Gross Square Foot	$6.25	$6.60	$6.75
Total Occupancy Costs	**$131,250**	**$138,600**	**$141,750**

One scenario for the Huron Perth Ag Science Centre is that in a municipally owned building, the Municipality of North Perth will absorb occupancy costs, just as it does for public libraries and arenas. This scenario is set out later in this chapter along with others that serve to eliminate the gap between earned income and operating expenses.

6.3.3 Exhibition Costs

Costs associated with permanent and temporary exhibitions may vary widely depending on the specific temporary exhibitions to be developed or leased, which cannot be predicted. Our estimates are as follows for temporary exhibitions, routine maintenance, and a reserve to build up a fund to change the permanent exhibitions.

- **Temporary Exhibitions**: The temporary exhibition space is limited at 1,500 sq. ft. We have assumed two temporary exhibitions per year at a combined $50,000 in Years 2 and 3. A lower amount, $30,000, is estimated in Year 1 when there is less need to invest in change.
- **Routine Maintenance**: The hands-on nature of science centres and children's museums leads to the need for repairs and maintenance. These non-staff costs will be limited in the opening year and will increase over time. We estimate the need to allocate $10,000 in Year 1 under warranty and a growth to $20,000 in subsequent years.
- **Reserve for Exhibition Replacement:** Exhibits need to be replaced periodically but are usually kept too long because of the need to raise funds for the replacement. An alternative is to establish a reserve for exhibition replacement at the outset to allow the funds to build up over time. We have assumed such a reserve will be in place, with $50,000 allocated to it each year, but no funds spent for several years.

These assumptions and estimates lead to the following projections.

Exhibitions	Year 1	Year 2	Year 3
Temporary Exhibitions	$30,000	$50,000	$50,000
Routine Maintenance	$10,000	$20,000	$20,000
Reserve for Exhibit Replacement	$50,000	$50,000	$50,000
Total Costs	**$90,000**	**$120,000**	**$120,000**

6.3.4 Public and Educational Programs

Important to the mission of the Centre, some public and educational programs will be charged, while others will be free or free with admission. As set out earlier in this chapter, relatively modest revenues from this source have been projected for the Huron Perth Ag Science Centre.

Since not all programs will be charged and will need to be charged at affordable rates, it is common for costs associated with public and educational programs to exceed the revenues generated by two to three times, taking the need for contract staff and purchases into account. We have estimated the costs at 1.5 times the revenue in the opening year and 1.25 times the revenues projected in Year 2 and 1.2 times in Year 3. This leads to the following projections.

Public and Educational Programs	Year 1	Year 2	Year 3
Total Costs	$75,000	$68,750	$72,000

6.3.5 General and Administrative

General and administrative costs exclude staffing and vary by institution but generally include office and related supplies, equipment, mailing, printing, telephone, travel, conferences, volunteer perquisites, professional services, the web site, dues and subscriptions, credit card fees, entertainment, and other items that do not fit into the other expense categories. These costs relate closely to staffing levels and are often in the range of 10-15% of total staffing costs.

We estimate these costs at 13% of staffing costs in Year 1 to take initial expenditures into account and then 12% in subsequent years, leading to the following projections.

General & Administrative	Year 1	Year 2	Year 3
Total Costs	$74,399	$69,019	$69,364

6.3.6 Marketing

Marketing staff have been accounted for in the staffing plan. The focus here is on non-staff marketing costs, including advertising and promotion, the web and social media.

We have estimated marketing expenditures at $1.30 per visitor in Year 1 to reflect a grand opening celebration and other initiatives to boost initial attendance, and $1.20 per visitor in subsequent years. This leads to the following projections.

Marketing	Year 1	Year 2	Year 3
$1.30/$1.20 per visitor	$54,600	$44,400	$42,000

6.3.7 Retail Cost of Goods Sold

The norm is for the retail cost of goods sold to be in the range of 50-60% of retail sales. For the purposes of the projections we have assumed 55% as the cost of goods sold, including the cost of grab and go food and beverage products, leading to the following projections.

Retail Cost of Goods Sold	Year 1	Year 2	Year 3
Total Costs (@55%)	$34,650	$31,543	$30,800

6.4 SUMMARY OF ATTENDANCE AND FINANCIAL PROJECTIONS

The following table summarizes our projections of attendance, operating revenue and expenses for the Huron Perth Ag Science Centre for the opening three years of operation, with Year 3 representative of subsequent years.

On-site attendance levels are estimated to stabilize at 42,000 visitors in Year 3 with Year 1 attendance at about 48,000.

Based on the analyses and assumptions in this report we project that the total operating budget for the Huron Perth Ag Science Centre will be in the range of $1.0 to $1.1 million. Earned income levels will stabilize at about 55% of the operating budget, which is in the range of earned income levels for children's museums (52%) and science centres (57%) set out in Chapter 2.1. Regionally, earned income levels are about 10% for the Huron County Museum, 17% for the Stratford Perth County Museum, 50% for the London Children's Museum, and 70% for THEMUSEUM in Kitchener. The remainder of the funds are from a combination of government and private supporters. The agriculture focus of the Huron Perth Ag Science Centre should help to lead to higher-than-average support from private funders.

The table that follows concludes with a scenario for how the gap between earned income and expenses might be filled for the Huron Perth Ag Science Centre. It assumes that the Municipality of North Perth will pay for building occupancy costs for a building it owns, just as it does for a municipally owned public library or arena. The amount is estimated to be in the range of a rounded $130,000 to $140,000 per year. The scenario also assumes $50,000 per year from Huron County, $100,000 per year from Perth County, and $130,000 to $150,000 per year from private donations and sponsorships, including sponsorship of temporary exhibitions brought into the Centre twice per year. There are also senior government student and project funds the Centre will apply for each year and assumed at $50,000 per year.

The Huron Perth Ag Science Centre will need to apply for federal and provincial funding to support the capital cost of the project, estimated at this pre-design stage to be in the range of $13.8 million. If there is municipal land and a commitment to annual operating funds from local and regional governments that will substantially increase the likelihood for capital support from federal and provincial funding programs including those set out in Appendix B to this report. Although interviews conducted in this study suggested there would be strong support from the agriculture industry, it will also be necessary for the Board of the Centre to initiate a private fundraising campaign.

A first step is a municipal commitment to the land and to support part of the operating costs of the Centre. Such a commitment would be conditional on their being federal, provincial and private funding for the capital project. If there is no capital project there would be no need for support for operations from the Municipality of North Perth, Perth County and Huron County. Municipal support would therefore be conditional.

Summary of Attendance, Operating Revenue and Expense Projections	Year 1	Year 2	Year 3	Year 1 %	Year 2 %	Year 3 %
Annual Attendance	**48,000**	**44,000**	**42,000**			
Projected Operating Revenues						
Admissions	$262,831	$272,085	$259,718	25.2%	25.6%	24.3%
Retail Sales	$72,000	$68,200	$67,200	6.9%	6.4%	6.3%
Membership	$70,125	$67,750	$65,375	6.7%	6.4%	6.1%
Educational and Public Programs	$50,000	$55,000	$60,000	4.8%	5.2%	5.6%
Birthday Parties and Other Rentals	$37,500	$42,750	$43,750	3.6%	4.0%	4.1%
Fundraising Events (net)	$60,000	$75,000	$75,000	5.7%	7.1%	7.0%
Other Earned Income	$12,000	$14,000	$15,000	1.1%	1.3%	1.4%
Total Earned Revenue	**$564,456**	**$594,785**	**$586,043**	**54.0%**	**56.0%**	**54.8%**
Projected Operating Expenses						
Salaries, Wages, Benefits	$572,300	$575,162	$578,037	54.8%	54.2%	54.1%
Building Occupancy	$131,250	$138,600	$141,750	12.6%	13.1%	13.3%
Exhibitions	$90,000	$120,000	$120,000	8.6%	11.3%	11.2%
Public and Educational Programs	$75,000	$68,750	$72,000	7.2%	6.5%	6.7%
General & Administrative	$74,399	$69,019	$69,364	7.1%	6.5%	6.5%
Marketing	$62,400	$52,800	$50,400	6.0%	5.0%	4.7%
Retail Cost of Goods Sold	$39,600	$37,510	$36,960	3.8%	3.5%	3.5%
Total Expenses	**$1,044,949**	**$1,061,841**	**$1,068,512**	**100.0%**	**100.0%**	**100.0%**
Amount Required to Break Even from Private and Government Sources	**($480,493)**	**($467,056)**	**($482,469)**	**-46.0%**	**-44.0%**	**-45.2%**
Scenario of Filling Gap						
North Perth Pays for Occupancy Costs	$131,250	$138,600	$141,750	12.6%	13.1%	13.3%
Funding from Perth County	$100,000	$100,000	$100,000	9.6%	9.4%	9.4%
Funding from Huron County	$50,000	$50,000	$50,000	4.8%	4.7%	4.7%
Funding from Federal/Provincial Programs	$50,000	$50,000	$50,000	4.8%	4.7%	4.7%
Funding from Private Donations/Sponsorships	$150,000	$130,000	$140,000	14.4%	12.2%	13.1%
Total	**$481,250**	**$468,600**	**$481,750**			

APPENDIX A: ACKNOWLEDGMENTS

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Vision/Assumptions Workshop

- Mary Elizabeth Foote, Member, Huron Perth Children's Museum Committee
- Jillian Lewis, Chair, Children's Museum Committee
- Sue Knowlton, Member, Huron Perth Children's Museum Committee
- Kimberley Kowch, Community Development Coordinator, Municipality of North Perth

External Interviews

- Jodie Baker, Superintendent of Education, Avon Maitland School District
- Kelly Broughton, Recreation Coordinator, Municipality of North Perth
- Laura Carson, Coordinator, North Perth EarlyOn Program
- Sharon D'Arcy, General Manager, North Perth Chamber of Commerce
- Elizabeth French Gibson, Executive Director, Huron County Museum
- Elizabeth Johnston, President, Listowel Agricultural Society
- Todd Kasenberg, Mayor, Municipality of North Perth
- John Kastner, General Manager, Stratford Perth Museum
- Emily Lawrence, Director, National Ag Science Centre, Modesto, CA
- David Marskell, Director, THEMUSEUM, Kitchener
- Brittany McDonald, Coordinator, Big Brothers/Big Sisters of Perth County
- Carol Mason, Volunteer, North Perth Arts and Culture Council
- Kriss Snell, Chief Administrative Officer, Municipality of North Perth
- Margaret Vincent, Huron Perth Regional Coordinator, Ontario Federation of Agriculture

Consultants of Lord Cultural Resources

- Ted Silberberg, Senior Principal, Market and Financial Planning
- Sean Stanwick, Director, Facility Planning
- Sophia Sousa, Research Consultant

APPENDIX B: CAPITAL FUNDING SOURCES

It is understood that the Board and supporters of the Huron Perth Ag Science Centre will need to raise private funds in support of the capital project, especially from agriculture-related businesses, organizations and individuals. It is also assumed that the municipal contribution to the project will include the land and support for operating costs. Capital funds will need to be secured in part from federal and provincial funding sources, however it is important to note that many of these funds are matching in nature and cannot be procured without some level of private support. The potential federal and provincial funding sources are set out below, including their eligibility requirements.

It is important to note that it is the intention of both the federal and provincial governments to support infrastructure projects which are shovel ready as part of a post-COVID economic stimulus for the country and province.

B.1: CANADA CULTURAL SPACES FUND

The Canada Cultural Spaces Fund (CCSF) supports the improvement of physical conditions for arts, heritage, culture and creative innovation, including museums. The Fund supports renovation and construction projects, the acquisition of specialized equipment and feasibility studies related to cultural spaces.

Key points for the Huron Perth Ag Science Centre in applications for CCSF capital monies are as follows:

- ***The Centre would be eligible to submit directly for capital funds if incorporated as a not-for-profit entity, or this application can be put forward by the municipality or an agency of the municipality.***
- ***Huron Perth Ag Science Centre is not required to own the property, however it would require a long-term lease agreement with the municipality- a minimum of 10 years, along with the documentation of the operating agreements in effect between the organization and the facility owners and other tenants***.
- Huron Perth Ag Science Centre would be required to present a formal business plan if the funding request was made for greater than one million dollars. This completed feasibility study and projections would satisfy this granting requirement.
- Huron Perth Ag Science Centre **may** be required to produce Class C capital cost estimates, but these are not mandatory to apply. This study includes a pre-design Class D estimate.
- Applications are accepted on an ongoing basis. Though we highly recommend contacting your area grants officer with the Department of Canadian Heritage before submitting an application, as well as liaising with your MP's office as political will is important to gaining program support.

- CCSF is a matching grant, the maximum federal contribution is $15 million or 50% of total eligible project costs, whichever is less. Huron Perth Ag Science Centre will therefore need capital funding support from private and other government sources.

B.2: CANADA CULTURAL INVESTMENT FUND

The Canada Cultural Investment Fund encourages private sector investment, partnership and sound business practices to help arts and heritage organizations be better rooted and recognized in their communities.

The Canada Cultural Investment Fund provides support through three components:

Strategic Initiatives

The Strategic Initiatives component provides financial assistance for projects involving multiple partners that will help arts and heritage organizations improve their business practices and diversify their revenues. By supporting collaborative projects, Strategic Initiatives encourages knowledge and resource sharing and the strategic use of technologies that will strengthen the business operations of arts and heritage organizations, helping them make stronger contributions to Canadian society and the economy.

To date, over 95 projects have been approved for an amount of over $28 million.

Endowment Incentives

The Endowment Incentives component encourages arts organizations to build new revenue streams. Canadians are encouraged to support the arts by providing donations to an arts organization's endowment fund. The government provides a funding incentive for these donations. To date, more than 230 arts organizations have received matching funds. This is a gift matching program for private donations. The maximum that can be requested is 50% of the average total operating revenues of the organizations past three completed fiscal years.

Huron Perth Ag Science Centre would need to **partner** with a public foundation in order to apply for this matching program. The funds received, together with the equivalent sum raised from private donors, must be capitalized in perpetuity in the foundation's restricted assets, and only the income generated by the funds can be used. They can only be used in support of the associated not-for-profit, and not for other uses. If the Ag Science Centre were to partner with such a Foundation, these monies would be required to be kept separate from that of the main account of said Foundation.

Ideally Huron Perth Ag Science Centre would apply for this program in a year where it has been actively campaigning for donations during the full period of eligibility. It can apply for this grant annually. Applications are due December 1st of each year.

As of December 1, 2021, the period to raise and deposit private donations will return to encompassing 12 months, from November 1, 2020 to October 31, 2021.

B.3: INVESTING IN CANADA INFRASTRUCTURE PROGRAM

The Investing in Canada Infrastructure Program (ICIP) is a cost-shared infrastructure funding program between the federal government, provinces and territories, and municipalities and other recipients. This program envisions up to $30 billion in combined federal, provincial and other partner funding, under four priority areas, including Community, Culture and Recreation.

The Community, Culture and Recreation stream will support community infrastructure priorities across the province, improving access to and / or quality of community, cultural, and recreation priority infrastructure projects. A first intake for this grant was completed in 2019, with a second intake tentatively, but not guaranteed to occur in 2021. It is important to note that as of December 2020 the grant funds for the 2019 intake have not yet been released by the provincial government. (There is a total of $38.12 million under review and an additional $18.51 million for this program that has been unallocated).

Important considerations for the grant if Huron Perth Ag Science Centre would like to apply in the next round of intake are as follows:

- Huron Perth Ag Science Centre would be **eligible** in the **Rehabilitation and Renovation Category** if the project moved forward with an adaptive reuse of an existing building (project total cost cap is $5 million in this category) provided it has a long-term lease agreement (minimum ten years) in place with the municipality.
- Huron Perth Ag Science Centre would be **eligible** in the **Multi-Purpose Intake** if the project moved forward with a new build (project total cost cap is $50 million in this category) provided it has a long-term lease agreement (minimum ten years) in place with the municipality.
- Huron Perth Ag Science Centre would **not** need to own the facility as the municipality would be an eligible owner.
- The cost sharing breakdown for this program is as follows Federal- 40%, Provincial 33.33% and Applicant cost share 26.67%. Federal funds are stackable, applicants can apply for a project already receiving funding through other capital programs such as CCSF. Provincial funds are not stackable.

B.4: ONTARIO TRILLIUM FOUNDATION

The Ontario Trillium Foundation's Capital Grants stream assists with renovations, installations and repairs or building structures and spaces. These are one-year grants ranging in value from $5,000 to $150,000.

- Huron Perth Ag Science Centre would be **eligible** within the Inspired People: Arts, culture and heritage category of grant results.
- Huron Perth Ag Science Centre would require a lease agreement in place for at least five years for the facility.

B.5: INFRASTRUCTURE ONTARIO LOAN PROGRAM

Loans are available for the construction, renovation, energy efficiency projects, and accessibility improvement. Non-profit arts organizations are eligible to apply. This is a loan rather than a grant with repayment terms ranging from 5 to 20 years.

B.6: INVESTING IN CANADA INFRUSTRUCTURE PROGRAM: COVID019 RESILIENCE STREAM

The Government of Canada is adapting the Investing in Canada Infrastructure Program to respond to the impacts of COVID-19. The Program, delivered through bilateral agreements with provinces and territories, is being adjusted to add some flexibilities, expand project eligibility and accelerate approvals.

- The maximum size of projects under the stream is set at $10 million total eligible costs, the federal contribution from all sources is up to 80% for provinces, municipalities and not-for-profit organizations in the provinces
- Construction must start no later than September 30, 2021 and must be completed by the end of 2021 or by end of 2022 in the territories and in remote communities
- Retrofits, repairs and upgrades for municipal infrastructure is eligible, and therefore Huron Perth Ag Science Centre would be eligible if created within an adaptive reuse building.

B.7: RURAL ECONOMIC DEVELOPMENT PROGRAM

This provincial initiative was designed to help create jobs and boost growth in rural communities in Ontario. Huron Perth Ag Science Centre would be eligible either as a municipal agency or as a not-for profit entity. The Economic Infrastructure Stream funds up to 30% of eligible project costs up to a maximum of $250,000.

- Huron Perth Ag Science Centre would be eligible under this stream if implemented as the redevelopment of a vacant or under-used existing property within the municipality.
- This feasibility study can be submitted to identify this initiative as an economic development priority for the region.
- Granting is usually made within three months from the posted intake closure date.
- The intake for the next **Rural Economic Development Program is scheduled to open in December 2020.**

APPENDIX C: DETAILED CAPITAL COST ESTIMATE

NORTH PERTH AG SCIENCE CENTRE
ORDER OF MAGNITUDE ESTIMATE

PREPARED FOR:
LORD CULTURAL RESOURCES
400 - 1300 Yonge Street, Toronto, Ontario. M4T 1X3

PREPARED BY:
Altus Expert Services
33 Yonge Street, Suite 500, Toronto, ON, M5E 1G4
Phone: (416) 641-9500
Issue Date:- December 3, 2020

December 3, 2020 Project No.: 20130.103XXX

LORD CULTURAL RESOURCES
400 - 1300 Yonge Street
Toronto, Ontario
M4T 1X3

Attention: Ted Silberberg

Re: NORTH PERTH AG SCIENCE CENTRE, ORDER OF MAGNITUDE ESTIMATE , R1

Dear Ted

We submit for your review our report in accordance with the terms of our engagement.

The estimate includes all direct and indirect construction costs, general conditions, as well as, contractor's overheads and profit. We have furthermore included cost allowances for soft costs, furniture and security installation and third party commissioning

The estimate includes the following contingencies, which are defined within the body of this report.

- 12.0% for design and pricing contingency (average percentage rate)
- 10.5% for escalation contingency
- 5.0% for construction contingency (post contract change orders)

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Details of our Client Data Policy are located on our website at www.altusgroup.com.

Should you have questions related to this report please do not hesitate to contact the undersigned.

Yours Truly,
ALTUS GROUP LIMITED

Anil Ramjee PQS MRICS
Director

Ryan Stephenson
Cost Consultant

Altus Group

REPORT CONTENTS

1 Introduction

1.1 Scope

This project includes for the construction of a facility for the North Perth AC Science Centre. The scope of the project includes for the construction of a new building with a total GFA amounting to 21,000 square feet.

The Order of Magnitude - Class D Estimate is intended to provide a realistic budget of the hard construction costs and soft costs based on the level of design information provided. The estimate reflects our opinion as to the fair market value for the hard construction of this proposed project and is not intended to predict the lowest bid.

The estimate includes all direct and indirect construction costs consistent with the design information provided. Certain exclusions and qualifications may apply; please refer to Section 3.

2 Project Details

2.1 General Information

From the design information provided, we have measured quantities where possible and applied unit rates for the specific items based on the conceptual design drawings and outline project specifications. Where design information was limited, we made inquiries to the relevant design discipline and/or made assumptions based on our experience with projects of a similar type, size, and standard of quality.

2.2 Location

The location cost base for this estimate is North Perth, Ontario

2.3 Measurement and Pricing

The estimate has been derived using generally accepted principles on method of measurement in accordance with the Canadian Institute of Quantity Surveyors Elemental Cost Analysis and/or Method of Measurement of Construction Works.

The unit rates used in this estimate where applicable include labour and material, equipment, and subcontractor's overheads and profit. Pricing is based on our experience with projects of a similar design.

We have assumed that both union and non-union commercial contractors would perform the work. This estimate is not intended to be a prediction of the lowest bid and assumes competitive bidding for all aspects of the work.

2.4 Environmental Sustainability

The estimate incorporates sustainable design elements consistent with Green Standards as identified within the design information provided. Although the design and pricing incorporate energy efficient and sustainable elements, the costs associated with the actual certification with a regulatory body is not included in the estimate. Premium costs relating to the additional site management required and submission of the necessary documentation for certification is excluded from this estimate.

2.5 Taxes

Provincial Sales Tax (PST) is included where applicable in the unit rates. However, the Harmonized Sales Tax (HST) and/or the Goods and Services Tax (GST) have been excluded.

2.6 General Requirements and Fees

The fee for the Contractor is included. The general requirements are based on our assumptions of the anticipated construction approach and schedule.

The estimate includes premiums associated with bonding and insurance

2.7 Procurement Methodology

We have assumed that the project would be procured with a General Contractor approach under a CCDC standard form of contract.

We have assumed a minimum of three bids would be received for all major trade categories of work to establish competitive bidding and tender results. The estimate is a determination of fair market pricing and not a prediction of lowest bid in any trade category. Please note that should the above minimum bidding conditions not occur on this project, construction bids received could vary significantly from the estimated costs included within this report.

2.8 Schedule / Phasing

The project has been priced to be completed as a single phase.

The unit rates in our estimate are based on construction activities occuring during normal working hours and proceeding within a non-accelerated schedule.

3 Scope Assumptions & Exclusions

3.1 Inclusions and Assumptions

The inclusions for this project have been based on all the documentation provided to date. We have made assumptions where applicable and have noted them below.

Site Development

- The site for this project is unknown, however the cost estimate makes the following assumptions which are to be confirmed and updated once the site and site conditions are known.
- For the purposes of this cost estimate, we have assumed stable soil conditions for the project with no requirements for soil remediation or contaminated soils removal and disposal.
- It is assumed that there are no existing building structures on the site and therefore no allowances have been included within this estimate for demolition work.
- It is assumed that the site is level and does not require any bulk earthworks for cut and fill to create desired grading levels
- Municipal site services connections are assumed to be within a 1km range of the site. It is further assumed that existing municipal services are adequate to accommodate for the new building construction.

Foundations

- Standard strip footings, comprising 25Mpa concrete, approximately 600mm wide x 300mm thick
- Reinforced concrete foundation walls, 30Mpa concrete strength, approximately 200mm thick
- Excavations to below frost depth at 1200mm deep
- Imported clean granular backfill in lieu of using native excavated fill

Ground Floor Slab

- Slab on grade, with base build up comprising granular backfill, compacted to engineer's requirements, 125mm thick concrete slab with 25Mpa concrete strength
- Mesh wire reinforicng to slab

Upper Floor Construction

- Composite suspended floor slab, 200mm thick, comprising;
  - Structural Steel Floor Framing
  - Metal Decking
  - Mesh Reinforcing
  - Concrete Topping
  - Movement Joints, Construction Joints, Curing and Finishing

Structural Frame

- Building framing, comprising;
  - Steel Columns
  - Steel Beams
  - Joists
  - Connection plates, bolts, etc.
  - Fire Proofing & painting work to exposed steel
  - Precast concrete stair construction

Roof Construction

- Roof structure comprising
  - Structural steel OWSJ
  - Beams
  - Columns
  - Connection plates & bolts
  - Fireproofing
  - Metal decking
  - Concrete topping
  - EPDM or similar roof finish

Building Façade

- Composite façade
- Curtain wall
- Doors, Frames and Hardware

Interior Finishes

- Gypsum partitions
- Interior wood doors, frames and hardware
- Interior floor finishes
- Interior wall finishes
- Interior ceiling finishes

Mechanical Installation

- Plumbing pipework, fittings, etc.
- Sprinkler installation
- HVAC
- Building Automated Controls

Electrical Installation

- Electrical distribution, conduits, etc.
- Lighting, devices and heating
- Systems and ancillaries

Soft costs allowance includes for the following:

Professional Fees

- Project Management Fee
- Architect's Fee
- Civil Engineer's Fee
- Structural Engineer's Fee
- Mechanical Engineer's Fee
- Electrical Engineer's Fee
- Landscape Design Fee
- Cost Consultant Fee
- Other Fees

Development Cost

- Property Tax
- Legal Fees
- Survey Costs
- RFP/RFQ Costs
- Financing
- Investigations

3.2 Construction Budget Exclusions

The following items are excluded from the estimate:

- Harmonized Sales Tax (HST)
- Realty taxes, levies, insurance
- Operating or maintenance expenses
- Interest/finance charges (on any financing)
- Vibration/noise control premiums
- Moving or relocation costs
- Sole sourcing of materials, services, or equipment
- Phasing premium (assumed to be executed in a single phase)
- Site development costs

4 Contingencies

4.1 General

The effective use of contingencies in construction cost planning requires a clear understanding of estimating risks in both a project specific and general construction market sense. The appropriate level of contingency is dependent on the amount of information available, knowledge of the design teams' methods and philosophy, the timing of the estimate preparation relative to the project design and construction schedule, and the anticipated complexity of the construction work.

4.2 Design and Pricing

A design and prising contingency of 12**%** is included in the estimate. This allowance where included is meant to cover pricing and design unknowns during the preparation of this estimate, and not additional scope or functional program requirements

4.3 Escalation

An escalation contingency of **10.5%** has been included in the estimate . This allowance is meant to address anticipated changes in construction costs due to market fluctuations between the date of this report and the anticipated midpoint of construction phase.

Escalation is calculated, based on the following parameters:

- Annual Escalation Rate
  4.5%
- Estimate Base Date
  December 3, 2020
- Construction Start Date
  April 1, 2022
- Construction Duration in Months
  24
- Pre-Contract Escalation Period
  16
- Post Contract Escalation Period (Midpoint)
  12
- Total Escalation Period in Months
  28

4.4 Construction Contingency (Post Contract)

Post contract contingency has been included at **5%** of the construction cost. The intention of this contingency is to cover the cost of post contract change orders.

4.5 Construction Phasing

Construction phasing contingency has been **EXCLUDED** from the estimate. The construction work is assumed to be completed in a single phase

4.6 Acceleration / Overtime

Acceleration / Overtime contingency has been **EXCLUDED** from the estimate. It is assumed that all construction work will be completed within normal working hours

4.7 COVID-19

The COVID-19 pandemic has the potential to materially impact the project construction budget beyond the estimate provided herein and outside of "standard" project contingencies. This estimate does not include any potential COVID-19 related impact costs. We recommend the Developer/Client assess each project individually and apply an appropriate contingency.

5 General Statement of Liability

5.1 Probable Costs and Ongoing Cost Control

Altus Group Limited does not guarantee that tenders or actual construction costs will not vary from this estimate. Acute market conditions, proprietary specifications, or competition/collaboration among contractors may cause tenders to vary from reasonable estimates based on normal and abnormal competitive conditions.

Altus Group Limited recommends the owner and/or design team review the cost estimate report including line item descriptions, unit prices, allowances, assumptions, exclusions, and contingencies to ensure the appropriate design intent has been accurately captured within the report.

It should be noted that the cost consultants are not qualified to confirm that construction work and design is in accordance with approved plans and specifications.

Details of our Client Data Policy can be found at www.altusgroup.com

7 Introduction

7.1 The following appendices are included with this report:

A. Project Statistics
B. Executive Summary
C. Elemental Summary

A. Project Statistics

FLOOR AREA DETAILS

Floor Level / Description	Gross Floor Area (GFA)	
	(m^2)	(sf)
Zone A	286	3,080
Zone B	1,106	11,900
Zone C	195	2,100
Zone D	364	3,920
Total	1,951	21,000

B. Executive Summary

Altus Group

EXECUTIVE SUMMARY

$13,751,000
PROJECT TOTAL

$7,048 /m2
TOTAL /m2
$655 /sf
TOTAL /sf

Building Component	Building	Site	Total
Net Construction Cost	$6,508,618	$0	$6,508,618
General Requirements	$781,034	$0	$781,034
Fee (Head office overheads & profit)	$195,259	$0	$195,259
Sub-Total	$7,484,910	$0	$7,484,910
Design and Pricing Contingency	$898,189	$0	$898,189
Escalation Contingency	$785,916	$0	$785,916
Construction Contingency	$374,246	$0	$374,246
Construction Phasing Contingency	$0	$0	$0
Acceleration/Overtime Contingency	$0	$0	$0
Cash Allowances (Refer to - Appendix E)	$0	$0	$0
Sub-Total	$9,543,261	$0	$9,543,261
Pre-Construction Allowance	$150,223	$0	$150,223
Permanent Exhibition Space	$2,750,000	$0	$2,750,000
Kids Play Zone	$450,000	$0	$450,000
Professional Fees	$380,435	$0	$380,435
Legal Fees	$39,019	$0	$39,019
Supply and Installation - FF&E	$234,114	$0	$234,114
Building and/or Development Fees	$23,411	$0	$23,411
AV System	$97,547	$0	$97,547
Security System & Monitor Room	$74,136	$0	$74,136
Third Party Commissioning	$8,779	$0	$8,779
Sub-Total	$13,750,925	$0	$13,750,925
HST	$0	$0	$0
TOTAL PROJECT COST	$13,750,925	$0	$13,750,925
Rate per square foot	$654.81	$0.00	$654.81

C. Elemental Summary

ELEMENTAL SUMMARY

Altus Group

$9.543.000
PROJECT TOTAL

$4,891 /m2
TOTAL /m2

$454 /sf
TOTAL /sf

1,951 m2

21,000 sf

Element	GFA Ratio	Element Quantity	Element Unit Rate	Cost Total	$ Total/m2 GFA	%
A SHELL				2,903,010	1,488 /m2	30%
A1 Substructure				342,391	176 /m2	3.6%
A11 Foundations	0.50	975 m2	351.00 /m2	342,391	176 /m2	3.6%
A12 Basement Excavation	0.00	0 m3	0.00 /m3	0	0 /m2	0.0%
A2 Structure				746,237	383 /m2	7.8%
A21 Lowest Floor Construction	0.50	975 m2	105.00 /m2	102,425	53 /m2	1.1%
A22 Upper Floor Construction	0.50	975 m2	360.00 /m2	351,171	180 /m2	3.7%
A23 Roof Construction	0.50	975 m2	300.00 /m2	292,642	150 /m2	3.1%
A3 Exterior Envelope				1,814,381	930 /m2	19.0%
A31 Wall Below Grade	0.00	0 m2	0.00 /m2	0	0 /m2	0.0%
A32 Walls Above Grade	1.00	1,951 m2	400.00 /m2	780,379	400 /m2	8.2%
A33 Windows & Entrances	1.00	1,951 m2	290.00 /m2	565,775	290 /m2	5.9%
A34 Roof Covering	1.00	1,951 m2	210.00 /m2	409,699	210 /m2	4.3%
A35 Projections	1.00	1,951 m2	30.00 /m2	58,528	30 /m2	0.6%
B INTERIOR				1,523,946	781 /m2	16%
B1 Partitions & Doors				370,680	190 /m2	3.9%
B11 Partitions	1.00	1,951 m2	140.00 /m2	273,133	140 /m2	2.9%
B12 Doors	1.00	1,951 m2	50.00 /m2	97,547	50 /m2	1.0%
B2 Finishes				692,586	355 /m2	7.3%
B21 Floor Finishes	1.00	1,951 m2	120.00 /m2	234,114	120 /m2	2.5%
B22 Ceiling Finishes	1.00	1,951 m2	160.00 /m2	312,152	160 /m2	3.3%
B23 Wall Finishes	1.00	1,951 m2	75.00 /m2	146,321	75 /m2	1.5%
B3 Fittings & Equipment				460,680	236 /m2	4.8%
B31 Fittings & Fixtures	1.00	1,951 m2	190.00 /m2	370,680	190 /m2	3.9%
B32 Equipment	1.00	1,951 m2	0.00 /m2	0	0 /m2	0.0%
B33 Conveying Systems	0.00	2 stop	45,000.00 /stop	90,000	46 /m2	0.9%
C SERVICES				2,081,661	1,067 /m2	22%
C1 Mechanical				1,170,569	600 /m2	12.3%
C11 Plumbing & Drainage	1.00	1,951 m2	160.00 /m2	312,152	160 /m2	3.3%
C12 Fire Protection	1.00	1,951 m2	30.00 /m2	58,528	30 /m2	0.6%
C13 HVAC	1.00	1,951 m2	350.00 /m2	682,832	350 /m2	7.2%
C14 Controls	1.00	1,951 m2	60.00 /m2	117,057	60 /m2	1.2%
C2 Electrical				911,093	467 /m2	9.5%
C21 Services & Distribution	1.00	1,951 m2	105.00 /m2	204,849	105 /m2	2.1%
C22 Lighting, Devices & Heating	1.00	1,951 m2	300.00 /m2	585,284	300 /m2	6.1%
C23 Systems & Ancillaries	1.00	1,951 m2	62.00 /m2	120,959	62 /m2	1.3%
D SITE & ANCILLARY WORK				0	0 /m2	0%
D1 Site Work				0	0 /m2	0.0%
D11 Site Development	0.00	0 m2	0.00 /m2	0	0 /m2	0.0%
D12 Mechanical Site Services	0.00	0 m2	0.00 /m2	0	0 /m2	0.0%
D13 Electrical Site Services	0.00	0 m2	0.00 /m2	0	0 /m2	0.0%
D2 Ancillary Work				0	0 /m2	0.0%
D21 Demolition	0.00	0 m2	0.00 /m2	0	0 /m2	0.0%
D22 Alterations	0.00	0 m2	0.00 /m2	0	0 /m2	0.0%
Net Construction Estimate				6,508,618	3,336 /m2	68.2%
Z GENERAL REQUIREMENTS & ALLOWANCES				976,293	500 /m2	10%
Z1 General Requirements & Fee				976,293	500 /m2	10.2%
Z11 General Requirements		12.0%		781,034	400 /m2	8.2%
Z12 Fee (Head office overheads & profit)		3.0%		195,259	100 /m2	2.0%
Total Construction Estimate (Excluding Contingencies)				7,484,910	3,837 /m2	78.4%
Z2 Contingencies				2,058,350	1,055 /m2	21.6%
Z21 Design and Pricing Contingency		12.0%		898,189	460 /m2	9.4%
Z22 Escalation Contingency		10.5%		785,916	403 /m2	8.2%
Z23 Construction Contingency		5.0%		374,246	192 /m2	3.9%
Z24 Construction Phasing Contingency		0.0%		0	0 /m2	0.0%
Z25 Acceleration/Overtime Contingency		0.0%		0	0 /m2	0.0%
Z26 Cash Allowances		sum		0	0 /m2	0.0%
Total Construction Estimate (Including Contingencies)				9,543,261	4,892 /m2	100.0%
HST		0.0%		0	0 /m2	0.0%
TOTAL CONSTRUCTION COST				9,543,261	4,892 /m2	100%