Community Cemetery Assessment

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STRATHCONA COUNTY

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Executive Summary

Strathcona County is exploring the need for a community cemetery to serve current and future residents. Municipal cemeteries offer a range of services and a spectrum of price points for all residents. The provincial *Cemeteries Act* was recently changed to state that "no new cemetery may be established except by a religious auxiliary, religious denomination, or municipality."

In July 2018, Council approved an external review to report on the viability and desirability of a community cemetery in Strathcona County. In April 2019, the County issued a Request for Proposals inviting consultants to conduct a community cemetery assessment. This report summarizes the first two phases of this project:

- Phase 1 – Introduction and Background
- Phase 2 – Market and Community Demand Analysis

Information is provided on community cemeteries, including common design principles, cemetery services, and design features and approaches. Operational structures are presented and evaluated. All cemeteries in communities equivalent in size to Strathcona County are owned and operated by the municipality, with a limited amount of contracting of services in some cases. This is because the costs, needed expertise, administrative requirements, operations, and risks are all significant.

Public engagement was conducted to solicit feedback from residents on the potential for a community cemetery. Stakeholder workshops and open houses took place, along with a community-wide survey. The community survey received a total of 534 responses, and participants were well distributed in Sherwood Park and rural areas, and across age groups. Seventy-four percent of participants reported that their remains are more likely to be cremated. A majority of participants (68%) think that Strathcona County should have a community cemetery. The primary reasons for this were cited as a more affordable option, inclusive of all people and religious beliefs, accessible, and offering environmentally friendly services such as green burial. Participants expressed interest in a wide range of cemetery services in the following order: columbarium, green burial, cremated remains plot, scattering garden, family columbarium, full burial, memorial, and cremated remains above burial.

Comparable cemeteries in communities of similar sizes were investigated to determine their services, trends, organizational structure, and fees. Existing cemeteries in Strathcona County were reviewed to identify their services, population served, and capacity.

Based on the projected interment demand in Strathcona County and the review of capacity in existing cemeteries, the following are the key findings:

- Existing cemeteries in Strathcona County have the capacity to meet demand for the next 30 years
- Capacity is primarily in two faith-based cemeteries and the private cemetery
- Faith-based cemeteries are not an option for some residents
- Fees at private cemeteries are generally higher than at other cemeteries reviewed, including comparable municipal cemeteries
- Existing cemeteries have limited options for green burial

A community cemetery would help the County be consistent with the following common themes from strategic documents and community engagement:

Options   Inclusivity   Affordability

Two scenarios for a community cemetery are presented in response to the key findings:

- Scenario 1 - Strathcona County establishes a full-service community cemetery to provide all residents with a variety of affordable services
- Scenario 2 - Strathcona County establishes a cemetery offering only green burial and scattering, to complement the services available at the private cemetery and to offer limited affordable options

Should Council choose to proceed with planning for a community cemetery based on this report, the next steps include the following:

- Phase 3 - Financial feasibility and funding analysis
- Phase 4 – Identifying and evaluating potential locations for a cemetery

If Phases 3 and 4 are conducted, Scenarios 1 and 2 will both be explored, and options for existing rural and historic cemeteries will be identified.

1.0 Introduction

1.1 Context

Strathcona County does not currently own or operate a community cemetery. Cemetery services are provided within the County by a private corporation, religious-affiliated organizations, and some volunteer community-based groups.

Three cemetery markets influence the region – the full-service private cemetery in Sherwood Park, the rural areas around the County where the cemeteries offer more basic services, and the urban Edmonton area with a range of services in municipal and faith-based cemeteries. The County is unique in that, for the size and population, it does not have a municipal cemetery. The services currently at faith-based and rural cemeteries are not available to the entire population, and in a cemetery run by a private corporation, the price point is higher than in many municipal cemeteries.

For several years, there has been discussion within the County regarding the potential for a community cemetery. In 2016, the Burial Options Society in Strathcona (BOSS) was incorporated as an Alberta non-profit society with a mandate to advocate for a municipal cemetery. BOSS has partnered with Strathcona County in hosting some workshops and providing material on cemetery options, including green burial, to County residents. In 2017, Council provided funding for BOSS to pursue an exploration of cemetery needs in the County. The results were presented to Council in February 2018.

On July 3, 2018, Council made the following motion: "THAT the 2019 budget include funds, up to $60,000, to support an external review and report on the viability and desirability of a community cemetery in Strathcona County; and that this report be provided to Council for consideration by the end of 2019."

In April 2019, the County issued a Request for Proposals inviting consultants to conduct a community cemetery assessment. Urban Systems was awarded the contract for a four-phase project. This report summarizes Phases 1 and 2. Phases 3 and 4 are each contingent upon approval of the preceding phase of work.

1.2 Planning Process

In keeping with the County's protocols for community engagement, a Communications Plan was prepared for this project in alignment with the goals of the County's Strategic Plan and its commitment to provide opportunities for public engagement and support for the diverse needs of residents. The following were the goal and objectives of engagement:

GOAL

- Inform and engage stakeholders and residents in a process that will increase the County's understanding of resident's interests related to a community cemetery

OBJECTIVES

- Increase internal and external understanding about the exploration of needs for a community cemetery and what type of cemetery is appropriate for Strathcona County
- Raise awareness and inform stakeholders and community members of the project and opportunities to provide input
- Obtain input and build a shared vision from a diverse range of stakeholders and residents with different demographic backgrounds and cultural interests

The following were the key engagement tools (in consecutive order):

- A community survey hosted on the County's Gizmo and SCOOP (Strathcona County Online Opinion Panel) platforms
- Presentation and workshop with the Community Living Advisory Committee

- Stakeholder meetings in Sherwood Park and South Cooking Lake. Invited stakeholders included:
  - Cemetery operators – all types of existing cemeteries
  - Religious leaders
  - Funeral directors and funeral home operators that serve the County
  - Burial Options Society in Strathcona (BOSS) board members
  - Councillors
- Public open houses in Sherwood Park and South Cooking Lake
- Presentations and workshops with the Youth Advisory Committee and Accessibility Advisory Committee

Multiple tools were used to invite participation in the engagement process including the following:

- Media release
- Webpage
- Emails to stakeholders, with follow-up phone calls
- Social media platforms hosted by the County

1.3   Report Guide

This document provides the information needed to help the County decide whether to pursue a community cemetery in Strathcona County. It includes the following information:

- Phase 1 – Introduction and background
  - Policy context – overview of County policies relevant to a community cemetery
  - Understanding community cemeteries – information of existing cemetery principles, forms, operational structures, and establishment
  - Community input – summary of the results of the engagement process
- Phase 2 – Market and community demand analysis
  - Market and demand analysis – existing and comparable cemeteries and projection of cemetery demand
  - Financial Feasibility – analysis of future revenues and costs

If Strathcona County proceeds, the following will be completed in the next phases:

- Phase 3 – Financial feasibility and funding analysis
  - Projected cash flow scenarios based on needs, revenue forecasts, operating costs, and capital costs
  - Comprehensive recommendation – recommendation on approach based on all work completed to date
- Phase 4 – Identifying and evaluating potential locations for a cemetery
  - Site analysis – evaluate potential sites based on assessment criteria
  - Community input – present work to date to the community to request feedback
  - Site recommendation – based on site analysis and community input, recommend preferred site

2.0 Policy Context

2.1 2013 – 2030 Strategic Plan

Strathcona County's Strategic Plan is the principal guiding document for governance, community development, infrastructure, and service delivery. It outlines the County's vision, goals, and priorities for the years 2013-2030, including its plan for "becoming Canada's most livable community".

The Strategic Plan outlines eight community goals, three of which are particularly relevant for the community cemetery assessment:

- Goal 1 – Build strong communities to support the diverse needs of residents
  - This goal supports developing a diverse and inclusive community where municipal services are accessible and affordable
- Goal 2 – Manage, invest, and plan for sustainable municipal infrastructure
  - This goal supports investing in accessible cultural, recreational, and social infrastructure
- Goal 6 – Provide facilities and services that are available and accessible to residents
  - This goal supports providing well-designed infrastructure and adapting to meet community members' changing needs and desires

2.2 Together We Count: Census 2018 Results Report

The Together We Count: Census 2018 Results Report summarizes the results of the voluntary Strathcona County Census that was conducted on May 1, 2018. The census was undertaken in order to provide an up-to-date count of County residents and facilitate planning for community projects and services.

Key findings from the census are listed in the table below:

2018 Census Results	
Total 2018 Population	**98,381**
Population (Urban Area)	71,332
Population (Rural Area)	27,049
Total Number of Dwellings	**37,935**
Dwellings (Urban Area)	28,016
Dwellings (Rural Area)	9,919
Average Age of Residents (Urban Area)	39.8 years
Average Age of Residents (Rural Area)	41.3 years

2.3   Community Social Profile, 2018

Family and Community Services completed a social profile for Strathcona County in order to record and understand the socio-demographic characteristics of the community as well as population subgroups. In 2016, the population of Strathcona County was 98,044, with 70,700 residents living in the urban Sherwood Park area and the remaining 27,345 living in the rural area. Six out of ten residents (61%) had lived in the County for ten years or more, while 16.6% had lived in the County for less than 10 years, 13.2% between two and five years, and 9.3% less than two years. The median age in the County was 40.1 in 2016, and between 2011 and 2016 the seniors' population (people age 65 and older) increased by 34.9% from 10,185 to 13,735 people.

2.4   Social Framework, 2017

The Strathcona County Social Framework outlines current issues facing the County and proposes a rationale for shifting to a new model of service delivery. In 2016, Strathcona County undertook extensive public engagement in order to better understand community priorities, and four themes arose: Affordability, Access to Programs and Services, Connectedness and Inclusion, and Safety. The Framework proposes shifting the way community services are provided in the following ways:

- From programmatic responses to systematic thinking
- From doing _for_ people to doing _with_ people
- From incremental organizational-level outcomes to high aspirations and community-wide outcomes
- From working in silos to collective ownership
- From a focus on symptoms to a focus on root causes

This shift is intended to support increased access to programs and services as well as increased affordability for community members.

2.5   Strathcona County's Statutory Plans and Land Use Bylaw

The Alberta _Municipal Government Act_ is the provincial legislation that empowers municipalities to govern the development of lands within their boundaries. Statutory Plans, which include the Municipal Development Plan, Area Concept Plans, Area Structure Plans, and Area Redevelopment Plans, provide comprehensive planning frameworks, objectives, and policies for orderly growth and development of land in the County.

Strathcona County's Land Use Bylaw regulates use and development of land in pursuit of the policies and objectives of Strathcona County's statutory plans.

2.6   Common Themes

Strathcona County's Strategic Plan and Social Framework have several common themes that are relevant to the consideration of a community cemetery as shown below:

Theme	Strategic Plan	Social Framework
Options	▪ Goal 1 – "… support the diverse needs of residents…" ▪ Goal 2 – "…investing in accessible cultural, recreational, and social infrastructure …"	Access to Programs and Services as one of four themes
Inclusivity	▪ Goal 1 – "…developing a diverse and inclusive community …" ▪ Goal 6 - – "…adapting to meet community members' changing needs and desires …"	Connectedness and Inclusion as one of four themes
Affordability	▪ Goal 1 – "…municipal services are accessible and affordable …" ▪ Goal 6 - – "…facilities and services that are available and accessible to residents …"	Affordability as one of four themes

3.0 Understanding Community Cemeteries

3.1 Design Principles

Community cemeteries strive to provide a range of affordable and inclusive options to residents as a public service.

Small community cemeteries typically offer options for full burial and cremated remains interments. These cemeteries vary widely in their character and condition depending largely on their age and the size of the municipality.

In larger urban centres, there are trends towards recognizing that cemeteries have values as green, open spaces and that it is worth deliberate planning and design efforts to enhance cemeteries as valuable open space that can support respectful recreation use. The following are examples of design principles for these types of community cemeteries:

- Design the cemetery as an appealing, attractive and spiritual place
- Consider universal design principles (accessibility)
- Demonstrate a sustainable approach to planning and design
- Provide a variety of interment options to address multiple cultures and faiths and a range of costs
- Provide opportunities for contemplation, walking, sitting, and gathering
- Maximize interment space and efficiency
- Integrate trees and natural areas
- Design the site with consideration for servicing and maintenance needs

3.2 Cemetery Services

Cemetery services have been evolving in response to economic, environmental and social considerations. The first service in community cemeteries was traditional burial. When cremation was introduced, the next services offered were burial plots for cremated remains. With increasing rates of cremation and concerns about space, columbaria were the next interment service introduced. More recent trends include family columbaria, green burial, scattering gardens, and memorials, as described and illustrated below.

MOST COMMON CEMETERY SERVICES

The following are the most common cemetery services that are found in most community cemeteries.

Full burial

Placement of a full casket in the ground, with mowed grass and a monument on the surface

Cremated remains burial plot

Placement of cremated remains in an urn or container in the ground, with mowed grass and a monument on the surface

Cremated remains above burial

Placement of cremated remains in an urn or container in the ground above a full burial in the same plot

Columbarium

Placement of cremated remains in a niche (securely locked enclosure within a columbarium wall) with a plaque or engraving on the outside

LESS COMMON CEMETERY SERVICES TRENDING UPWARDS

The following cemetery services are relatively new and all are increasing in popularity and therefore being introduced in community cemeteries.

Family columbarium

Placement of cremated remains in a small family monument

Green burial with group marker

Placement of un-embalmed remains in a biodegradable shroud or box in the ground; surface is planted and allowed to naturalize, name is inscribed on a communal monument

Green burial with individual marker

Same as above but each plot has a monument that blends with the environment
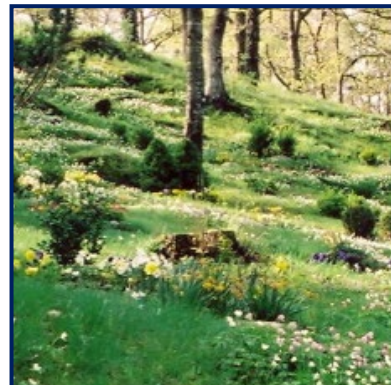
SECONDARY CEMETERY SERVICES

The following cemetery services are included in some cemeteries and not others. They are low cost to offer and to purchase, and appeal to certain people, and can therefore be used to increase options.

Scattering garden

Cremated remains are placed directly in the ground (not in a vessel) in a specific area of the cemetery, name is inscribed on a communal monument

Memorial

Name is placed on a memorial wall or monument with no placement of remains

3.3 Design Features and Approaches

In keeping with the design principles and the values that cemeteries can offer as green open space, community cemeteries in larger municipalities often include amenities that welcome appropriate public use such as walking, sitting, and small gatherings.

The following are common design features:

- Walking paths
- Individual benches
- Seating for groups
- Outdoor gathering space
- Covered shelter or arbour

There are many ways to approach the layout and design of a cemetery. The following are some of the more common design approaches seen in community cemeteries:

Full Interment Areas

- Mowed grass lawn and monuments flush with the ground (1)
- Mowed grass lawn and pillow monuments (2)
- Mowed grass lawn with stand-alone upright monuments (3)
- Mowed grass lawn with upright monuments on concrete runners (4)
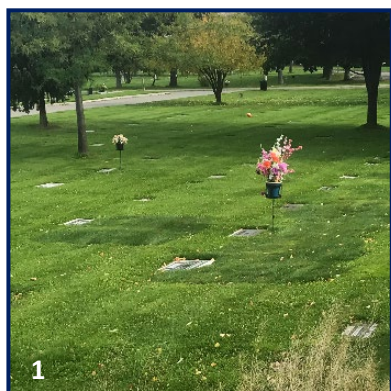
Columbaria

- Columbarium walls clustered in one area
- Columbarium walls distributed throughout the cemetery within the landscape

Green Burial

- Restore to wooded or prairie setting (most common types)
- Mowed grass with individual monuments – grass may not be as level as in traditional full interment areas, not irrigated so grass may not be green year-round

Scattering Garden

- Ornamental grasses and ground covers
- Shrubs and/or perennials
- Wooded areaMemorials
- Wall
- Sculpture
- Monument(s)
- Paving stones or river rocks

Road Layout

- No roads within the cemetery
- Central access road to a roundabout
- Loop road(s)
- Road grid

Parking

- Parking lot at or near entry
- Parking along the sides of internal roads
- Small parking area(s) within the cemetery

Paths

- No paths within the cemetery
- Walking along roads
- Loop paths separate from roads
- Perimeter path

Landscape

- Mowed grass landscape dominates
- Trees along roads
- Trees throughout cemetery
- Garden-like plantings
- Natural areas that integrate placement of remains

Perimeter

- Fence
- Hedge
- Fence and hedge

Entry

- Sign with cemetery name
- Special entry gate

Special Features

- Water features, e.g., fountain, pond, rain gardens
- Public art

3.4   Operational Structures

To support planning and staffing for a cemetery, Strathcona County requested an analysis of potential operational structures. The table below shows the key functions of community cemeteries on the left and potential responsibilities for each function:

Function	Municipality	Funeral Home	Contractor	Non-profit Group
Planning – prepare and update bylaw, establish fees, site planning and design	✔			
Capital Development – construction management	✔		✔	
Public Interface – selling cemetery services, supporting family needs	✔	✔		✔
Administration – record keeping, collecting fees	✔			
Operations and Maintenance – maintaining site, performing interments, installing monuments	✔		✔	✔

> Most community cemeteries perform all of the functions inhouse.

The following are some of the ways that operations are typically organized:

- Planning – most often falls within the responsibility of Parks, sometimes Planning
- Capital Development – can be overseen by Public Works or Parks
- Public Interface/Clerk – for small cemeteries, this responsibility is usually assigned to someone on the municipal administrative team; once a cemetery is large enough, a full-time staff person is assigned, and for very large cemeteries, there may also be support staff
- Administration – usually combined with the person responsible for public interface, or administration can be from the Finance or Administration departments
- Operations and maintenance – can be by Parks and/or Public Works; although not typical in other communities of comparable size with full-service cemeteries, a contractor or non-profit organization could perform this function

Some municipal cemeteries also have portions of the cemetery that are operated by others, such as the following:

- Mausoleum buildings, with some outdoor niches inside and on the outside of the building, operated by a private corporation, though municipal staff conduct the interments
- Columbaria operated by a funeral home

It is fairly common for cemeteries to contract out some services, such as the following:

- Laying concrete foundations for monuments
- Tree work
- Security service to open and close gates and patrol site
- Engraving of monuments

In the analysis described primarily in Section 5.0, public cemeteries in comparable communities were reviewed and their operational structures were identified. The following is a SWOT analysis of the most likely operational structures:

Operational Structure	Strengths	Weaknesses	Opportunities	Threats
Municipally Owned and Operated No staff dedicated specifically to cemetery, common in small communities and cemeteries	Cost savings Do not need to hire new staff	Implementation may be slow Staff may not have the appropriate skills	Build capacity by expanding skill sets	Work is not completed to an appropriate standard
Municipally Owned and Operated Staff with partial cemetery roles from two departments – one for all planning and administration and another for all operations and maintenance	Efficiency in planning, operations, and communications	One department may not have all the skills for each of these responsibility areas	Build capacity by expanding skill sets	Work is not completed to an appropriate standard
Municipally Owned and Operated Staff with partial cemetery roles from multiple departments	Each department can contribute based on their equipment, skills, and experience Staff can learn from each other and work in collaboration	Communication can be more challenging Potential for gaps or overlaps in service	Can be a good stepping stone as cemetery service expands	The division of departments and responsibilities can make planning, record-keeping, and budgeting more cumbersome
Municipally Owned and Operated Dedicated staff for administration and one department for operations	Very efficient and effective model Allows for specific training and experience	Small communities and cemeteries may not be able to justify the expense of dedicated staff	Work towards this option as cemetery expands	Implementing this too early could cost more

Operational Structure	Strengths	Weaknesses	Opportunities	Threats
Operation of a portion of the cemetery by a private corporation, e.g., columbarium	Reduces the workload of the municipality	Significant loss of revenue as these arrangements tend to favour the interests of the private corporation		Establishment of agreements that are difficult to change
Contracting out certain services to a contractor	Can help for specific tasks and reduce needs for municipality to acquire specialized equipment or expertise	Can cost more	Can be a good stepping stone as cemetery service expands and municipal capacity increases	Contractors may not be sensitive to cemetery operations
Contracting out certain services to a non-profit group	Can help for specific tasks and reduce needs for municipality to acquire specialized equipment or expertise	Non-profit group may not have the necessary expertise or equipment	Can be a good stepping stone as cemetery service expands and municipal capacity increases	Group may not have adequate risk protection

None of the comparable community cemeteries involve non-profit groups in cemetery planning, management, or operations. Such cemeteries typically exist only in small rural communities, such as the rural cemeteries in Strathcona County. The costs of managing and operating a cemetery are significant, and a wide range of specialized expertise is required. The administrative requirements are extensive and require obtaining regulatory approvals, managing customers and sales, and maintaining accounting and asset management software systems. Operating a cemetery requires experienced crews who know how to maintain parks and infrastructure.

There are also significant risks to involving non-profit groups. Cemeteries operated by municipalities benefit from the insurance and other risk protection measures that protect property, staff and the public from unanticipated challenges.

4.0 Community Input

4.1 Community Survey

Community engagement included three components - a public survey, stakeholder workshops, and open houses. The public was invited to complete an online survey through SCOOP or Gizmo from October 1 to October 21, 2019.

> The survey received a total of 534 responses across the two platforms and is considered statistically valid.

The summary below presents the findings of this survey. Because all questions were optional, the percentages shown in the graphs are based on the number of respondents that answered each question. For some questions, participants were also given the opportunity to provide comments. Themes from these comments are summarized and the numbers in parentheses show how many comments were related to each theme. A full record of the survey input, including verbatim comments, is available from Strathcona County.

Demographics

The following graphs provide an overview of the demographic characteristics of survey participants. These questions were designed to provide a better understanding of those who participated and the degree to which they represent the broader community.

Seventy-seven percent of survey participants live in Sherwood Park and 21 percent of survey participants live in rural Strathcona County. Seven participants indicated that they do not live in Strathcona County. A majority of participants living in both Sherwood Park and rural Strathcona County have been in living in their current locations for five years or more.
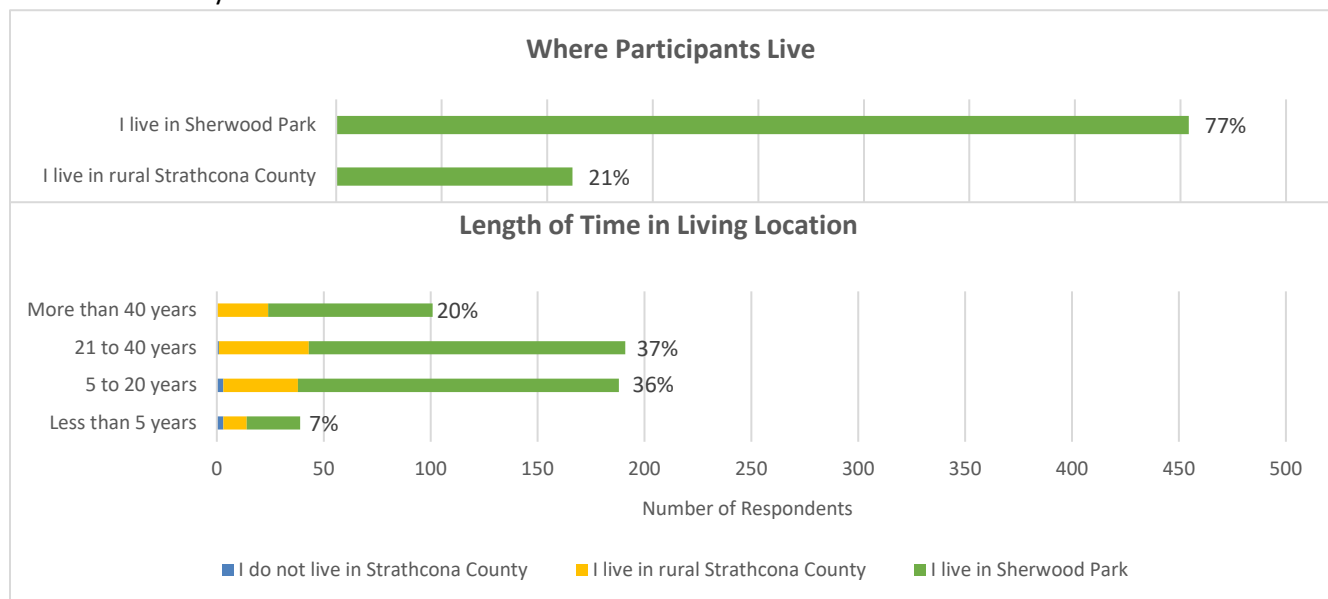
The survey received a good distribution of responses from participants aged 25 to 84. There is a low number of responses from participants aged 15 to 24 and no responses from participants of 85 or older.

Age of Participants

Age	Percent
15 - 24	2%
25 - 34	12%
35 - 44	16%
45 - 54	21%
55 - 64	22%
65 - 74	22%
75 - 84	6%
85 years and older	0%
Prefer not to answer	1%
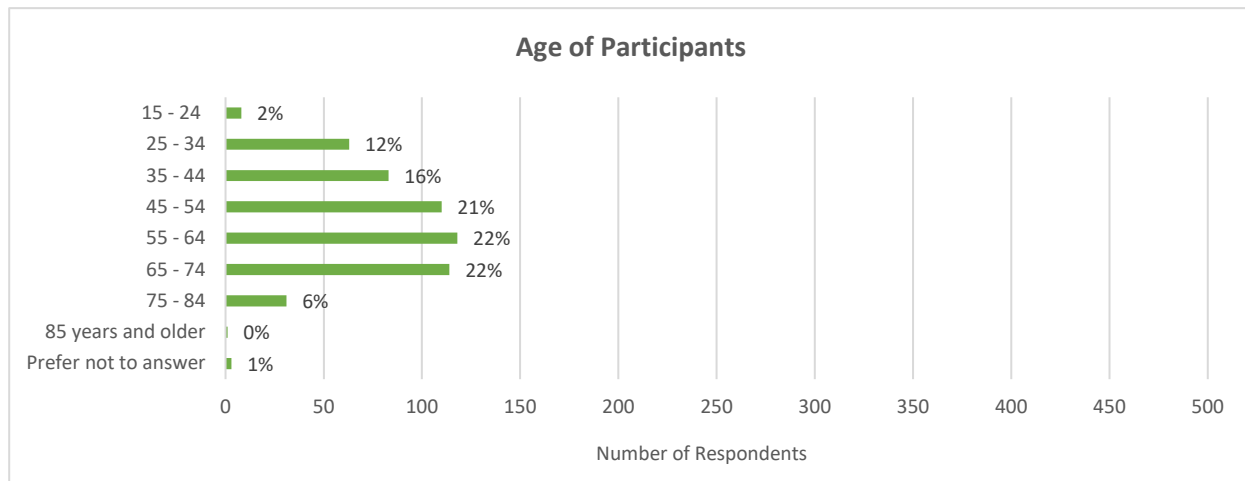
Plans for Burial or Cremation

Seventy-four percent of participants reported that their remains are more likely to be cremated. The remaining participants were equally split between those who were most likely to be buried or unsure. Around 12 percent of participants have already purchased a burial plot or niche.

Plans for Bruial or Cremation

	Percent
Cremated	74%
Not Sure	13%
Buried	13%

Purchased Plot or Niche
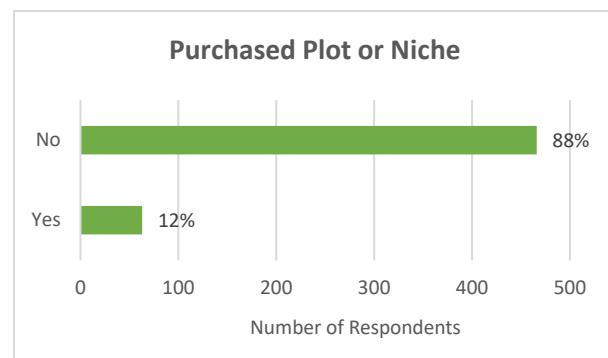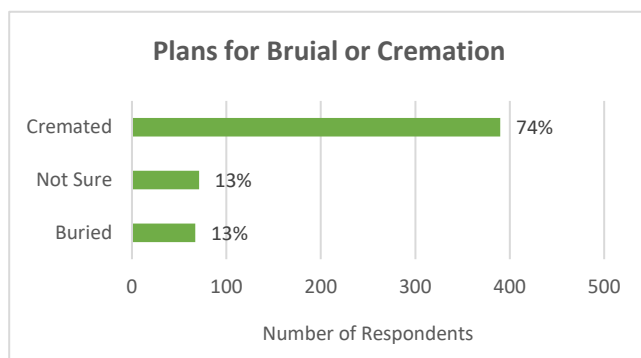
	Percent
No	88%
Yes	12%

Survey participants who indicated that they had purchased a burial plot or niche were asked to specify where it was located. Most of these respondents (43 percent) have purchased in Glenwood Memorial Gardens, 17 percent in Edmonton (Evergreen, Our Lady of Peace and St. Michaels Cemeteries), 11 percent in rural cemeteries, and 29 percent in other parts of Alberta.

Location of Plot or Niche

Category	Percentage
In Glenwood Memorial Gardens	43%
Elsewhere	29%
In a cemetery in Edmonton	17%
In a religious-affiliated cemetery in Strathcona County	11%

(Number of Respondents)
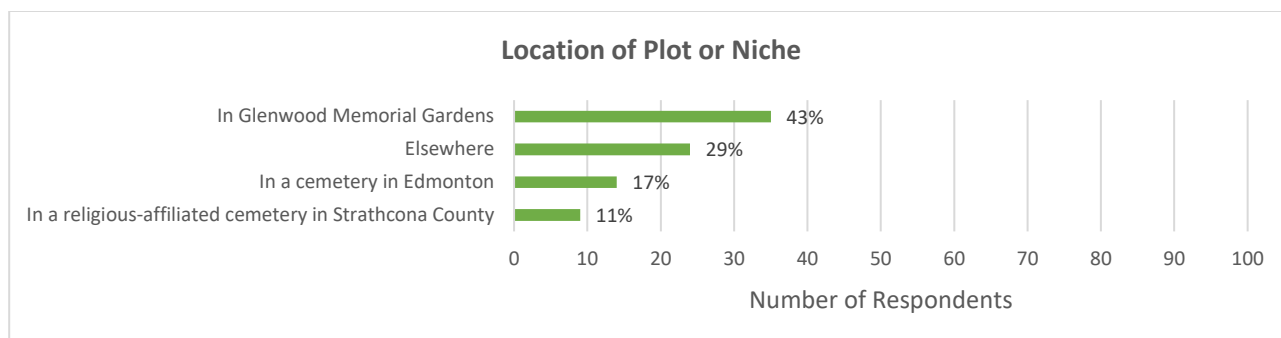
*See footnote 1

When survey participants were asked where their remains are likely to be located, 53 percent of participants said that they were not sure, and 24 percent of participants said that their remains will not be placed in a cemetery. Nine percent said their remains would be located Glenwood Memorial Gardens, with the remaining participants selecting a religious-affiliated cemetery in Strathcona County[1], Edmonton, or elsewhere in Canada.

Cemetery Locations

Category	Percentage
Not sure	53%
My remains will not be placed in a cemetery	24%
In Glenwood Memorial Gardens	9%
In a cemetery elsewhere	7%
In a cemetery in Edmonton	3%
In a religious-affiliated cemetery in Strathcona County	3%

(Number of Respondents)
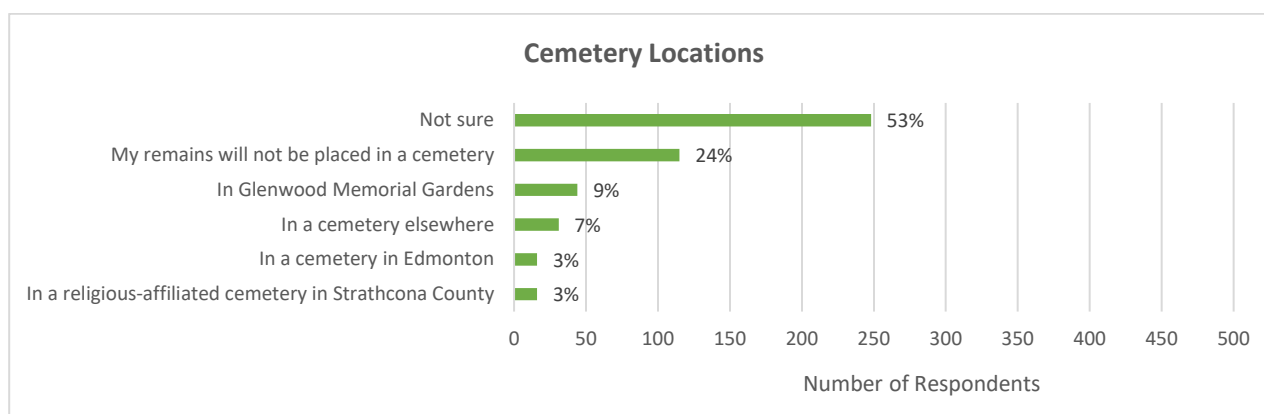
Respondents were asked if there are specific cultural requirements related to how their remains are treated that are important to them. Comments related to this question from two or more people are summarized below.

- Green / environmentally friendly burial (13)
- Catholic protocols (6)
- Christian protocols (4)
- Headstone and plot with spouse or family (2)

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[1] The term "religious-affiliated" was used on the survey to refer to rural cemeteries; it was discovered later that some rural cemeteries do not require a religious affiliation.

Strathcona County Community Cemetery Services and Design Features

The majority (68 percent) of participants think that Strathcona County should have a community cemetery and 16 percent of participants were unsure.

If there was a community cemetery in Strathcona County, 48 percent of participants reported that it was highly or somewhat likely that their remains would be placed there. The remaining participants were divided between being unsure or not interested in having their remains placed in the community cemetery.

Support for a Community Cemetery in Strathcona County
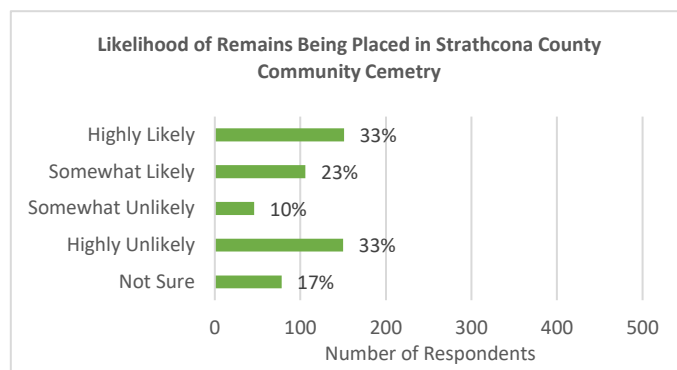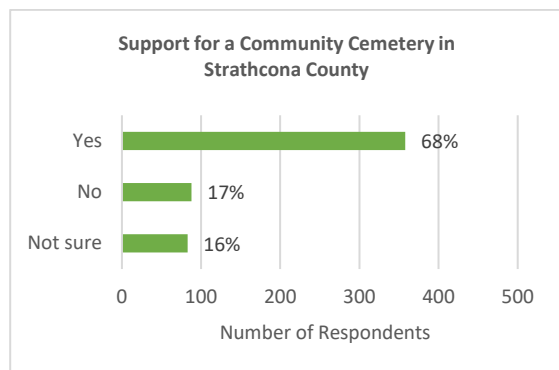
Category	Value
Yes	68%
No	17%
Not sure	16%

Number of Respondents

Likelihood of Remains Being Placed in Strathcona County Community Cemetry

Category	Value
Highly Likely	33%
Somewhat Likely	23%
Somewhat Unlikely	10%
Highly Unlikely	33%
Not Sure	17%

Number of Respondents

Participants were asked about their level of interest in cemetery services. The graph below shows the responses in order of highest interest ('very interested' and 'somewhat interested') to least interest. Participants also had the option of indicating that they were not sure. Overall, participants expressed the most interest in columbaria. Interest in green burial was significantly higher than traditional burial.

Interest in Cemetery Services

Service	Very interested	Somewhat interested	Not at all interested	Not sure
Columbarium	25%	38%	38%	8%
Green burial with group marker	24%	30%	46%	7%
Green burial with individual marker	23%	33%	45%	8%
Cremated Remains Burial Plot	22%	44%	34%	7%
Scattering garden	21%	41%	38%	10%
Family Columbarium	14%	38%	47%	13%
Traditional Burial	13%	23%	64%	6%
Memorial	10%	40%	50%	11%
Cremated Remains Above Burial	10%	32%	58%	13%
Mausoleum	2%	4%	94%	5%

Number of Respondents

Participants were asked about their level of interest in design features in the cemetery. The graph below shows the responses arranged from the highest interest ('very interested' and 'somewhat interested') to least interest.

Interest in Cemetery Design Features

Feature	Very interested	Somewhat interested	Not at all interested	Don't know/no opinion
Walking Paths	55%	31%	9%	5%
Individual Benches	45%	40%	9%	5%
Outdoor Gathering Space	30%	47%	16%	8%
Covered Shelter	27%	39%	23%	11%
Seating for groups	26%	40%	23%	11%
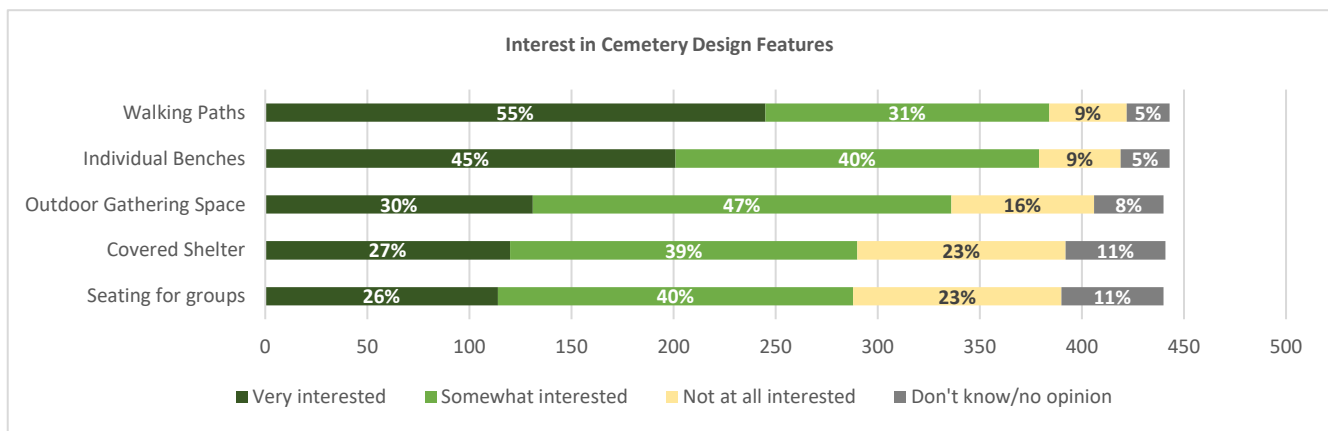
Participants were given the opportunity to suggest other design features. Themes suggested by two or more people are provided below:

- Green spaces / park / forest / trees (19)
- Water features (e.g. pond) (6)
- Flowers / community garden / Indigenous plants (8)
- Facilities (e.g. chapel, washrooms, garbage cans) (3)
- Flat markers (2)
- Directory map (3)
- Monuments (2)

Historic Cemeteries in Strathcona County

Survey participants were asked to share their thoughts on what they believe should happen with historic cemeteries in Strathcona County that are in poor conditions or no longer used for new burials. It was commonly suggested that cemeteries should be maintained / restored / refurbished (191) by the County (23), community members or volunteers (14), the owners (6), the church (6), or the families of those buried there (3). Some participants also suggested maintaining and preserving the sites as historic landmarks (24) and adding interpretations, plaques, or markers (4) for tourists. Other common themes mentioned by two or more people are summarized below:

- Leave them alone (40)
- Convert cemeteries into green spaces / parks / public spaces (16)
- Consult families of those buried in the cemeteries (11)
- Repurpose the sites (e.g., green burials) (9)
- Use for new burials (4)
- Form a community care-taker committee to make decisions (2)
- Incorporate new sites with old sites (2)
- Place names of those buried on one large monument wall or memorial (2)
- Archive and photograph details of burials for the public (2)
- Relocate the burials (2)
- Remove the burials (2)

Additional Thoughts

As a final question, participants were given the opportunity to provide any additional thoughts related to the potential establishment of a community cemetery in Strathcona County. Themes expressed by two or more people are summarized below. Comments expressing general support for the cemetery are not included.

- Costs for a burial plot should be affordable for families (25)
- Green / environmentally-friendly / non-traditional burial options are needed (21)
- Taxpayers' money should not be allocated to the establishment of a community cemetery (16)
- There is an urgent and growing need for a community cemetery (15)
- The cemetery should be inclusive of different religious needs (10)
- Adding a cemetery would not demonstrate good use of land in Strathcona County (9)
- More information about the assessment of current existing local / regional options and the potential locations considered for the community cemetery is needed (8)
- The cemetery should be an innovative space that can be multi-purpose and used as a memorial park or green space (7)
- The County should not get involved in cemetery planning (2)
- The cemetery should be located away from main roads (2)
- A specific area should be designated for pets (2) and veterans
- There should be options to add memorial benches, trees (2), or headstones

4.2 Workshops and Open Houses

Two stakeholder workshops and open houses were conducted. In the urban area, 11 stakeholders participated in a facilitated discussion and seven members of the public attended the open house. In the rural area, five stakeholders participated in the facilitated discussion and eight members of the public attended the open house. The overall input from the workshops and open houses was similar in content and themes to the online survey. Stakeholders provided information on the existing cemeteries, which is included in Section 5.0 of this report. Some of the other comments from the workshops and open houses that are unique and relevant include the following:

- Discussion about requirements for concrete liners in many cemeteries, which add to the cost and are not environmentally friendly; the liners are solely for the purpose of maintaining a smooth lawn that will not subside
- Comments that green burial reflects traditional burial practices
- Need to embrace all cultures and to reflect Treaty Six
- Concerns about ongoing maintenance costs and the need for a perpetual care fund
- Need to consider the capacity of the existing cemeteries and options for using those prior to making the commitment to establish a new cemetery
- There is no central information on cemetery services available in Strathcona County
- Need for stability in a cemetery for resilience to churches leaving or volunteer capacity declining
- Consider other uses such as walking and gatherings in a cemetery
- County should support rural cemeteries, especially if providing a new municipal cemetery – use of taxes for a cemetery service should include all non-private cemeteries in the County
- Need to take care of older cemeteries that are no longer performing interments
- Given that Glenwood Memorial Gardens has extensive space, there would need to be a very solid rationale for a new community cemetery
- Community cemetery should be close to or within Sherwood Park for ease of access

Historic and Rural Cemeteries

Many comments were received during the engagement process on historic and rural cemeteries. These cemeteries fall into two main categories – those still offering interments, and others that are not in operation.

Some of the small operational cemeteries indicated that they have significant challenges maintaining their cemeteries with only volunteer labour. Their key suggestion is that if Strathcona County is considering financial support for cemetery services, that it also supports the maintenance of rural cemeteries. A precedent for this is Wetaskiwin County, where $10 per plot to a maximum of $1,000 is granted annually to cemetery associations for assistance in operations.

Historic cemeteries that are no longer in operation are cultural resources that offer rich information on the past. Strathcona County residents noted the importance of maintaining and caring for these sites. A precedent for this is the Province of Ontario, where municipalities are required to take over the maintenance of historic cemeteries. In Strathcona County, this would mean that the County would take over responsibility for the maintenance of these cemeteries. Delegating all or some of the work at each cemetery to a community group, with financial support, could be one way to accomplish this.

5.0 Existing and Comparable Cemeteries

5.1 Existing Cemeteries

While Strathcona County does not have a community cemetery, there are several faith-based, historic, and rural cemeteries, as well as one privately-owned and managed cemetery within and close to Strathcona County, as follows:

Private Cemeteries

- Glenwood Memorial Gardens, Strathcona AB

Faith-Based Cemeteries

- Bethany Lutheran Cemetery, Strathcona AB
- Colchester Cemetery, Strathcona AB
- Fairmount Cemetery (Ardrossan United Church), Strathcona AB
- Josephburg United Church of Christ (Reformed) Cemetery, Strathcona AB
- St Paul's of Agricola Cemetery, Strathcona AB
- St. John's Lutheran Cemetery, Strathcona AB
- St. Margaret Roman Catholic Cemetery, Strathcona AB

Historic and Rural

- Fort Saskatchewan Hutterite Cemetery, Strathcona AB
- Good Hope Cemetery, Strathcona AB
- South Cooking Lake Cemetery, Strathcona AB
- Clover Bar Cemetery, Edmonton AB (owned and operated by City of Edmonton, close to Strathcona County boundary)

The Clover Bar, Colchester, Fairmount and St. Margaret's Church cemeteries hold rich historic significance within the County. Additional information on these cemeteries is provided in Section 6.6.

All cemeteries within Strathcona County may not be captured here as there could be additional abandoned or private family cemeteries that have not been identified to the County.

Cemeteries in Strathcona County

	Cemetery Name
1	Fairmount Cemetery
2	Glenwood Memorial Gardens
3	St. Paul's of Agricola Cemetery
4	St. John's Lutheran Cemetery
5	Clover Bar Cemetery
6	Colchester Cemetery
7	Bethany Lutheran Church Cemetery
8	South Cooking Lake Cemetery
9	St. Margaret's Catholic Cemetery
10	Josephburg Community Cemetery
11	Hutterian Brethren of Scotford Cemetery
12	Good Hope Cemetery

Legend:
- Cemetery
- Municipal Boundary
- Urban Service Areas
- Secondary Road
- Primary Road
- Railway
- Alberta Recreation Areas
- Alberta National Parks
- Lake
- River

1:200,000
0   2   4   8 KM
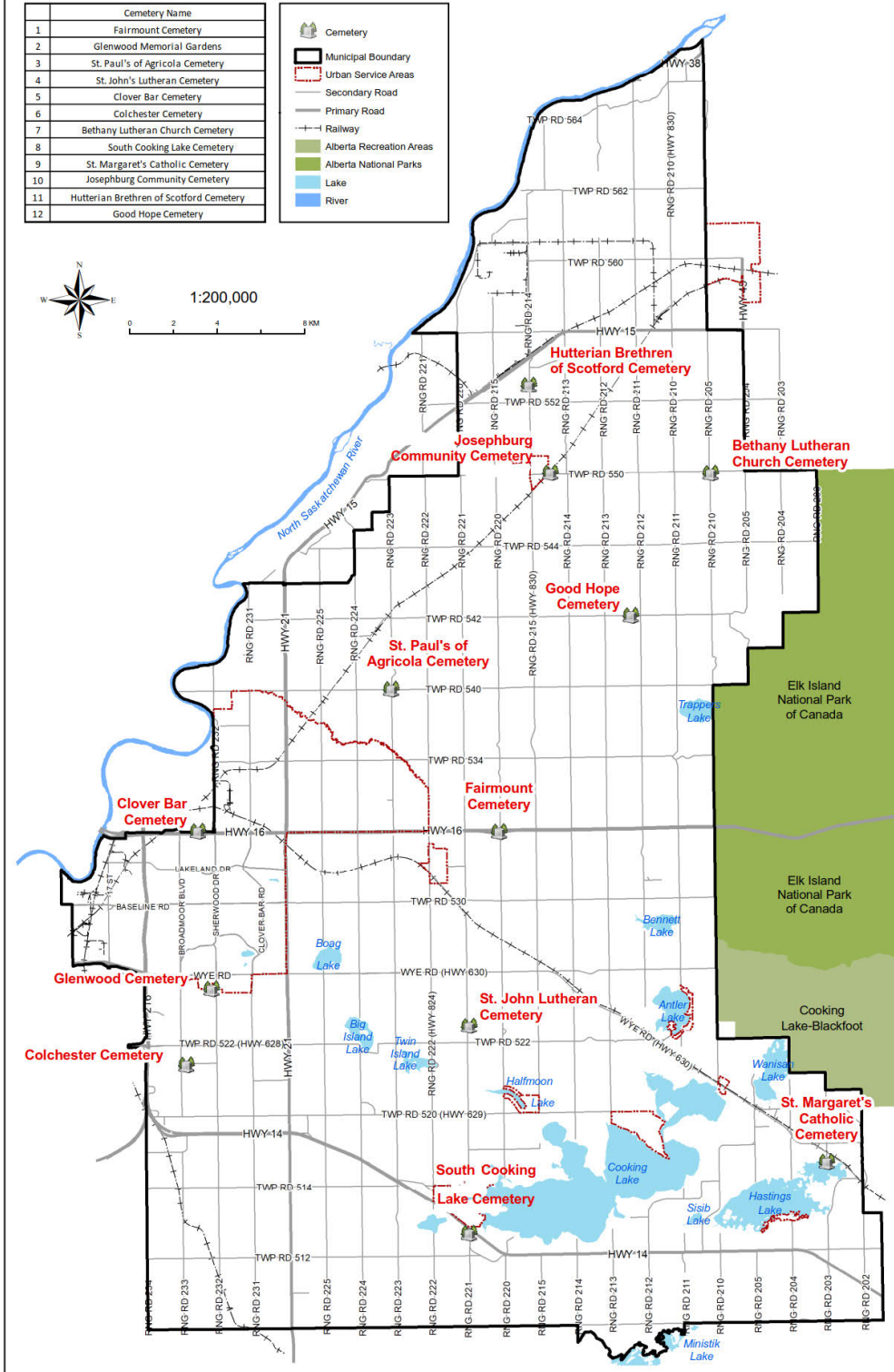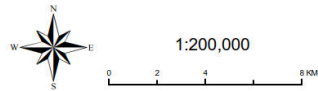
Disclaimer: The information on this map is based on the most current information available to Strathcona County Geographic Information Systems.
Strathcona County does not warrant its accuracy or suitability for any particular purpose. The information on this map is not intended to replace engineering, financial or primary records research.

Author: Strathcona County GIS Team   Date: Feb 05, 2018

5.2 Comparable Cemeteries

Municipal cemetery services and fees are generally related to the population of a community. Information was collected on six comparable communities that have a similar population (St. Albert, Red Deer, Lethbridge, Medicine Hat, Leduc) and include urban and rural areas (Regional Municipality of Wood Buffalo). The purpose was to collect information on cemetery services, trends, fees and charges, operations, and organizational structures so Strathcona County can be aware of current practices in other locations. Data collection included reviewing available information online and conversations /emails with cemetery staff to gather the remaining information. A summary of the information collected is below, with complete answers provided in Appendix A.

Topic	Summary
Cemetery Services	▪ All cemeteries offer full burial plots, cremation plots and columbarium niches; some cemeteries offer other services such as a scattering garden or memorial wall ▪ Some cemeteries provide designated areas for specific religious and ethnic groups although demand is generally low
Cemetery Trends	▪ Most cemeteries are experiencing higher interest in cremains interment in a plot or niche rather than full burial ▪ Lethbridge and Wood Buffalo currently offer green burial; other cemeteries either do not offer green burial or have had only minimal interest
Perpetual Care, Budgeting and Interments, and Plot Sales Statistics	▪ Most cemeteries include a Perpetual Care Fund (PCF) allowance in fees that is placed in a reserve fund to maintain the site in perpetuity ▪ Operating costs are subsidized in most cemeteries (ranging from 33% - 92%) ▪ Average annual interments in each cemetery range from 20 to 420 ▪ Available 2018 plot/niches sales range from 31 to 315
Operational / Organizational Structure	▪ All cemeteries reviewed are municipally owned and operated ▪ Contracted services typically include monument/memorial wall engraving, concrete foundations, and tree and site work ▪ The municipal department providing cemetery services differs between municipalities but is generally provided by Parks or Public Works ▪ The municipal full-time equivalents engaged in client liaison, administration, planning and operations varies significantly between municipalities
Cemetery Design Features	▪ Total area of cemeteries being maintained by each municipality ranges from 2.6 ha (St. Albert) to 28 ha (Lethbridge) ▪ Typical design features include walkways/roads and memorial benches; some cemeteries have a covered shelter/gathering space or chapel on site ▪ Most cemetery areas are grassed, and some include art features, gardens, and/or treed areas

Topic	Summary
Strengths, Challenges, and Recommendations	▪ Strengths of the cemeteries include reasonable fees, peaceful space, paved roads, burial options, relationship with funeral home, good maintenance crew (including support from Parks Department), and easily accessible operations building ▪ Challenges include the division of departments/responsibilities, ability to maintain all plots, staff limitations for public interface and burials, and provision of access to cemeteries in winter for those with mobility issues ▪ Recommendations include visit other cemeteries, allow upright headstones, use concrete foundations for headstones, do not build too far into the future, and keep operations staff involved in planning

The table and graph below provide the average cost to the consumer for a plot or niche (includes perpetual care fund [PCF] fee if applicable) for the most common interment options based on cemetery type and location. (A PCF fee is not mandatory in Alberta but it is a best practice).

Average Plot/Niche Fees in Cemeteries				
Interment Service	**Rural Strathcona County**	**Comparable Communities[2]**	**Edmonton[3]**	**Private Strathcona County**
Single Depth Adult Burial Plot	$900	$1,400	$3,600	$5,200
Cremation Plot	$700	$700	$1,300	$2,300
Columbarium Niche	$1,600	$2,100	$5,900	$7,600
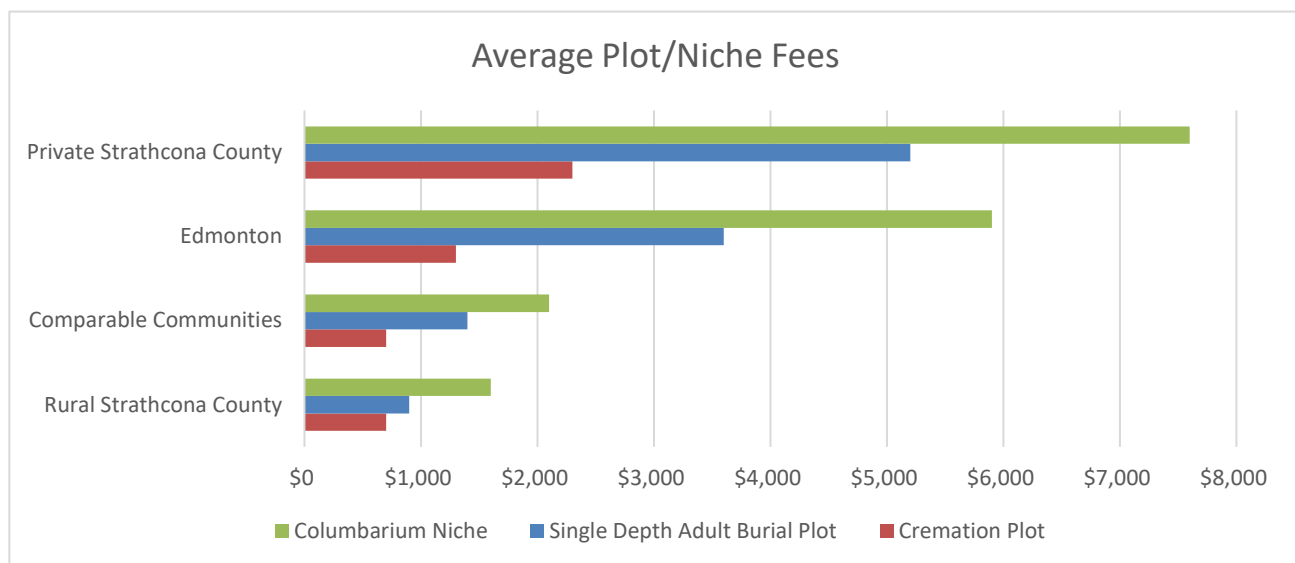
Average Plot/Niche Fees

6.0 Market and Demand Analysis

6.1 Population Projection

The demand for cemetery services is calculated through the following steps:

- Calculating population projections
- Identifying and projecting mortality rates
- Determining the "disposition" (burial or cremation) of projected deaths
- Projecting how many of the interments (burial or cremation) will be directed to cemeteries, and of those, how many are anticipated if there were to be a community cemetery in Strathcona County

Approach

The population projections for 30 years (2020-2049) are based on available population data. The process for preparing the projections was as follows:

- Review the population projections for Strathcona County to 2060 that align with the Edmonton Metropolitan Regional Board high scenario projection of 160,000 by 2044, provided by Strathcona County
- Review the Government of Alberta Population Projections by age cohort for Strathcona County, 2001 – 2047[4] (Strathcona County subzone, including Sherwood Park)
- Extend the Alberta Population Projections by age cohort from 2047 to 2049 using a 'simple exponential smoothing' forecast function in Excel (ETS) [5]
- Apply the projected breakdown of population by age cohort based on the Alberta Population Projections to the total population projections for Strathcona County

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[4] Government of Alberta Interactive Health Data Application (IHDA) Population Projections by subzone for Strathcona County, including Sherwood Park

[5] Exponential smoothing predicts future values (population by cohort) using a weighted sum of past values. It uses an exponentially decreasing weight for past observations.

Results

Based on the population projections provided by Strathcona County, the population of Strathcona County is projected to exceed 184,000 in 2049 based on an average annual growth rate of 1.8%.

Strathcona County Population Projections 2020-2049

Year	Projected Population	Growth Rate
2020	104,465	1.8%
2021	106,335	1.8%
2022	108,238	1.8%
2023	110,176	1.8%
2024	112,148	1.8%
2025	114,155	1.8%
2026	116,198	1.8%
2027	118,278	1.8%
2028	120,396	1.8%
2029	122,551	1.8%
2030	124,744	1.8%
2031	126,977	1.8%
2032	129,250	1.8%
2033	131,564	1.8%
2034	133,919	1.8%
2035	136,316	1.8%
2036	138,756	1.8%
2037	141,240	1.8%
2038	143,768	1.8%
2039	146,341	1.8%
2040	148,961	1.8%
2041	151,627	1.8%
2042	154,341	1.8%
2043	157,104	1.8%
2044	159,916	1.8%
2045	162,779	1.8%
2046	165,692	1.8%
2047	168,658	1.8%
2048	171,677	1.8%
2049	174,750	1.8%

The projected population is shown below in consolidated age groupings.

Strathcona County Population Projections by Consolidated Age Groupings

Age Cohort	2020	2029	2039	2049
<25	30,528	33,671	37,413	42,709
25-44	27,957	31,624	35,936	43,567
45-64	29,169	32,320	41,502	48,579
65+	16,811	24,935	31,490	39,896
Total	**104,465**	**122,551**	**146,341**	**174,750**

Strathcona County Population Projection to 2049 by Consolidated Age Groupings
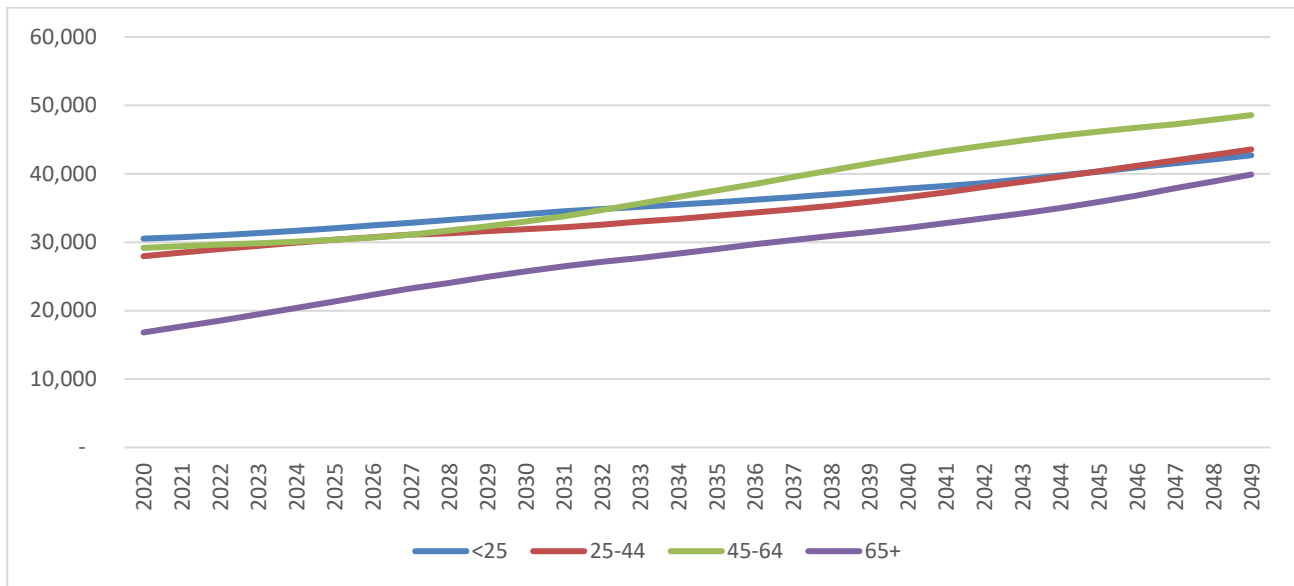
The figure below shows the projected breakdown of Strathcona County's population by consolidated age groupings as proportions of the total. The trend indicates the age profile in the County is expected to grow older over time. The 65+ age category is projected to represent approximately 16% of the population in 2020 and to increase to 20% in 2029, 22% in 2039 and 23% in 2049. The 45-64 age category represents approximately 28% of the projected population in 2020 and is expected to maintain a similar proportion of the population over 30 years (26% in 2029, 28% in 2039 and 28% in 2049). The <25 and 25-44 age categories are projected to decrease over time from 29% and 27% in 2020 to 24% and 25% in 2049, respectively.

Strathcona County Population Projections by Consolidated Age Group to 2049
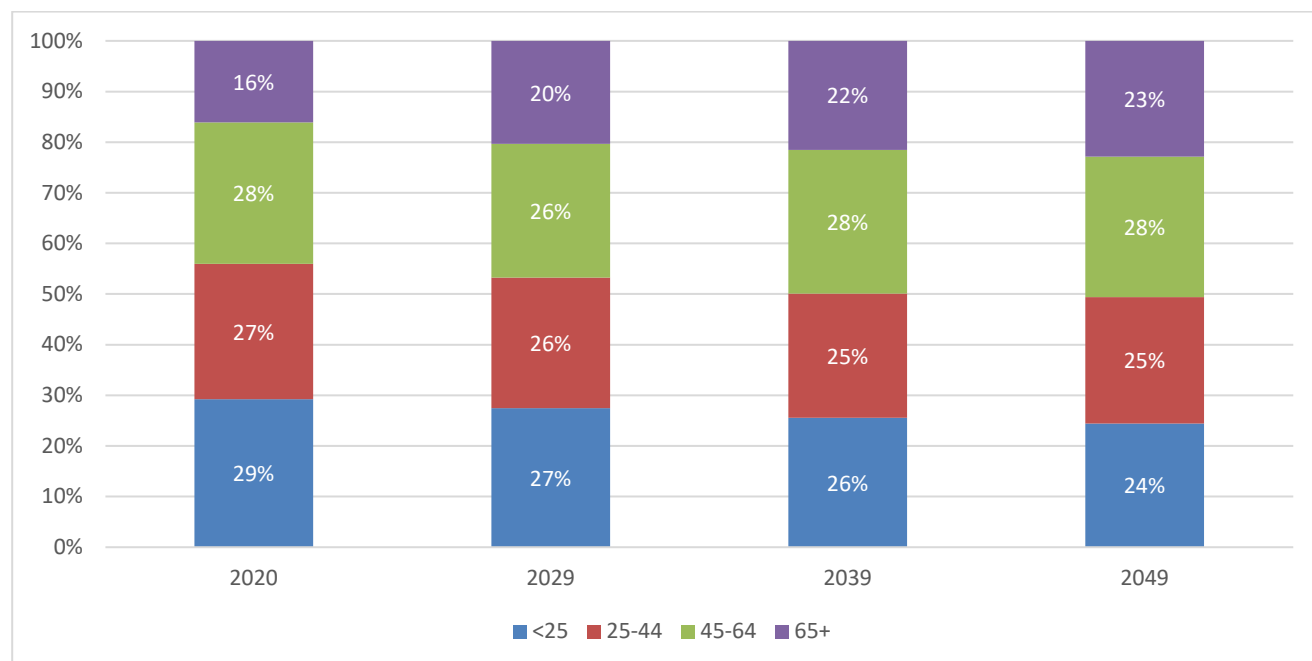
6.2   Mortality Rates

Historic mortality rates from 2008-2017[6] by age cohort were reviewed for the Province of Alberta and rates of year-over-year age-specific mortality <u>change</u> were calculated using this 10-year time series. This rate was applied to project future age-specific mortality rates to 2049. These projected rates for Alberta are applied to the population projections for Strathcona County to calculate mortality by age cohort.

Appendix B shows the annual population projection, growth rate, total deaths, and death rates per 1,000 people.

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[6] Statistics Canada - Deaths and mortality rates, by age group, Table: 13-10-0710-01

6.3   Strathcona County Resident Deaths

The mortality forecast for Strathcona County residents, based on applying the mortality rates by age cohort to the projected population, is shown below.

Strathcona County Mortality Forecast to 2049 (number of mortalities per year)
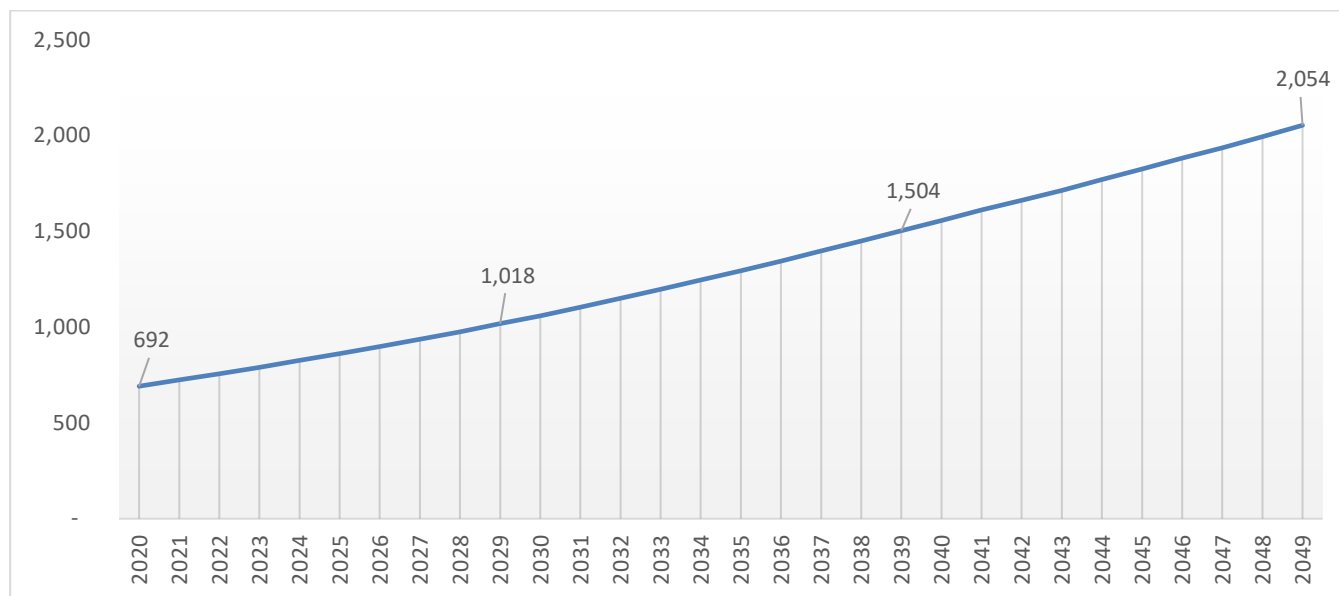
Between 2020 and 2049, over 39,000 deaths of Strathcona County residents are projected. As the population ages, the number of deaths per 1,000 will increase from 6.6/1,000 in 2020 to 11.8/1000 in 2049. The number of deaths among residents is projected to increase by an average of 4% annually.

6.4   Dispositions

Methods of disposition for Strathcona County deaths are projected based on available data for the Province of Alberta between 2008 and 2018 (see figure below). Based on the rate of change for full burial and cremated remains interments during the 11-year period (showing cremation increasing and full burial decreasing), a trend-based projection was prepared. Cremation as a means of disposition is capped at 90% of total from 2037 onward to recognize that demand for full burial will remain, although as a smaller proportion of total dispositions. Projected mortalities by disposition for residents are provided below.

Province of Alberta Methods of Disposition, 2008 to 2018

Year	Burial		Cremation		Other	
	#	%	#	%	#	%
2008	7,844	37%	13,122	62%	211	1%
2009	7,396	35%	13,523	64%	214	1%
2010	6,965	33%	13,653	65%	231	1%
2011	7,004	33%	14,146	66%	206	1%
2012	7,051	32%	14,902	67%	226	1%
2013	7,014	31%	15,723	69%	210	1%
2014	6,964	30%	16,278	69%	207	1%
2015	6,812	28%	17,021	71%	204	1%
2016	6,839	28%	17,570	71%	194	1%
2017	6,851	27%	18,547	72%	198	1%
2018	6,617	25%	19,223	74%	209	1%

Note: Other includes Department of Anatomy, Mausoleum, Fetal/Infant Death. Other is not considered in this analysis.

Strathcona County Resident Deaths and Method of Disposition, 2020 to 2049

Strathcona County			
Year	Deaths	Burial	Cremation
2020	692	170	522
2021	725	172	553
2022	757	173	584
2023	790	174	616
2024	826	175	651
2025	861	175	687
2026	898	174	724
2027	937	173	763
2028	976	172	804
2029	1018	170	848
2030	1060	167	893
2031	1104	163	940
2032	1151	159	991
2033	1197	154	1042
2034	1246	149	1097
2035	1294	142	1152
2036	1345	134	1210
2037	1398	140	1259
2038	1450	145	1305
2039	1504	150	1353
2040	1557	156	1401
2041	1611	161	1450
2042	1662	166	1496
2043	1714	171	1542
2044	1770	177	1593
2045	1826	183	1643
2046	1883	188	1694
2047	1935	194	1742
2048	1995	199	1795
2049	2054	205	1848

6.5   Resident Interment Demand

Proportions of resident dispositions that are likely to be interred in Strathcona County are estimated using historic death to interment ratios based on interments at existing private and rural cemeteries in Strathcona County. The following assumptions were applied to the analysis:

- 100% of full burials will be interred in Strathcona County. It is unusual for 100% of burials to be interred in a community but it is difficult to determine how many residents may be choosing locations or services outside the County as the nearby cemeteries we contacted do not track resident vs. non-resident interments. We know that there is some outflow based on the community survey, and we also know that there is inflow to Glenwood Memorial Gardens. Given the lack of data on outflow and inflow, we assume the inflow and outflow are generally balanced.
- 50% of cremated remains (cremains) will be interred in Strathcona County. A lower proportion of cremains dispositions expected to be interred is typical of trends in other communities as cremains are often scattered outside cemeteries or kept with families.

In Strathcona County, the estimated interment needs over the next 30 years results in 5,000 burials and 17,100 cremations for a total of 22,100 interments.

Interment projections are dependent on population growth and age cohort of that population. As such, any significant changes in demographics may affect the demand for interments in Strathcona County.

6.6   Existing Services and Capacity

Demand for resident interments within Strathcona County is currently being accommodated by rural, faith-based, and private cemeteries. Some residents are also being interred in Edmonton cemeteries and elsewhere in Canada. When considering capacity, full burial is the key limiting factor because of its space requirements, whereas cremation options require much less space.

Rural and Faith-based Cemeteries

Most rural and faith-based cemeteries provide full interments (mostly single depth and a few double depth), and burial of cremains over traditional burial plots and in cremation plots. One cemetery has columbarium niches, and one is offering green burial.

Based on historic average annual demand, the rural and faith-based cemeteries capture 15% of the resident market share (13% of burial and 2% of cremation).

Assuming this portion of the market share remains the same over 30 years, projected total demand will reach approximately 630 burial and 730 cremains (1,360 total) interments (see Appendix C).

The relationship between interments and space requirements is not a 1:1 ratio since some interment options can accommodate two sets of remains.

- **Burials** – Double-depth traditional burial is only offered in one of the cemeteries, so no meaningful decrease is anticipated in space requirements relative to full burial interments. Space is needed for all 630 burials.
- **Cremations** – It is reasonable to assume that the number of spaces required to accommodate cremains interments will be approximately 15% lower than projected interments, because most niches and cremation plots can accept two sets of cremains. This will result in a need for approximately 620 cremains plots/niches for 730 interments.

Based on information provided by each cemetery, the interment plot availability is approximately 2,000 for burial, 2,000 for burial or cremation, and 80 for cremation (excludes option to inter cremains on full burial plot of family member), which will accommodate the projected need for more than 30 years. It is important to note that some cemeteries are only available to those with a certain faith or a connection to the local community. Other cemeteries are open to the public, but residents may choose not to be interred in a faith-based cemetery.

The table below shows an estimate of the remaining capacity at rural and faith-based cemeteries per information provided by these cemeteries.

Cemetery	Plot Availability (Estimate)	Notes
Colchester Cemetery	350 burial, 80 cremation	Cemetery is approximately 40% full. Cemetery will open more plots as needed. Double depth burials are offered, which will result in higher capacity than shown.
Fairmount Cemetery (Ardrossan United Church)	1,600 burial or cremation	
Josephburg United Church of Christ (Reformed) Cemetery	1,500 burial	Up to 3 sets of cremains are allowed on full burial plots so could accommodate up to 4,500 cremains on burial plots.
Lamoureux Catholic Cemetery	50 burial	Additional cremation plots are available (max two sets of cremains). Adjacent land is owned so cemetery expansion is possible.
St. Margaret Roman Catholic Cemetery	100 burial	
South Cooking Lake Cemetery	400 burial or cremation	Cremains are allowed on full burial plots.
Total Estimate	*2,000 burial, 2,000 burial or cremation, 80 cremation (excluding interring cremains on occupied burial plots)*	

Private Cemeteries

Glenwood Memorial Gardens provides a variety of interment options including the following:

- Single-depth traditional burial
- Double-depth traditional burial
- Veteran's and Alberta Human Services lots
- Cremation lots
- Cremation product lots, where interment and memorial can be placed (e.g., family columbarium, bench with niches, granite Nature Rock with inscription and cremains interred in-ground)
- Columbarium niche walls
- Outdoor mausoleum plots

Based on historic interment data from recent years, Glenwood Memorial Gardens captures 87% of the market share of burials and 48% of cremations in relation to Strathcona County dispositions. If this portion of the market share remains the same over the next 30 years, projected total demand at Glenwood Memorial Gardens will reach approximately 4,400 burials and 16,400 cremations (20,800 total).

Glenwood Memorial Gardens has a 60-acre site, of which 40% is currently developed. The cemetery is approaching 11,000 interments (burial and cremation) and has capacity to accommodate the demand for at least 30 years.

6.7   Key Findings

Based on the projected interment demand in Strathcona County and this review of existing cemeteries, the following are the key findings:

- Existing cemeteries in Strathcona County have the capacity to meet demand for the next 30 years
- Capacity is primarily in two faith-based cemeteries and the private cemetery
- Faith-based cemeteries are not an option for some residents
- Fees at private cemeteries are higher than at other cemeteries reviewed, including comparable municipal cemeteries
- Existing cemeteries have limited options for green burial

A community cemetery would help the County become more consistent with the following common themes from the Strategic Plan and Social Framework, themes that were also echoed in the community engagement process:

Options   **Inclusivity**   **Affordability**

6.8 Scenarios

Two scenarios for a community cemetery are presented in response to the key findings:

- Scenario 1 - Strathcona County establishes a full-service community cemetery to provide all residents with a variety of affordable services
- Scenario 2 - Strathcona County establishes a cemetery offering only green burial and scattering, to complement the services available at the private cemetery and to offer limited affordable options

Scenarios 1 and 2 are based on the assumption that rural and faith-based cemeteries will continue to capture 13% of the burial and 2% of the cremation market share.

Scenario 1 – Full-service Community Cemetery

Scenario 1 assumes that a potential community cemetery will offer a wide range of cemetery service options including the following:

- Traditional full burial - double depth for efficiency
- Green burial – double depth, the most affordable burial option
- Cremation plots
- Columbarium niches – walls and family columbaria
- Scattering gardens

It is assumed that Glenwood Memorial Gardens would retain 70% of the burial and cremation market share (excluding rural cemeteries) and that the remaining 30% of the market share would be directed towards the community cemetery. This projection would result in demand over 30 years for approximately 2,100 burials and 4,100 cremated remains interments in the community cemetery (see Appendix C).

Projected interment demand by service type at the community cemetery is based on trends in similar communities and the public survey results. Assumptions are made to determine the proportionate demand for each service type and the space required to accommodate all interments, as follows:

- 50% of burials will be traditional full burials interred in double depth plots
    - Plots will accommodate an average of 1.5 interments per plot for the first 10 years, then increase to 1.75 interments per plot thereafter
- 50% of burials will be green burials interred in double depth plots
- 10% of the market share for cremations will switch to green burial in years 1 to 10, 15% in years 11-20, and 20% in years 21-30; this will result in decreasing proportions of demand in each of the other cremation options
    - 20% of green burials will be in single depth plots
    - 80% of green burials will be in double depth plots
        - This option could consist of a double depth plot purchased by a single family, or consecutive double depth burial (those interred are not related)
        - Plots will average 1.75 interments each to reflect potential for a higher number of second interments earlier than traditional burial through offering consecutive burial option

- 45% of cremains interments will be interred in cremation plots in years 1-10, 42% in years 11-20, and 40% in years 21 to 30
    - 20% of cremains for the first five years and 40% thereafter will be interred as the second interment in a cremation plot or over a full burial
- 23% of cremains interments will be in interred in a columbarium niche in years 1-10, 21% in years 11-20, and 20% in years 21 to 30
    - 67% of niches will accommodate two sets of cremains
- 23% of cremains interments will be interred in scattering gardens (or a memorial option may be chosen instead of scattering) in years 1-10, 21% in years 11-20, and 20% in years 21-30

Based on the population projections, anticipated market share captured by a community cemetery, and the demand by service type, the resulting interments by type and space requirements are shown below in 10-year increments.

Projected 30-Year Interments at Community Cemetery – Scenario 1

Interment Service	2020-2029	2030-2039	2040-2049	30-Year Total Projected
Traditional Burials - Double Depth	225	197	238	659
Green Burials - Single and Double Depth	324	439	701	1464
Total Burials	**549**	**636**	**939**	**2123**
Cremation Plot	437	679	929	2045
Columbarium Niche	218	342	466	1026
Scattering	218	342	466	1026
Total Cremations	**873**	**1363**	**1861**	**4097**
Total Interments	**1422**	**1999**	**2800**	**6220**

Projected 30-Year Space Requirements at Community Cemetery – Scenario 1

Interment Service	2020-2029	2030-2039	2040-2049	30-Year Total Projected
Traditional Burials - Double Depth	150	112	136	398
Green Burials - Single Depth	65	88	140	293
Green Burials - Double Depth	148	201	320	669
Total Burials	**363**	**401**	**596**	**1360**
Cremation Plot	370	544	745	1658
Columbarium Niche	145	228	309	682
Scattering	218	342	466	1026
Total Cremations	**733**	**1114**	**1520**	**3366**
Total Interments	**1096**	**1096**	**1514**	**2116**

Scenario 2 – Green Burial and Scattering Community Cemetery

Scenario 2 assumes that the community cemetery will offer only green burial and scattering options, providing a smaller scale opportunity to Strathcona County in terms of site size, and capital and operating costs. The market share capture rate for the community cemetery is anticipated to be 15% of burials (compared to 30% in Scenario 1) and 13% to 21% of cremations (compared to 30% in Scenario 1). This market share assumes that there will be increasing demand for green burial shifting from the cremation market based on recent trends in other communities. As this trend continues, the demand for green burial previously attributed to cremation is projected to increase, resulting in a higher capture rate in the community cemetery of the cremation market over time (13% in years 1-10, 17% in years 11-20, and 21% in years 21-30). The resulting demand is for approximately 1,900 green burials and 1,800 cremated remains interments in the community cemetery over 30 years (see Appendix C).

Interment assumptions to determine space requirements for green burial and scattering interments are the same as in Scenario 1.

Based on the population projections, anticipated market share captured by the community cemetery, and the demand by service type, the resulting interments by type and space requirements are provided below in 10-year increments.

Projected 30-Year Interments at Community Cemetery – Scenario 2

Interment Service	2020-2029	2030-2039	2040-2049	30-Year Total Projected
Full Burials - Double Depth	0	0	0	0
Green Burials - Single and Double Depth	355	539	956	1850
Total Burials	**549**	**636**	**939**	**2123**
Cremation Plot	0	0	0	0
Cremation in Standard Plot (or occupied burial)	0	0	0	0
Columbarium Niche	0	0	0	0
Scattering	0	0	0	0
Total Cremations	**297**	**580**	**918**	**1795**
Total Interments	**652**	**1119**	**1874**	**3645**

Projected 30-Year Space Requirements at Community Cemetery – Scenario 2

Interment Service	2020-2029	2030-2039	2040-2049	30-Year Total Projected
Traditional Burials - Double Depth	0	0	0	0
Green Burials - Single Depth	71	108	191	370
Green Burials - Double Depth	162	246	437	846
Total Burials	**233**	**354**	**628**	**1216**
Cremation Plot	0	0	0	0
Columbarium Niche	0	0	0	0
Scattering	297	580	918	1795
Total Cremations	**297**	**580**	**918**	**1795**
Total Interments	**530**	**934**	**1546**	**3011**

Commentary

The following are some of the pros and cons of the two scenarios:

Criterion	Scenario 1	Scenario 2
Access to a wide range of relatively affordable cemetery services	Provides access to a full range of cemetery services	Provides access to a limited range of cemetery services, with only one choice for full burial and one choice for cremated remains
Size of cemetery required	Larger site	Smaller site
Scale of cemetery operation	Larger operation	Smaller operation
Impact on private sector	Higher impact	Lower impact

7.0 Next Steps

7.1 Next Steps in Process

Should Council choose to proceed with planning for a community cemetery based on this report, the next steps include the following:

- Phase 3 - Financial feasibility and funding analysis
- Phase 4 - Identifying and evaluating potential locations for a cemetery

The analysis has shown that, in addition to properties owned by the County, there are two faith-based cemeteries with capacity that may be able to support a community cemetery on their properties, should this be of interest to the respective organizations. This option will be further analyzed as part of Phase 4 if the County decides to move forward in its consideration of a community cemetery.

Through the engagement process, the community expressed concerns about the maintenance of historic cemeteries. As Strathcona County continues to consider the future of cemeteries, it will be important to review options for these historic sites.

If Phases 3 and 4 are conducted, Scenarios 1 and 2 will both be explored, and options for existing rural and historic cemeteries will be identified.

7.2   Cemetery Establishment Steps

Strathcona County, on completion of all four phases of this project, will have conducted the following steps:

- Community engagement to determine public interests in a new community cemetery
- Demand analysis based on projections of needs and the current market
- Services and features to be included in the cemetery
- A preferred operational structure
- Financial feasibility analysis through identifying and modelling cemetery service needs, revenues, capital and operating costs, and potential funding sources
- Location criteria for a new community cemetery
- Evaluation of County-owned sites to identify a potential preferred location

The following are the additional steps involved in acquiring, planning, designing, building, and operating a new cemetery:

- Provincial project approval
- Environmental review
- Site data
- Preliminary design
- Cash flow analysis
- Detailed design
- Establish operations

Appendix D provides more detail on these steps.

Comparable Cemeteries

	City of St. Albert	City of Red Deer	City of Lethbridge	City of Medicine Hat	Regional Municipality of Wood Buffalo	City of Leduc
Cemetery Services						
	What services do you provide at the cemetery?					
	▪ Full Interment Plot (Standard or Double Depth) ▪ Cremation Plots (up to four urns per plot) ▪ Columbaria (each niche can hold two ash urns) ▪ Memorial Wall	▪ Full Interment Plot (Standard or Double Depth) - can hold up to four urns ▪ Cremation Plots (single and double urn plots) ▪ Columbaria (each niche can hold two ash urns) ▪ Scattering Garden	▪ Full Interment Plot (Standard or Double Depth) ▪ Cremation Plots (single and double urn plots) ▪ Columbaria (option of one or two urn niche) ▪ Scattering Garden ▪ Memorial Wall ▪ Ossuary	▪ Full Interment Plot (Standard or Double Depth) - can hold up to four urns ▪ Cremation Plots (up to two urns per plot) ▪ Columbaria (each niche can hold two ash urns) ▪ Scattering garden ▪ Memorial Bench Program ▪ Memorial Tree Program	▪ Full Interment Plot (Standard) ▪ Cremation Plots ▪ Columbaria	▪ Full Interment Plot (Standard or Double) ▪ Cremation Plots (single urn) ▪ Columbaria (option of one or two urn niche)
	Do you provide services or designate areas of the cemetery for specific religious or ethnic groups?					
	▪ No	▪ Muslim	▪ Protestant ▪ Chinese ▪ Japanese ▪ Catholic ▪ Muslim ▪ Hebrew	▪ Anglican ▪ Catholic ▪ Hebrew ▪ Muslim	▪ Muslim	▪ No
	What demand do you experience for these designated areas?					
	N/A	▪ Low Demand - average of one burial per year since 2013 (year area was opened)	▪ Low Demand	▪ Anglican - no demand ▪ Catholic - high demand ▪ Hebrew - no demand ▪ Muslim - no demand	▪ 5 - 10 burials per year	N/A
	Do you experience any challenges with managing the designated areas?					
	N/A	▪ Cannot always handle requests as interments need to happen within one day and staff are not available on weekends ▪ With no vaults or liners, ground is left to settle for a few years before infilling	▪ No	▪ Difficulties with Muslim section: Differing expectations	▪ No	N/A

Comparable Cemeteries

	City of St. Albert	City of Red Deer	City of Lethbridge	City of Medicine Hat	Regional Municipality of Wood Buffalo	City of Leduc
Cemetery Trends			**What trends have you been noticing?**			
	• Stronger interest in cremation (niche and burial) vs. full interment • Desire for options for pets	• Have had one or two inquiries about Green Burial	• Stronger interest in cremation (niche and burial) vs. full interment • Removing funeral home from discussion of placement for cremations (e.g.; families choosing to keep urns, scatter ashes elsewhere)	• Cremation starting to dominate - now have a hard time keeping up on providing columbaria • Second and third generations wanting to be buried with grandparents, parents, etc. (This is a concern for liability regarding family issues and intentions of original lot purchaser)	• Ash burials are becoming more common	• More cremation and columbarium sales versus traditional burial
			Has there been any interest in green or natural burial? (if not offered already)			
	N/A	• Nothing to indicate an immediate need but it is something being considered for the future	• Green Burial Area opening in Fall 2019	• No interest currently	N/A	• No interest from residents at this time - will be opening a new cemetery in the future and may have this option for residents • Would also like to offer an ash garden in the new cemetery as this is not offered now
			If already offered, what has been your experience so far? Please describe your practices (e.g., how many deep, treatment of ground surface, individual or group monuments, other green practices)			
	N/A	N/A	• Single depth - first come first serve (no plot reservations) • Surface treatment: prairie grass • Group monuments • Strict Guidelines – Canadian Green Burial Society (not currently members but hoping to join)	N/A	• Started offering green burial in 2017 but so far have had no inquiries or requests	N/A

Comparable Cemeteries

Fees and Charges		City of St. Albert	City of Red Deer	City of Lethbridge	City of Medicine Hat	Regional Municipality of Wood Buffalo	Fort Saskatchewan*	City of Leduc	Average
	Single Adult Burial Plot and Perpetual Care Fund	$ 1,680.00[2]	$ 1,580.00[1]	$ 1,800.00[2]	$ 2,513.00[1]	$ 97.65[2]	$ 1,520.40[1]	$ 850.00[2]	$ 1,370.24
	Open/Close (Weekday)	$ 966.00	$ 765.00 (May - Oct.)	$ 1,000.00	$ 1,004.00	$ 1520.40	$ 1,162.00	$ 500.00	$ 952.25
	Double-Depth Adult Burial Plot and Perpetual Care Fund	$ 1,680.00[2]	$ 1,580.00[1]	$ 2,200.00[2]	$ 2,513.00[1]	N/A	N/A	$ 850.00[2]	$ 1,764.60
	Open/Close First (Weekday)	$ 966.00	$ 505.00	$ 650.00	$ 672.50	N/A	N/A	$ 325.00	$ 623.70
	Open/Close Second (Weekday)	$ 724.00	$ 505.00	$ 650.00	$ 672.50	N/A	N/A	$ 325.00	$ 575.30
	Cremation Plot and Perpetual Care Fund	$ 777.00[2]	$ 645.00[1]	$ 770.00[2]	$ 293.00	$ 97.65[2]	$ 510.00[1]	$ 450.00[2]	$ 718.81
	Open/Close (Weekday)	$ 504.00	$ 320.00 (May-Oct.)	$ 470.00	$ 408.00	$ 539.70	$ 428.40	$ 200.00	$ 406.95
	Columbarium Niche and Perpetual Care Fund	$ 2,047.50 - $ 2,572.50[2]	$ 1,760.00 - $ 2,520.00[1]	$ 2,270.00 - $ 3,585.00[2]	$ 2,471.00 - $ 3,062.00[1]	$ 1050.00[2]	$ 1,606.50 - $ 1,927.80[1]	$ 1,100.00 - $ 1,300.00[2]	$ 1,757.86 - $ 2,494.55
	Open/Close (Weekday)	$ 105.00	$ 125.00	$ 155.00	$ 100.00	$ 63.00	139.23	$ 100.00	$ 108.00
	Ash Scattering	$ 325.50	$ 240.00	$ 90.00	$ 100.00	N/A	N/A	N/A	$ 188.88

*   Fort Saskatchewan included in this table for fee comparison purposes

N/A   Service not offered or pricing was unavailable

1   Perpetual Care Fund charges included in price

2   No additional Perpetual Care Fund charges

Comparable Cemeteries

Perpetual Care, Budgeting and Interments	City of St. Albert	City of Red Deer	City of Lethbridge	City of Medicine Hat	Regional Municipality of Wood Buffalo	City of Leduc
	Do you include a Perpetual Care Fund allowance in your fees?					
	- Do not currently charge for perpetual care, will be introducing it into fee schedule in 2020 - Expected amount: flat rate of $310.00	Yes - Perpetual Care Fund charges are included in purchase of lot	- Mountain View Cemetery Hebrew section (owned by Hebrew Community and maintained by City under special arrangement): $300.00 for each interment - Any surplus funds go into Lifecycle Fund - Currently no Perpetual Care Fund	Yes - Perpetual Care Fund charges are included in purchase of lot	Perpetual Care charges are included in fees	No Perpetual Care Fund
	Is the cemetery financially self-sufficient or is it subsidized by the municipality? If it is subsidized, but what percentage of actual costs?					
	N/A	- Annual budget organized through the city - This includes fleet, staff, purchasing costs etc.	Approximately $ 500,000 (1/3 of annual operating budget) comes from municipal taxes	- Required to be self-sufficient - Columbaria have been purchased through Municipal Sustainability Initiative Funding - Building projects have been funded through City capital funds	Subsidized by $ 268,581 (approximately 92 % of total budget)	Difference between operating revenues and expenses leaves a shortfall of $89,343 (59%) that needs to be subsidized by other means
	What is your annual budget? (Operating and Maintenance)					
	N/A	Approximately $ 500,000 (this includes all operations and maintenance)	$1.3 M - $1.5 M (this includes staff wages) $ 800,000 - $ 900,000 in wages per year	Approximately $ 800,000 per year in expenses and $ 700,000 per year in revenue (balance goes to perpetual care.	$ 289,381	- Operating Revenues: $ 61,175 - Operating Expenses: $ 150,518 - Transfer to Reserves: $ 36,000
	Approximately how many interments do you conduct per year?					
	Approximately 26	- Traditional burials: 74 - Cremation interments: 21 - Cremations on existing traditional lots: 61 - Niche interments: 61	- Traditional burials: 170 - Cremations interments: 209 - Scattering Garden: 41 - Disinterment: 1	Approximately 375	- Traditional Burials: 13 - Cremation interments: 7	- Traditional Burials: 9 - Cremation interments: 32

Comparable Cemeteries

	City of St. Albert	City of Red Deer	City of Lethbridge	City of Medicine Hat	Regional Municipality of Wood Buffalo	City of Leduc
Operational/Organizational Structure and Plot Sale Statistics	all — **What is your operational structure?**					
	• Cemetery municipally owned and operated	• Cemetery municipally owned and operated	• Cemetery municipally owned and operated	• Cemetery municipally owned and operated	• Cemetery municipally owned and operated	• Cemetery municipally owned and operated
	— **Do you contract out any services? (e.g; administration, maintenance)**					
	• Do not provide markers - families negotiate that directly with monument companies • Contract with Edmonton Granite to engrave on Memorial Wall - sell space on wall to the family and then the family coordinates the design and any associated fees with Edmonton Granite directly (they are the only authorized engravers for the wall)	• Monument Companies and contractors working on future development	• Bring in contractors to do concrete foundations for headstones • Contract out some of the tree work (have some 100-year-old trees) • Contract out some of the custom trimming/pruning. • Paladin Security performs regular Cemetery patrols	• Contract out tree pruning, road repair, hydrodigging irrigation.	N/A	• Monument installation and engraving services must be completed by a licensed monument company
	— **What department(s) provides cemetery services? (administration, planning, maintenance)**					
	• Legislative Services administers the sales of the cemetery services • Public Works manages the operations/maintenance of services at the Cemetery • Currently re-evaluating this structure and trying to consolidate all services under one department (will likely be Public Works)	• City of Red Deer Parks Department	• Cemetery department - includes specialty gardens • Unit falls under Community Services	• City Parks Department	• Parks Services	• Engineering Department (Administration Staff) • Public Services (Parks Staff take care of interments & maintenance)
	— **2018 Plot Sale Statistics (if available)**					
	N/A	Jan 1, 2019 - Oct 7, 2019: • Traditional Plots: 37 • Columbarium Niches: 35 • Cremation Plots: 28	• Traditional Plots: 192 • Cremation Plots/Niches: 85 • Memorial Wall: 38	• Traditional Plots: 9 • Cremation Plots: 32	• Traditional Plots: 9 • Cremation Plots: 32	• Traditional Plots: 9 • Cremation Plots: 2 • Columbarium Niches: 20

Comparable Cemeteries

		City of St. Albert	City of Red Deer	City of Lethbridge	City of Medicine Hat	Regional Municipality of Wood Buffalo	City of Leduc
Operational/Organizational Structure		**How many municipal full-time equivalents (FTE) are engaged in the following?**					
	Client Liaison	▪ 0.5 FTE with remaining 50% of time allocated to support of another department, but cemeteries require more than 50% of time ▪ All services directly related to cemeteries managed by municipality - funeral home involved with coordination and services outside of municipal scope	▪ 1 FTE in the office on a daily basis to liaise with the public on walk-ins, phone conversations, and emails regarding cemetery preparations	▪ 1 FTE ▪ 40% of liaison handled by City staff, 60% by funeral homes	▪ 1 FTE who is also divided in operations of the cemetery so is not always in the office ▪ Funeral homes have municipal paperwork on their websites to complete but lot selection is still done by City staff	▪ 1 - 2 FTEs (Cemetery Technician is occasionally engaged)	▪ 2 administrative staff that meet with clients and sell plots/niches ▪ City manages record keeping, contacting the funeral homes when required, sends all interment requests to Public Service Staff ▪ City does not carry liners or vaults (supplied by funeral home) ▪ Monuments supplied by monument companies and require a permit
	Administration	▪ Same 0.5 FTE	▪ Same FTE	▪ 1 FTE and 1 PTE (80%)	▪ Same FTE	▪ 1 FTE	▪ Same 2 FTEs
	Planning	▪ Conversations between two departments impact efficiencies ▪ 1 FTE (same as above) completed comparison fee schedule and submits budget	▪ Moves up chain of command to supervisors in Parks Department to manage forecasting cemetery operations	▪ 1 FTE - unit manager who manages cemeteries and Japanese garden	▪ Same FTE creates plans which then proceed to Parks Administration	▪ 3 FTEs currently reviewing	▪ 1 FTE (1 of the administration staff)
	Operations	▪ 1-2 people from Public Works attend interments to support families ▪ Maintenance crew numbers unknown	▪ 1 FTE - Foreman ▪ 3 FTE staff - responsible for maintenance and interments ▪ 3-4 seasonal staff (April – Oct)	▪ 4 FTE year-round employees who work outside in interments ▪ 2 PTE year-round (5 days per week in summer – May 1-Sept 30) ▪ 7 summer students for grass cutting (sometimes up to 8)	▪ Same FTE supervises ▪ City Parks Department	▪ 2 - 3 FTEs	▪ 1 FTE and 2 seasonal staff May – Sept for maintenance ▪ 8 – 10 FTE Public Services staff that are trained in performing interments ▪ 1 FTE "go-to" for cemetery maintenance operations

Comparable Cemeteries

Cemetery Design Features

	City of St. Albert	City of Red Deer	City of Lethbridge	City of Medicine Hat	Regional Municipality of Wood Buffalo	City of Leduc
What is the total area of municipal cemeteries that you are maintaining? (in hectares)						
	• Approximately 2.6 ha	• Red Deer Cemetery: 8.9 ha • Alto Reste Cemetery: 15.4 ha	• Archmount Cemetery: 6-7 ha • Mountain View Cemetery: 9-10 ha • Royal View Cemetery: 6 ha developed (room to expand to 36-40 ha depending on layout) • St. Patrick's Cemetery: 6 ha	• 32 ha of land • 23 ha in active use • Over 28,000 burials	N/A	• East Cemetery: 1.41 Ha • West Cemetery: 2.02 Ha
Do you have any of the following design features: paths separate from service roads, benches, gathering space(s), covered shelter, other?						
	• One path leading to the Memorial Cairn • Some benches • No other features/structures - generally a quiet, rural cemetery.	• Future design of Alto Reste Cemetery may include a paved walk way throughout to make it more park-like • Memorial benches placed around the cemetery - currently not installing more until plans are developed	• Wall feature • No water features • Several roadways • City benches (primarily donated) • No covered shelters	• Some designated paths wide enough to function as roads as well • Memorial benches installed with some conditions (considered donations) • Small chapel on site that can accommodate approximately 20 people	• Trail in Woodlawn Cemetery • Benches and gathering spaces in all cemeteries	• Covered shelter in West Cemetery
Do you have any spaces that are different from mowed grass: treed areas, garden-like plantings, wooded/natural areas with interments, other?						
	• Primarily grass with trees planted around the perimeter and between certain phases • Minimal plantings at entrance • Some potted plants around Columbaria • Much of the space is undeveloped (just grass) with a lot of potential • Intend to develop future garden-like area to be used as a scattering garden with columbaria, paths, and other memorial structures	• No	• 2,318 total trees • 525 shrubs	• Try to maximize burial space and do not have any unusable areas • Main entrance is lined with flower beds and approximately 25 feet of grass on either side with spaced trees	• Have art features and ponds in Woodlawn Cemetery	• Treed areas and flowers throughout the cemetery • Benches beside the columbaria

Comparable Cemeteries

	City of St. Albert	City of Red Deer	City of Lethbridge	City of Medicine Hat	Regional Municipality of Wood Buffalo	City of Leduc
Strengths, Challenges, and Recommendations	everything below					

Strengths, Challenges, and Recommendations (vertical label in left margin)

	City of St. Albert	City of Red Deer	City of Lethbridge	City of Medicine Hat	Regional Municipality of Wood Buffalo	City of Leduc
What are the strengths of the cemetery in your community?						
	"Families always tell us that they love how quiet and peaceful feeling it is. I think this is primarily because it is under-developed and so does not seem busy. We often have families mention that they feel our fees are much more reasonable than nearby Cemeteries"	"Our crew is one of our strengths. We have a great group of staff who focus on completing burials or monument installations or cemetery maintenance to the best of their abilities. We also provide a lot of burial options and can hopefully make the process for families a little easier"	• Really good working relationship with funeral homes • Dedicated crew of staff who are committed to helping families that come in	• History and family tradition • Reputation • All roads are paved • Support from the Parks department in flower and tree maintenance • Choices in burial options not only for cremation or casket but servicing different faiths • Fully irrigated	• Low prices • Dedicated cemetery technician on call 24/7	• Location of the operations building - easy access with equipment and staff • The size - it's only 6 acres with lots of trees and shrub beds making the maintenance fairly simple
What are the challenges of the cemetery in your community?						
	• Lack of dedicated staff makes change and implementation slow • The division of departments and responsibilities has impacted the development and expansion and even presented some budgeting gaps • Only allow flat markers so families go elsewhere • Lack of staff makes prompt service provision difficult	• Occasional issues with public complaints (e.g; families will complain about a memorial item being removed from the family lots) • "Grass tends to grow over in time and we do not have the man power to clear them all. We always encourage families to help us maintain the lots as best they can"	• Deer • Weather • Just opened new cemetery so no longer concerned about running out of space	• No increase in staff in 25 years yet have 200 headstones more to trim around every year • Falling behind in ground settling • Aging irrigation system that is failing in many places. • No one in the office consistently to serve the public who expects them to be there • Very poor public reception area	• The Pioneer Cemetery is older and tracking grave locations is an issue	• Staff limitations when operating 7 days a week • Challenges for operating hours and providing access to the cemetery in the winter for people with mobility issues. • Maintaining the older cemetery • The old grave covers make accessing some rows with equipment very difficult
Do you have any suggestions or recommendations as we undertake this cemetery assessment for Strathcona County?						
	N/A	• Visit lots of cemeteries to get ideas and understanding of what can work and perhaps what to stay away from right from the start! (E.g; allowing personal tributes, artificial flowers, fencing, Shepard's hooks etc.)	• Not allowing upright headstones is a big deal breaker – need to allow them (Lethbridge has one section with just flat headstones and it is not popular) • Use concrete foundation along top of graves where headstones go	• This industry is more fluid than people think - cremation is the current now the trend, but who knows if that will continue • Don't try to predict or build specifically too far in the future.	N/A	• Plan and plan some more, keep the operations people involved too

APPENDIX B: POPULATION, MORTALITY AND INTERMENT TREND ANALYSIS

Strathcona County Population Projection, Total Deaths, Death Rate per 1,000 People, 2020-2049

STRATHCONA COUNTY				
Year	Population	Growth Rate	Total Deaths	Death Rate per 1,000 People
2020	104,465	1.8%	692	6.6
2021	106,335	1.8%	725	6.8
2022	108,238	1.8%	757	7.0
2023	110,176	1.8%	790	7.2
2024	112,148	1.8%	826	7.4
2025	114,155	1.8%	861	7.5
2026	116,198	1.8%	898	7.7
2027	118,278	1.8%	937	7.9
2028	120,396	1.8%	976	8.1
2029	122,551	1.8%	1018	8.3
2030	124,744	1.8%	1060	8.5
2031	126,977	1.8%	1104	8.7
2032	129,250	1.8%	1151	8.9
2033	131,564	1.8%	1197	9.1
2034	133,919	1.8%	1246	9.3
2035	136,316	1.8%	1294	9.5
2036	138,756	1.8%	1345	9.7
2037	141,240	1.8%	1398	9.9
2038	143,768	1.8%	1450	10.1
2039	146,341	1.8%	1504	10.3
2040	148,961	1.8%	1557	10.5
2041	151,627	1.8%	1611	10.6
2042	154,341	1.8%	1662	10.8
2043	157,104	1.8%	1714	10.9
2044	159,916	1.8%	1770	11.1
2045	162,779	1.8%	1826	11.2
2046	165,692	1.8%	1883	11.4
2047	168,658	1.8%	1935	11.5
2048	171,677	1.8%	1995	11.6
2049	174,750	1.8%	2054	11.8

Province of Alberta Mortality Rate per 1,000 Population, 2008-2017

Age at time of death	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Age at time of death, all ages	5.9	5.7	5.6	5.6	5.7	5.7	5.7	5.7	5.8	6
Less than 1	6.2	5.5	5.9	5.2	4.3	5.3	5.1	4.7	4.4	4.6
1 to 4	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2
5 to 9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
10 to 14	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1
15 to 19	0.5	0.5	0.4	0.5	0.5	0.4	0.6	0.5	0.5	0.5
20 to 24	0.7	0.6	0.7	0.6	0.7	0.7	0.7	0.8	0.8	0.7
25 to 29	0.7	0.7	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9
30 to 34	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.1
35 to 39	1.1	1	0.9	0.8	0.8	0.8	1	1	1.1	1.1
40 to 44	1.4	1.5	1.3	1.3	1.4	1.2	1.4	1.5	1.4	1.4
45 to 49	2.4	2.3	1.9	2.1	2.2	2.2	2.2	2	2.1	2.1
50 to 54	3.7	3.5	3.3	3.2	3.2	3.2	3.1	3.2	3.4	3.2
55 to 59	5.5	4.9	4.9	5.1	4.8	4.7	4.9	4.7	4.9	4.8
60 to 64	8.1	8	7.5	7.7	7.6	7.6	7.3	7.5	7.2	7.2
65 to 69	13	12.7	11.5	11.6	11.8	11.9	11.5	11.3	11.4	11.1
70 to 74	21.3	19.9	20.2	19.9	19.4	19.7	18.5	17.9	17.9	18.4
75 to 79	34.1	34	31.5	30.8	31.2	30.5	29.9	29.9	30	29
80 to 84	58.2	55	55.1	51.7	53.6	52.5	52.5	52.5	50.7	49.8
85 to 89	101.8	97.3	92.3	93	94.5	94.7	90.5	90	88.1	90.2
90+	192.3	193.9	182.4	181.5	193.5	196.7	197.8	189.4	195	203.7

Government of Alberta Interactive Health Data Application, Historic Population by Age Cohort by Subzone (Sherwood Park and Strathcona County), 2008-2017

Age	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
0	1,106	1,028	1,065	1,028	1,008	956	1,034	977	981	980
1-4	4,183	4,267	4,361	4,466	4,407	4,353	4,317	4,254	4,191	4,126
5-9	5,590	5,680	5,712	5,692	5,675	5,831	5,937	6,078	6,125	6,142
10-14	6,127	6,068	5,933	5,845	5,948	6,038	6,180	6,215	6,202	6,217
15-19	7,011	6,922	6,840	6,820	6,557	6,399	6,370	6,384	6,387	6,434
20-24	6,220	6,547	6,587	6,666	6,732	6,713	6,575	6,503	6,405	6,261
25-29	5,229	5,428	5,576	5,622	5,847	5,906	6,155	6,199	6,133	6,114
30-34	5,480	5,581	5,701	5,762	5,742	5,980	6,142	6,130	6,165	6,253
35-39	6,544	6,447	6,334	6,234	6,249	6,247	6,393	6,483	6,390	6,397
40-44	7,228	7,108	6,949	6,868	6,789	6,886	6,858	6,749	6,658	6,690
45-49	8,025	8,086	7,941	7,758	7,559	7,325	7,127	7,035	6,969	6,926
50-54	7,131	7,291	7,503	7,720	7,862	7,857	7,852	7,705	7,504	7,311
55-59	5,598	5,812	6,021	6,300	6,468	6,765	6,968	7,155	7,279	7,418
60-64	5,163	5,285	5,422	5,467	5,367	5,341	5,503	5,653	5,865	6,087
65-69	3,165	3,456	3,695	3,994	4,434	4,729	4,876	5,010	5,086	4,999
70-74	2,004	2,161	2,342	2,468	2,682	2,886	3,143	3,353	3,650	4,031
75-79	1,367	1,511	1,576	1,683	1,756	1,873	2,001	2,108	2,199	2,424
80-84	867	938	991	1,095	1,136	1,199	1,276	1,358	1,443	1,507
85-89	473	495	548	577	610	662	682	727	783	831
90+	233	266	290	315	331	376	387	399	421	419
Grand Total	**88,744**	**90,378**	**91,388**	**92,378**	**93,160**	**94,323**	**95,773**	**96,475**	**96,834**	**97,567**

Strathcona County Calculated Mortality Rates, 2008-2017

Age (Years)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Less than 1	0.62%	0.55%	0.59%	0.52%	0.43%	0.53%	0.51%	0.47%	0.44%	0.46%
1 to 4	0.02%	0.02%	0.03%	0.02%	0.02%	0.03%	0.02%	0.02%	0.02%	0.02%
5 to 9	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
10 to 14	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.02%	0.02%	0.01%	0.01%
15 to 19	0.05%	0.05%	0.04%	0.05%	0.05%	0.04%	0.06%	0.05%	0.05%	0.05%
20 to 24	0.07%	0.06%	0.07%	0.06%	0.07%	0.07%	0.07%	0.08%	0.08%	0.07%
25 to 29	0.07%	0.07%	0.06%	0.06%	0.07%	0.07%	0.08%	0.08%	0.08%	0.09%
30 to 34	0.07%	0.07%	0.07%	0.07%	0.07%	0.07%	0.07%	0.09%	0.09%	0.11%
35 to 39	0.11%	0.10%	0.09%	0.08%	0.08%	0.08%	0.10%	0.10%	0.11%	0.11%
40 to 44	0.14%	0.15%	0.13%	0.13%	0.14%	0.12%	0.14%	0.15%	0.14%	0.14%
45 to 49	0.24%	0.23%	0.19%	0.21%	0.22%	0.22%	0.22%	0.20%	0.21%	0.21%
50 to 54	0.37%	0.35%	0.33%	0.32%	0.32%	0.32%	0.31%	0.32%	0.34%	0.32%
55 to 59	0.55%	0.49%	0.49%	0.51%	0.48%	0.47%	0.49%	0.47%	0.49%	0.48%
60 to 64	0.81%	0.80%	0.75%	0.77%	0.76%	0.76%	0.73%	0.75%	0.72%	0.72%
65 to 69	1.30%	1.27%	1.15%	1.16%	1.18%	1.19%	1.15%	1.13%	1.14%	1.11%
70 to 74	2.13%	1.99%	2.02%	1.99%	1.94%	1.97%	1.85%	1.79%	1.79%	1.84%
75 to 79	3.41%	3.40%	3.15%	3.08%	3.12%	3.05%	2.99%	2.99%	3.00%	2.90%
80 to 84	5.82%	5.50%	5.51%	5.17%	5.36%	5.25%	5.25%	5.25%	5.07%	4.98%
85 to 89	10.18%	9.73%	9.23%	9.30%	9.45%	9.47%	9.05%	9.00%	8.81%	9.02%
90+	19.23%	19.39%	18.24%	18.15%	19.35%	19.67%	19.78%	18.94%	19.50%	20.37%

Strathcona County Deaths and Local Interment Needs, 2020-2049

Year	Total Deaths	Interments in Strathcona County	% of Interment Deaths
2020	692	431	62%
2021	725	448	62%
2022	757	465	61%
2023	790	482	61%
2024	826	500	61%
2025	861	518	60%
2026	898	536	60%
2027	937	555	59%
2028	976	574	59%
2029	1,018	594	58%
2030	1,060	613	58%
2031	1,104	634	57%
2032	1,151	655	57%
2033	1,197	676	56%
2034	1,246	697	56%
2035	1,294	718	55%
2036	1,345	740	55%
2037	1,398	769	55%
2038	1,450	797	55%
2039	1,504	827	55%
2040	1,557	856	55%
2041	1,611	886	55%
2042	1,662	914	55%
2043	1,714	943	55%
2044	1,770	974	55%
2045	1,826	1,004	55%
2046	1,883	1,035	55%
2047	1,935	1,064	55%
2048	1,995	1,097	55%
2049	2,054	1,130	55%

APPENDIX C: PROJECTED NEED ANALYSIS

Portion of Total Interments in Strathcona County Interred in Rural and Faith-based Cemeteries, 2020-2049

Year	Total Interments	Traditional Burial #	Traditional Burial %	Cremation #	Cremation %
2020	431	21	5%	11	3%
2021	448	22	5%	12	3%
2022	465	22	5%	13	3%
2023	482	22	5%	13	3%
2024	500	22	4%	14	3%
2025	518	22	4%	15	3%
2026	536	22	4%	16	3%
2027	555	22	4%	16	3%
2028	574	21	4%	17	3%
2029	594	21	4%	18	3%
2030	613	21	3%	19	3%
2031	634	20	3%	20	3%
2032	655	20	3%	21	3%
2033	676	19	3%	22	3%
2034	697	19	3%	24	3%
2035	718	18	3%	25	3%
2036	740	17	2%	26	4%
2037	769	18	2%	27	4%
2038	797	18	2%	28	4%
2039	827	19	2%	29	4%
2040	856	20	2%	30	4%
2041	886	20	2%	31	3%
2042	914	21	2%	32	3%
2043	943	21	2%	33	4%
2044	974	22	2%	34	3%
2045	1004	23	2%	35	3%
2046	1035	24	2%	37	4%
2047	1064	24	2%	38	4%
2048	1097	25	2%	39	4%
2049	1130	26	2%	40	4%

Scenario 1 - Interments in Strathcona County Interred in Community Cemetery, 2020-2049

Year	Total Interments	Traditional Burial #	Traditional Burial %	Green Burial #	Green Burial %	Cremation Plot #	Cremation Plot %	Niche #	Niche %	Scattering #	Scattering %
2020	119	23	19%	29	25%	34	28%	17	14%	17	14%
2021	124	22	18%	31	25%	36	29%	18	14%	18	14%
2022	129	22	17%	31	24%	38	29%	19	15%	19	15%
2023	134	23	17%	32	24%	40	30%	20	15%	20	15%
2024	139	23	16%	32	23%	42	30%	21	15%	21	15%
2025	144	23	16%	33	23%	44	31%	22	15%	22	15%
2026	150	23	15%	33	22%	47	31%	23	16%	23	16%
2027	155	22	14%	34	22%	49	32%	25	16%	25	16%
2028	161	22	14%	35	22%	52	32%	26	16%	26	16%
2029	166	23	14%	34	21%	55	33%	27	16%	27	16%
2030	172	22	13%	41	24%	54	31%	27	16%	27	16%
2031	178	22	12%	41	23%	57	32%	29	16%	29	16%
2032	184	21	11%	42	23%	60	32%	30	16%	30	16%
2033	190	21	11%	42	22%	63	33%	32	17%	32	17%
2034	196	19	10%	44	22%	66	34%	33	17%	33	17%
2035	203	18	9%	44	22%	69	34%	35	17%	35	17%
2036	209	17	8%	44	21%	73	35%	37	18%	37	18%
2037	217	19	9%	45	21%	76	35%	38	18%	38	18%
2038	225	19	8%	47	21%	79	35%	40	18%	40	18%
2039	234	19	8%	49	21%	82	35%	41	18%	41	18%
2040	242	21	9%	60	25%	80	33%	40	17%	40	17%
2041	250	21	8%	63	25%	83	33%	42	17%	42	17%
2042	258	22	8%	65	25%	86	33%	43	17%	43	17%
2043	266	23	9%	66	25%	89	33%	44	17%	44	17%
2044	275	23	9%	69	25%	91	33%	46	17%	46	17%
2045	284	24	8%	71	25%	94	33%	47	17%	47	17%
2046	293	24	8%	74	25%	97	33%	49	17%	49	17%
2047	301	26	9%	75	25%	100	33%	50	17%	50	17%
2048	310	26	8%	78	25%	103	33%	52	17%	52	17%
2049	319	27	8%	80	25%	106	33%	53	17%	53	17%

Scenario 2 - Interments in Strathcona County Interred in Community Cemetery, 2020-2049

Year	Total Interments	Green Burial #	Green Burial %	Scattering #	Scattering %
2020	55	32	58%	23	42%
2021	57	33	58%	24	42%
2022	59	34	57%	26	44%
2023	62	35	56%	27	44%
2024	64	35	55%	29	45%
2025	66	36	54%	30	45%
2026	68	37	54%	32	47%
2027	71	37	53%	34	48%
2028	73	38	52%	35	48%
2029	76	38	50%	37	49%
2030	95	49	52%	46	48%
2031	99	50	50%	49	50%
2032	102	51	50%	51	50%
2033	106	52	49%	54	51%
2034	109	53	49%	57	52%
2035	113	54	48%	59	52%
2036	117	55	47%	62	53%
2037	121	56	46%	65	54%
2038	126	59	46%	67	53%
2039	131	61	47%	70	54%
2040	162	82	51%	79	49%
2041	168	85	51%	82	49%
2042	173	89	51%	85	49%
2043	178	91	51%	87	49%
2044	184	94	51%	90	49%
2045	190	97	51%	93	49%
2046	196	100	51%	96	49%
2047	201	102	51%	99	49%
2048	208	106	51%	102	49%
2049	214	109	51%	105	49%

Note: Significant annual increases in 2030 and 2040 reflect the increase in projected demand for green burial from the cremation market. Although the change is projected in 10-year increments, it's expected the actual increase will occur year over year which results in a smoother trend.

APPENDIX D: CEMETERY ESTABLISHMENT STEPS

The following are the additional steps involved in acquiring, planning, designing, building, and operating a new cemetery.

Provincial Project Approval

- Complete an application for Provisional Approval, including the following information:

- Geotechnical and hydrogeological investigation to ensure that the proposed location meets health regulations

- Approval from health authority stating that the site meets the Alberta Health Services (AHS) site selection requirements for cemetery development

- Sketch plan showing proposed location of site (including legal description of the quarter section), general slope of land, all buildings used for human habitation and all water supplies within 150 metres of any boundary point of the cemetery, cemetery boundaries with measurements, placement of the cemetery within the quarter section showing the distance between a reference point and the cemetery boundaries

- Subdivision approval for cemetery land use from the municipality

- Acquire a clean and separate title for the cemetery site, free and clear of any liens or encumbrances

- If the proposed cemetery is described by a plan number on the title, a copy of the registered plan must also be submitted. If the title is in order, a Final Certificate of Approval may be issued. The Final Certificate of Approval permits burials to take place on the site.

- Advise the Director of Cemeteries of the creation of columbaria within the cemetery

- Register a mausoleum if the structure contains more than 12 compartments

Environmental Review

- Conduct a review of historic site uses to identify any potential sources of contamination. If there is a possibility of past contamination, conduct a Phase 1 Environmental Assessment.

- Review available environmental databases (e.g., provincial, municipal) to identify any environmentally sensitive features.

- Determine the need for more detailed environmental studies and complete those if necessary.

- Identify any areas of the site that need to be protected from site alteration or development for environmental reasons.

Site Data

- Prepare a topographical site survey, including property lines, surrounding roads, property access, grades, watercourses or drainage features, edges of forested areas, major trees, and any other site features.

- Compile information on utilities and services near the site, including identification of the closest water, sanitary sewer, and shallow utilities (e.g., power, gas, communications). Review opportunities, challenges and high-level costs for providing the required services to the site.

- Collect and review information related to site drainage, stormwater management infrastructure, and stormwater management plans for the area surrounding the site. Assess stormwater drainage on the site and identify any challenges that could affect the design of the site.

Preliminary Design

- Undertake a preliminary design process that includes the following:
- Community engagement to provide input into the design process
- Site inventory and analysis, including site opportunities and challenges
- Vision and goals for the cemetery
- Program of cemetery services, infrastructure, and design features to include in the cemetery
- Concept plan options that explore different site layouts
- Preferred site design
- Phasing plan
- Class C cost estimate
- Final report

Cash Flow Analysis

- Update the financial feasibility and funding analysis model with new information on capital costs:
- Enter capital costs into the financial model
- Confirm and update operating costs as needed based on the preferred operational structure
- Test the original proposed fees to identify the degree to which the cemetery will be self-sustaining vs subsidized by the County
- Adjust fees, if necessary, to achieve the desired balance of revenues and costs

Detailed Design

- Prepare a detailed design package for the cemetery that includes the following drawings and specifications suitable for tendering the project.

- Prepare a Class B cost estimate when detailed design is 50% and a Class A cost estimate when it is 100% complete.

- Tender the construction work.

- Monitor the project during construction.

Establish Operations

- Define the County staff positions needed to run and maintain the cemetery (internal only or combination of internal and external), including their roles, responsibilities, and wages.
- Assign the responsibilities to existing staff and/or hire new staff as needed.
- Evaluate the County's asset management and accounting software to determine if it can be used or adapted for cemetery management. If so, set it up accordingly. If not, pursue acquisition of cemetery management software.
- Prepare content for a new cemetery webpage on the County's website.
- Confirm fees and post these on the cemetery webpage.
- Prepare a marketing strategy for cemetery services and undertake communications to notify the public about the cemetery.
- Prepare a Cemetery Bylaw.