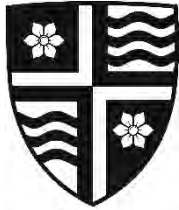


Township of
Langley



Est. 1873

REPORT TO MAYOR AND COUNCIL

PRESENTED: MAY 13, 2019 - REGULAR AFTERNOON MEETING
FROM: ENGINEERING DIVISION
SUBJECT: CEMETERY OPERATIONS REVIEW

REPORT: 19-81
FILE: 6130-01

RECOMMENDATIONS:

That Council receive the “Township of Langley Cemetery Operations Review” report prepared by LEES + Associates, presented as Attachment A; and

That Council direct staff to bring forward and include the necessary budget and rate increases as part of future budgets and bylaws for Council’s consideration.

EXECUTIVE SUMMARY:

The Township currently operates three municipal cemeteries; Fort Langley, Langley Lawn, and Murrayville. The capacity for interment is becoming increasingly less, prompting the need to undertake a review.

The Township of Langley commissioned LEES + Associates to prepare a review of operations at its three municipal cemeteries. The completed report will serve to guide many aspects of the operations. It identifies how the Township can enhance its service delivery to the community, plan for future required expansions, and become financially sustainable.

Specifically, with only a few remaining in-ground casket plots available at the Fort Langley Cemetery, the consultant also prepared a conceptual layout for the undeveloped western section of the cemetery, presented as Attachment B to this report.

Staff will focus available resources and priorities for the proposed expansion at Fort Langley and submit the necessary funding required as part of the annual budget process for Council’s consideration.

PURPOSE:

This report is to accompany the presentation and consultant report.

BACKGROUND/HISTORY:

Cemeteries in the Township have been serving the community since 1881 when pioneers in Fort Langley first began using the cemetery there. In 1891, Mr. Murray buried his son at what is now the Murrayville Cemetery. Over the past 138 years, the system of burial grounds has grown to accommodate the Township and citizen's needs for places of interment, memorialization and commemoration. Langley Lawn Cemetery is now the most utilized cemetery in the Township.

Murrayville Cemetery is almost at capacity and while there is still some capacity at both Fort Langley and Langley Lawn Cemeteries, they have a finite lifespan. The range of services at the three cemeteries are casket and cremated remains burials, interment of cremated remains in columbaria, and scattering gardens.

The Township retained the services of LEES + Associates to undertake a study of our Cemetery Operations and to provide recommendations. The findings in the consultant's report, presented as Attachment A, provides recommendations that the Township could adopt to position the Cemetery system to serve the needs of families as the Township's population grows over the next 30 years. It is anticipated that Township's cemeteries will inter 9,000 residents over the next 30 years, with 33% of interments as casket burial, 59% as cremation burial, 7% as niche interments, and 1% as scatterings.

DISCUSSION/ANALYSIS:**Cemetery Inventory**

Demand for cemetery land is driven by population growth, a community's ethnic and religious profile, and its corresponding preferences for traditional in-ground burials, consisting of caskets burial, which requires the largest land footprint, and cremated remains. As the Township's population grows, the death rate will also increase which will translate to a decrease in existing cemetery burial inventory options.

The Township's current inventory and gap analysis has identified various burial options that provided a limited time horizon of between 5 years (in-ground casket) and 14 years (in-ground cremation) dependent on interment choice.

In order to provide adequate burial inventory options for the next 30 years, an increase in the number of available interment types will need to be developed, including; 473 columbarium niches, 909 cremation in-ground lots, and 2,464 casket in-ground lots.

Cemetery Development Recommendation

To accommodate the increasing death rate and to meet the needs of families in the Township the following strategies are recommended:

1. Re-purpose existing adjacent Township property or secure additional property, that is preferably adjacent to existing cemeteries;
2. Redevelop and maximize areas within existing cemeteries, and
3. Offer improved services and a wider range of interment and memorialization options.

Fort Langley Cemetery:

There are only a few remaining traditional in-ground casket burial lots for sale at Fort Langley Cemetery. Key recommendations to enhance the service provided to families choosing to be buried at Fort Langley Cemetery include:

1. Developing a new burial section in the western end of the cemetery to provide a wider range of interment and memorialization options including:
 - a. 318 traditional in ground (full body) burial lots with flat markers;
 - b. 143 traditional in-ground (full body) burial lots with upright markers;
 - c. Cremation gardens containing:
 - i. 274 in-ground standard cremation lots (containing up to 2 interments);
 - ii. 53 family estate in-ground cremation lots (containing up to 6 interments);
 - iii. 12 columbaria units (with 48 above-ground cremation niches in each unit, with 2 interments per niche);
 - iv. An enhanced and enlarged scattering garden expanding on the existing scattering bed;
 - d. A memorial wall;
 - e. Installation of an irrigation system that could be expanded to the older burial sections in future; and
 - f. Expanded burial areas on parts of the current parking lot when the park or pool to the north west of Fort Langley Cemetery is redeveloped.

2. Upgrades to the office of the existing satellite cemetery building so it is more suitable to receive families when making burial arrangements with staff.

The design of the proposed burial section and other cemetery-wide improvements respect and enhance the heritage and historic character of the cemetery as defined by the Township's Statement of Significance. Proposed new lot layouts and enhancements to the cemetery were presented to the Heritage Advisory Committee on February 6, 2019 and members of that committee were supportive of the plan. See proposed Fort Langley Cemetery Layout, presented as Attachment B.

With only five traditional in-ground caskets remaining in the cemetery, staff hired LEES + Associates to develop a burial lot layout plan for the western end of the cemetery including an option to expand into Fort Langley Park parking lot in the future. In April 2019, staff marked out the burial lots according to the layout plan in the north western end of the cemetery only, and are in the process of seeking approval from Consumer Protection of BC before sales can be initiated. Detailed designs for the cremation gardens and landscaping are underway with a planned implementation over the next three years, as budgets permit.

Murrayville Cemetery:

The Murrayville Cemetery is a fully developed cemetery. The opportunities to create more burial space is limited to redundant driveways that will be in-filled with a limited number of traditional in-ground (full body) and cremation lots. The key recommendations are:

1. Creating a materials storage yard;
2. A limited in-fill strategy in the existing developed areas of the cemetery with some casket and cremation in-ground lots;
3. The purchase of additional property to the north and west which is only accessible through the cemetery because of a ravine; and
4. Decommissioning of the existing cemetery building and consolidation of customer service at Langley Lawn Cemetery.

Langley Lawn Cemetery:

Langley Lawn Cemetery is only partially developed and will be the main cemetery serving residents over the next 25 year period and beyond. Key recommendations for its development include:

1. Phased burial expansion on the undeveloped western half of the cemetery;
2. New interment options including green burial areas;
3. A wide variety of interment and memorialization options within each proposed burial section;
4. Relocation of the operations yard to the northern side of the cemetery on a smaller footprint to free up room for proposed green burial areas and to take advantage of existing access onto 44th Avenue; and
5. Upgrading the existing cemetery building and front entry experience.

General Cemetery System Wide Recommendations

Pricing:

It is recommended that a Financial Plan is procured to determine the strategy for moving the cemetery system toward a cost neutral position, as budget permits.

Through the 2019 Fees and Charges Bylaw, Cemetery fees for adult casket and cremated lots were increased to match surrounding municipal cemetery pricing as a starting point towards moving the Township's Cemeteries to a cost neutral position.

Records Management:

It is recommended that staff complete the digitization and verification of the Township's burial records to:

1. Ensure accuracy of the records, and
2. Allow the creation of an on-line database for the public to find family members.

Cemetery Management and Maintenance:

It is recommended that the Township:

1. Create and implement Standard Operating Procedures (SOP's) for the care and maintenance of all cemeteries, including a landscape management plan for the care and replacement of the trees.

Financial Implications

Funding required to implement the recommendations and priorities outlined in the Cemetery Operations Review Plan would be presented to Council for consideration as part of future years' annual Operating and Capital budget process.

Respectfully submitted,

Tab Buckner
MANAGER, PARKS OPERATIONS
for
ENGINEERING DIVISION

ATTACHMENT A TOWNSHIP OF LANGLEY CEMETERY OPERATIONS REVIEW
ATTACHMENT B FORT LANGLEY CEMETERY LAYOUT

Township of Langley

Cemetery

Operations Review

LEFS
ASSOCIATES

Cemetery Operations Review

2 May 2019

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EXECUTIVE SUMMARY

In July 2017, the Corporation of the Township of Langley (the Township) commissioned LEES+Associates to prepare a review of operations at its three municipal cemeteries, Fort Langley Cemetery, Langley Lawn Cemetery and Murrayville Cemetery.

This study will serve as a guide to the Township management decisions for its future cemetery operations. It identifies how the Township can enhance its service delivery to the community and outlines a plan for future cemetery land development.

Key findings from this study include:

NEEDS ANALYSIS

- It is anticipated that Township cemeteries will **inter 9,000 residents** over the next 30 years, with **33% of interments** as casket burial, **59% as cremation burial**, **7% as niche inurnments**, and **1% as scatterings**.

SITE ANALYSIS

- Fort Langley and Murrayville have significant **heritage values**;
- Some cemetery borders lack **visual buffers** of vegetation;
- **Ground conditions** due to sunken graves at Fort Langley and Murrayville present possible tripping hazards;
- **Operations areas** would benefit from reorganization that prioritizes the safe and efficient arrangement of storage and work spaces and visual screening from the cemetery, and
- Fort Langley and Langley Lawn offer opportunities for **expansion** and new capacity.

OPERATIONS RECOMMENDATIONS

- Cemetery Operations Recommendations:
 - It is recommended that **green burial** options be added to the cemetery inventory;
 - A **full variety of options** should be included in **each new cemetery section**, including cremation burial, columbaria and memorialization without interment;

- **Ossuaries and mausolea** are not currently recommended for the Township cemeteries.
- Pricing Recommendations:
 - Increase the **resident fee** for right of interment for:
 - Casket lots from the current rate of **\$2519 to \$3,000**;
 - Cremation lots from the current rate of **\$961 to \$1,300**;
 - Veteran lots from the current rate of **\$1261 to \$1,500**, and
 - Veteran cremation lots from the current rate of **\$482 to \$650**.
 - Maintain **non-resident fees** in line with general price increases.
 - Establish **Social Service rates**, and
 - Establish pricing for both adult and child **green burial** that is on par with standard casket lot rates.
- Records Management Recommendations:
 - Continue with the digitization and verification process for the Township's records to **ensure consistency in burial records** and GPS data;
 - Create an online and **searchable database of cemetery records** and locations;
 - Continue with the establishment of an **intuitive and logical lot numbering system** and the creation of protocols.
- Cemetery Management & Maintenance Recommendations:
 - Continue pursuing the **regularization of the boundary** at Murrayville Cemetery including the purchase additional property on the west side of the cemetery to accommodate a designated operations area;
 - When park or pool to the north of Fort Langley cemetery is redeveloped, a portion of the park's **parking lot should be relocated from designated cemetery land**;
 - Create and adopt **Standard Operating Procedures** for ongoing and cyclical maintenance including tree assessment and care and horticultural maintenance;
 - Consolidate **customer service operations to Langley Lawn**, and
 - **Extend irrigation** to any new burial areas at Fort Langley and Langley Lawn.

IMPLEMENTATION PLAN

- High priorities identified for the **cemetery system as a whole** include:
 - Completing the burial records digitization and georeferencing project;
 - Developing Standard Operating Procedures for cemetery maintenance;
 - Informing families of the Cemetery bylaw at time of lot purchase, particularly regarding ornamentation, and
 - Creating and implementing a tree planting strategy.
- High priorities identified for **Fort Langley Cemetery** include:
 - Expansion and reconfiguration of existing cremation garden;
 - Reconfiguring and screening of material storage area;
 - Adding new burial section and installing irrigation, and
 - Replanting the boundary hedge.
- High priorities identified for **Murrayville Cemetery** include:
 - Purchasing space on western edge of cemetery to create a new, screened materials storage yard;
 - Upgrading existing cemetery driveway surface and curbs;
 - Re-establishing the northern entry as a pedestrian link.
- High priorities identified for **Langley Lawn Cemetery** include:
 - Creation of new burial section 1 to allow for additional casket capacity;
 - Expansion of irrigation system to future burial sections;
 - Creation of green burial section;
 - Upgrading the existing building and front entry experience, and
 - Relocation of the operations yard and addition of new operations building with electricity, water, storm sewer, sanitary sewer and natural gas.

1 INTRODUCTION

In July 2017, the Township of Langley commissioned LEES+Associates to prepare a review of operations at its three municipal cemeteries, Fort Langley Cemetery, Langley Lawn Cemetery and Murrayville Cemetery.

This study will serve as a guide to Township management decisions for its future cemetery operations. It identifies how the Township can enhance its service delivery to the community and outlines a plan for future cemetery land development.

This report provides the Township with a strategy for the Township of Langley's future cemetery operations. Report chapters include:

Introduction

- An overview of this project's goals, approach and assumptions;

Needs Analysis

- A review of the Township's demographics, disposition rates and interment trends. This includes a comparative analysis of current inventory, anticipated future demand and current site capacity;

Site Analysis

- A summary of the opportunities and challenges in the Township cemetery system;

Operational Analysis

- An assessment of the Township's cemetery governance, human resources, administration, customer service, site care, community engagement and pricing policies and procedures;

Implementation Plan

- Summarizes this study's proposed next steps, and

Appendices

- Includes supporting information for the report's findings and recommendations.

This study used the following methods:

1. Background Data Review + Research

- Review demographic and disposition projections and past cemetery operations activity records from sources including: the Township of Langley, DataBC, BC Statistics, Statistics Canada, and the Cremation Association of North America;
- Visit Fort Langley, Murrayville and Langley Lawn cemeteries to document their character, capacity, challenges, and opportunities.

2. Analysis + Reporting

- Analyze the data collected, notes from the site visit, and feedback from Township staff. Identify and graph key trends;
- Compile findings from the research, analysis, and LEES+Associates' professional expertise, in order to inform the future operations and development at Township cemeteries;
- Project future demand through LEES+Associates' proprietary Cemetery Business Case Analysis Tool (CBCAT).

ASSUMPTIONS

Key assumptions in this study's analyses include:

- Fort Langley, Murrayville, and Langley Lawn cemeteries primarily serve residents of the District Municipality of Langley (also known as the Township of Langley). The Township cemetery system's primary market area includes the Local Health Area 035 – Langley except for City of Langley;
- The population of these markets will grow in accordance with the Provincial government's projections (generated by DataBC and BC Statistics);
- Baby Boomer deaths will increase the market's death rate from 2023 to 2041;
- Market cremation rates will rise by 0.67% per year to maximum of 90%, and
- 65% of future cremation interments will be in-ground burial, 25% of future cremation interments will be accommodated by columbaria niches and 10% of future cremation interments will be in scattering gardens;
- There are no private cemeteries operating in the Township of Langley.

2 NEEDS ANALYSIS

This chapter reviews the current inventory at the Township of Langley's cemeteries and compares it to the anticipated demand over the next 30 years. It includes a review of the Township's demographics, disposition rates and interment trends, as well as a comparative analysis of current inventory, anticipated future demand and current site capacity.

2.1 MARKET PROFILE

MARKET CATCHMENT AREA

This study examines the expected demand for the Township of Langley's cemetery services over the next 30 years.

The primary market for the Township of Langley's cemetery system are the residents with its municipal boundaries. The 2016 Statistics Canada census reported that the Township of Langley had a population of 117,285¹.

The Township of Langley is a district municipality in southwestern British Columbia. The Township is bounded by the Fraser River in the north, the City of Abbotsford in the east, the U.S. border to the south, and the City of Surrey and the City of Langley to the west.

Communities surrounding the Township of Langley comprise a secondary, non-resident market for the Township of Langley's cemetery system.

According to the Township's Cemetery Bylaw 2016 No. 5236:

- **Resident** means any person presently residing in the Township of Langley and for a continual period of not less than one year, and
- **Non-resident** means, for the purpose of the Township's Fees and Charges Bylaw, any person not covered under the interpretation of Resident.

The Township, like other Canadian municipalities, has defined a qualifying period in its bylaw for individuals to qualify for residential rate at its cemeteries. Canadian municipalities typically set this qualifying period from 1 to 5 years.

¹ Statistics Canada, Census 2016

<http://www12.statcan.gc.ca/census-recensement/index-eng.cfm>

MARKET AREA - CEMETERY SITES

While all three cemeteries are active, Langley Lawn Cemetery, with its substantial available inventory, is the primary site serving the Township's cemetery market. The Fort Langley and Murrayville cemeteries are identified as Historic Cemeteries in the Township's cemetery bylaw.

The cemeteries are located as follows:

- **Fort Langley Cemetery** - 23,105 St. Andrew St, Fort Langley;
- **Murrayville Cemetery** - 21,405 44th Ave, Langley, and
- **Langley Lawn Cemetery** - 4393 208th St, Langley.

2.2 DEMOGRAPHIC + DISPOSITION TRENDS

This chapter forecasts the need in the Township's cemetery market while outlining the demographic and market variables that will affect future demand.

These include:

- Projected population growth;
- Projected deaths;
- Ethnicity and religion;
- Cremation rates, and
- Cemetery market capture.

POPULATION GROWTH

The "Baby Boom" generation includes those born between **1952 and 1965**². As this large age cohort reaches its life expectancy, demand for cemetery services is expected to increase. The average life expectancy for this cohort is about 80 years. Statistics Canada expects the aging of the population will cause an increase in demand for cemetery and funeral-related goods and services starting in 2022, when the oldest of this group reaches the age of 70. The number of deaths is expected to decrease towards 2045, when the youngest members of this generation turns 80.

² "Canada's Baby Boom Is Nothing like the One in the US," Robert L. Brown, Past President of the Canadian Institute of Actuaries, Expert Advisor, EvidenceNetwork.ca,

http://www.huffingtonpost.ca/robert-l-brown/canada-baby-boom_b_6478760.html

The following table summarizes the Township's recent population statistics with those projected over the next 30 years.

Cemetery Market Area	Population 2016	Average Growth 2011-2016	Population 2046	Average Growth 2017-2046
Township of Langley	117,285	2.6%	205,332	1.7%

Table 1: Township of Langley Recent and Projected Population, Source: Statistics Canada, DataBC and BC Statistics.

DEATHS

An analysis of the Township of Langley's cemetery market finds that:

- 4,705 deaths took place from 2011 to 2016, averaging 784 per year, and
- The death rate averaged 7.1 per 1000 residents per year, from 2011 to 2016.

The following table compares the Township's recent yearly deaths with those predicted over the next 30 years.

Cemetery Market Area	Deaths 2016	Deaths per 1000 in 2016	Deaths 2046	Deaths per 1000 in 2046
Township of Langley	865	7.4	1,702	8.3

Table 2: Township of Langley Recent and Projected Deaths and Death Rates, Source: BC Vital Statistics + LEES+Associates.

ETHNIC ORIGINS + RELIGIOUS GROUP PROFILES

As many ethnic and religious groups have customs that discourage or forbid cremation, there will always be a segment of the population that chooses casket burial. Based on Township of Langley demographics and our professional expertise, we have estimated that cremation will not rise beyond 90% of dispositions for this market.

Christian

While cremation has been permitted for Catholics since 1962, provided that cremated remains are kept together and not scattered, some branches of Christianity, including Greek and Serbian Christians and the Eastern and Oriental Orthodox Churches, do not permit cremation.

Muslim

Muslim funeral rites vary by regional interpretation and custom, however cremation is forbidden in all cases.

Jewish

Cremation is also forbidden for Orthodox Jews. While Reform and Conservative Jewish rabbinical authorities also frown on the practice, it is growing in popularity.

Buddhism, Hinduism, Sikhism

Cremation is established as the primary funeral rite in Hinduism, Sikhism, and Buddhism.

The following figure illustrates the ethnic distribution in the Township of Langley.

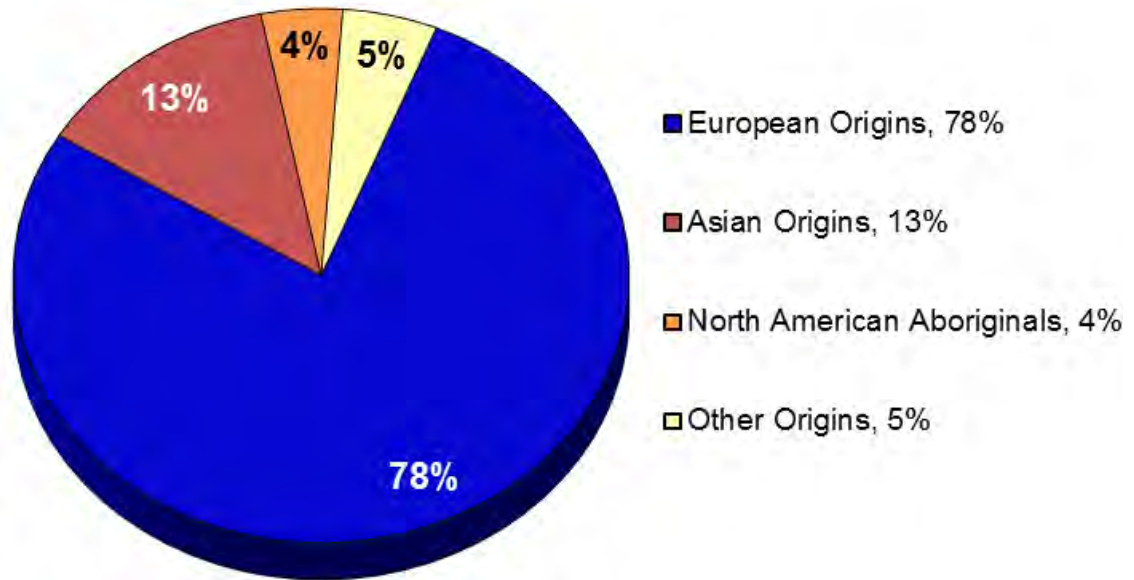


Figure 1: Township of Langley Ethnic Profile, Source: Statistics Canada National Household Survey 2011.

The following figure illustrates the religious distribution in the Township of Langley.

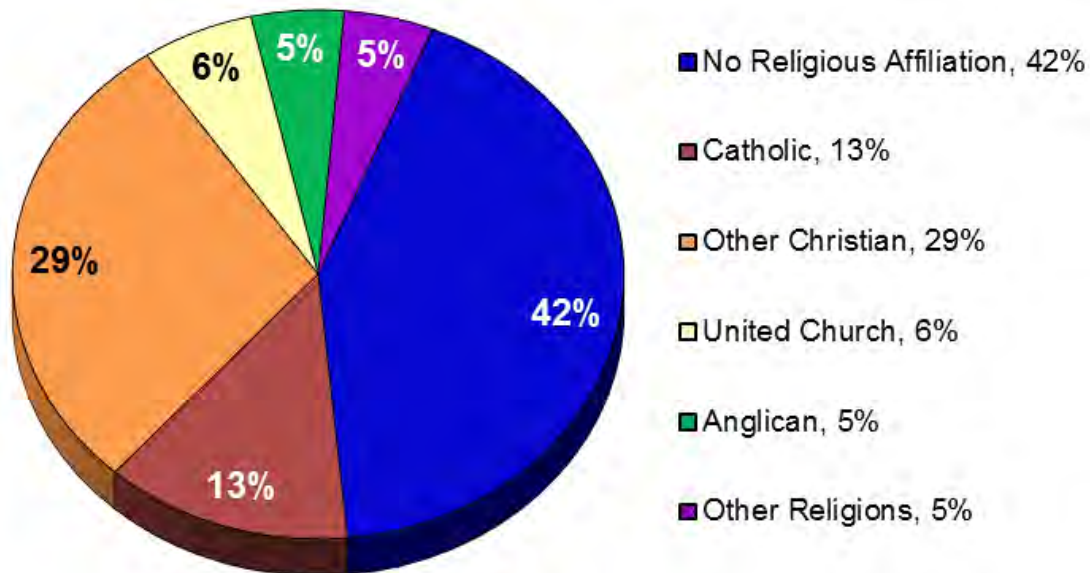


Figure 2: Township of Langley Religious Profile, Source: Statistics Canada National Household Survey 2011.

CREMATION TRENDS

Disposition describes the manner in which human remains are finally handled after death. In North America, the most common disposition options are casket burial or cremation.

Cremation is the preferred disposition option nationwide. The average national cremation rate rose from **55.8%** in 2006 to **70.2%** in 2016. It is expected to continue to rise across the country.

British Columbia has approximately 30,000 cremations per year. The cremation rate in British Columbia has increased from **78.6%** in 2006 to **84.6%** in 2016. The Cremation Association of North America (CANA) predicts British Columbia’s cremation rate will rise to **86.3%** by 2020. The Township of Langley cremation rate in Langley was **89.5%** in 2016.

The following map illustrates the preference for cremation in Canadian provinces and territories as of 2016.

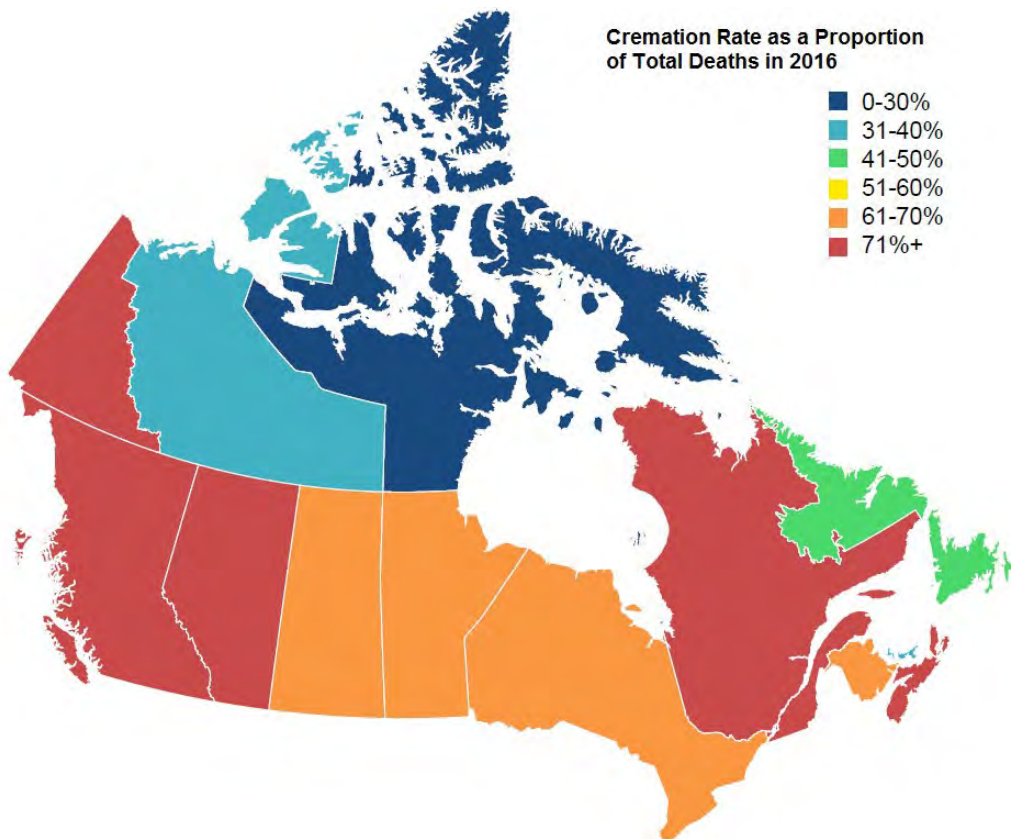


Figure 3: Map of Canadian Rates of Cremation as of 2016, Source: Cremation Association of North America, Vol 32, No 2.

CEMETERY LIFE CYCLE + COMMUNITY USE TRENDS

Pre-need + At-need Stages

Families may purchase a grave at a cemetery when a resident dies (“at-need”) or individuals may choose to purchase a grave before they die (“pre-need”).

The following diagram summarizes the usual cemetery life cycle.

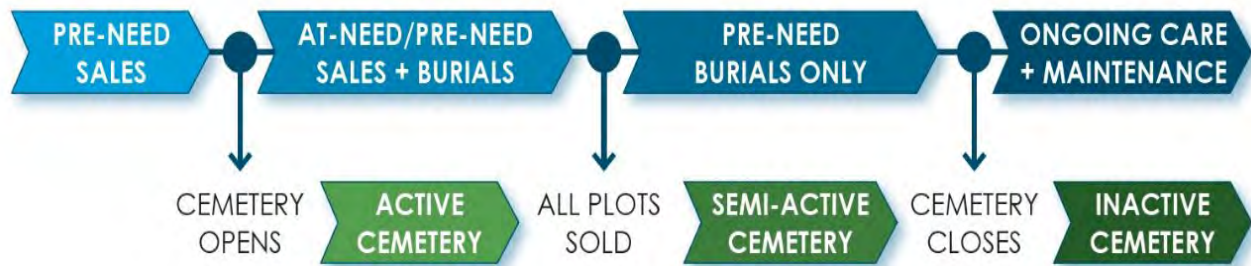


Figure 4: Cemetery Lifecycle Diagram, Source: LEES+Associates.

The Township is currently more restrictive of its pre-need sales than other Canadian municipal cemeteries. According to the Township cemetery bylaw:

- A pre-need Right of Interment may only be issued to a person who is sixty-five years of age or older, and:
 - a) Is a Resident;
 - b) Has been a Resident in the Township for at least twenty (20) consecutive years as of the date of the application for the Right of Interment; or
 - c) Is a Former Resident who has a Family Member Interred in the Cemetery where they are applying for a ‘Right-of-Interment’
- Pre-need Rights of Interment may not, in any given calendar year, in any given Cemetery, exceed the lesser of one-hundred (100) vacant Lots, or 50% of all remaining vacant Lots in the Cemetery.

Consequently, the vast majority of cemetery sales have been to Township residents.

Canadian municipal cemeteries rarely market their services and often lack dedicated sales representatives. Consequently, they usually average a **2:1** ratio of at-need to pre-need sales. In contrast, private operators and premium religious cemeteries often sell the majority of their inventory as pre-need lots, with a **1:2** ratio of at-need to pre-need sales. Over the past five years, the Township’s cemetery sales ratio has higher than that of many other municipal cemetery systems with almost one and a half at-need sales for every pre-need sale.

Resident + Non-Resident

Burials serve local resident demand, as well as that of non-residents who choose and are permitted to be buried in the community. Non-residents often have family buried in the cemetery.

In an effort to extend the functional life of the cemeteries for residents, the Township is far more restrictive of non-resident sales than other Canadian municipal cemeteries. According to the Township cemetery bylaw:

- Except as expressly provided for in this Bylaw, an at-need Right-of-Interment for in-ground burial of human remains may only be issued to inter a Resident, Former Resident, or a Family Member of a Resident or Former Resident.

The extent to which individuals choose to be buried in a particular cemetery (also known as market capture) correlates to the attractiveness and convenience of the site, the diversity of products and services offered, and the operator's ability to meet religious/ethnic traditions and accessibility needs. It is important to note that a high cremation rate decreases the demand for cemetery land and services, as approximately 80% of cremated remains are kept at home or scattered in a place of personal meaning.



Figure 5: Mountain View Cemetery Customer Service Building and Celebration Hall, Vancouver, British Columbia.

CEMETERY MARKET

The following graph summarizes the recent market trends for the Township of Langley cemeteries. In this graph, population data aligns with the left vertical axis while death, cremation and casket burial data aligns with the right vertical axis.

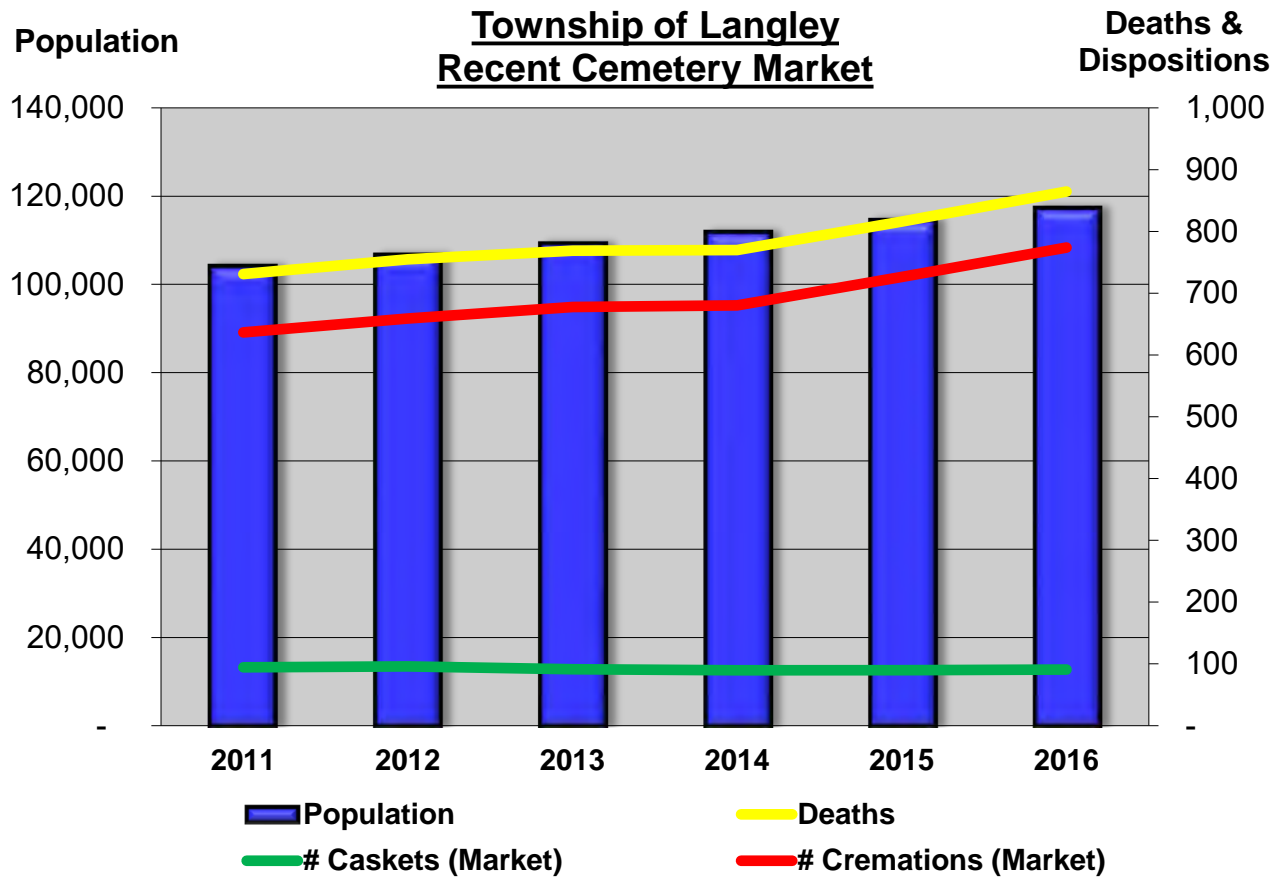
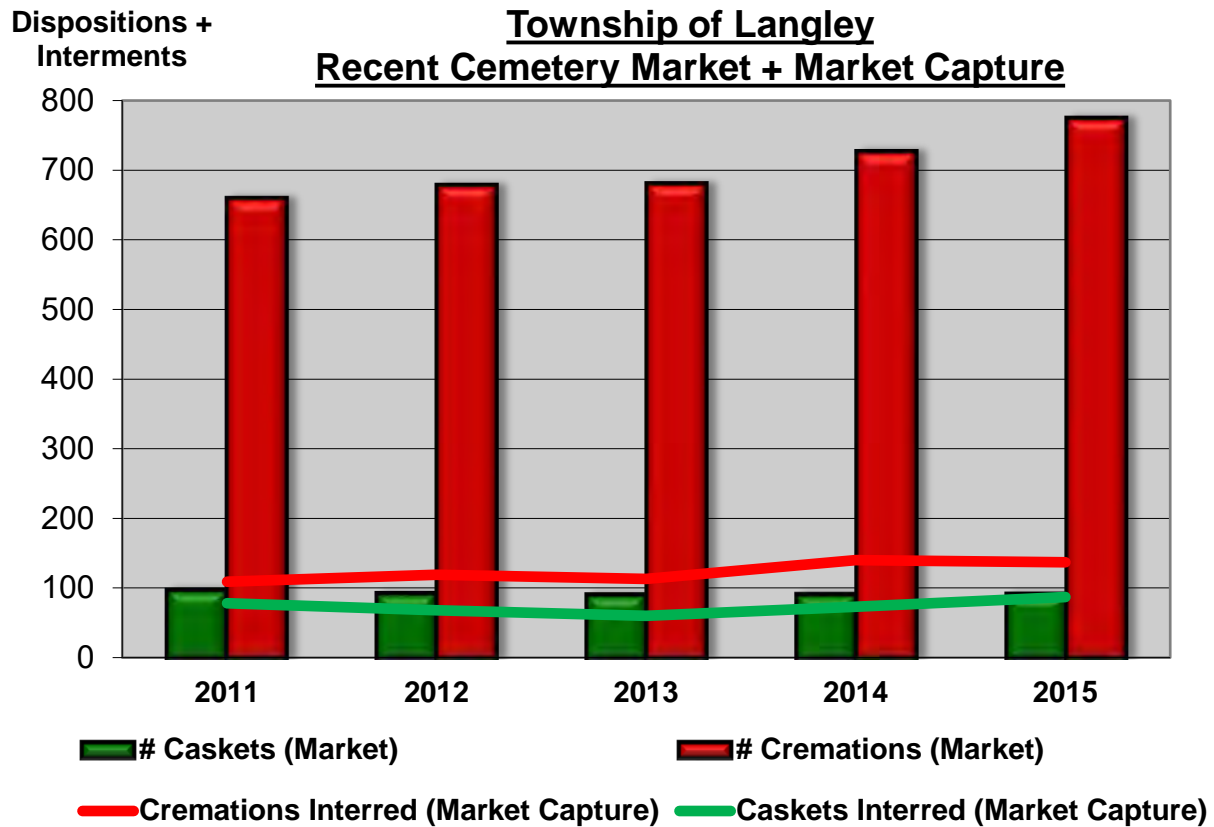


Figure 7: Township of Langley Recent Cemetery Market and Population, Source: LEES+Associates.

From 2011 to 2016 there were;

- 552 casket burials took place in the Township, averaging 92 per year, and
- 4,154 cremations took place in the Township, averaging 692 per year.

The following graph compares the recent cemetery market capture in the Township of Langley cemeteries with the overall market for both cremation and casket interment.



Figures 8: Township of Langley Recent Cemetery Market and Market Capture, Source: LEES+Associates.

From 2011 to 2016 there was;

- **80%** capture of the Township's casket market;
- **366** casket burials in Township cemeteries, averaging 73 casket burials per year;
- **18%** capture of the Township's cremation market;
- **542** cremation lot burials in the Township cemeteries, averaging 108 cremation lot burials per year (88% of cremation interments);
- **63** niche inurnments in the Township cemeteries, averaging 13 niche inurnments per year (10% of cremation interments), and
- **13** scatterings in the Township cemeteries, averaging 3 scatterings per year (2% of cremation interments).

PROJECTED MARKET DEMAND

Building on population projections and past cemetery trends in the Township and region, the following graph projects 30 years of demand in the Township of Langley’s cemetery market. Population data aligns with the left vertical axis, while total deaths, casket burials, and cremations aligns with the right vertical axis.

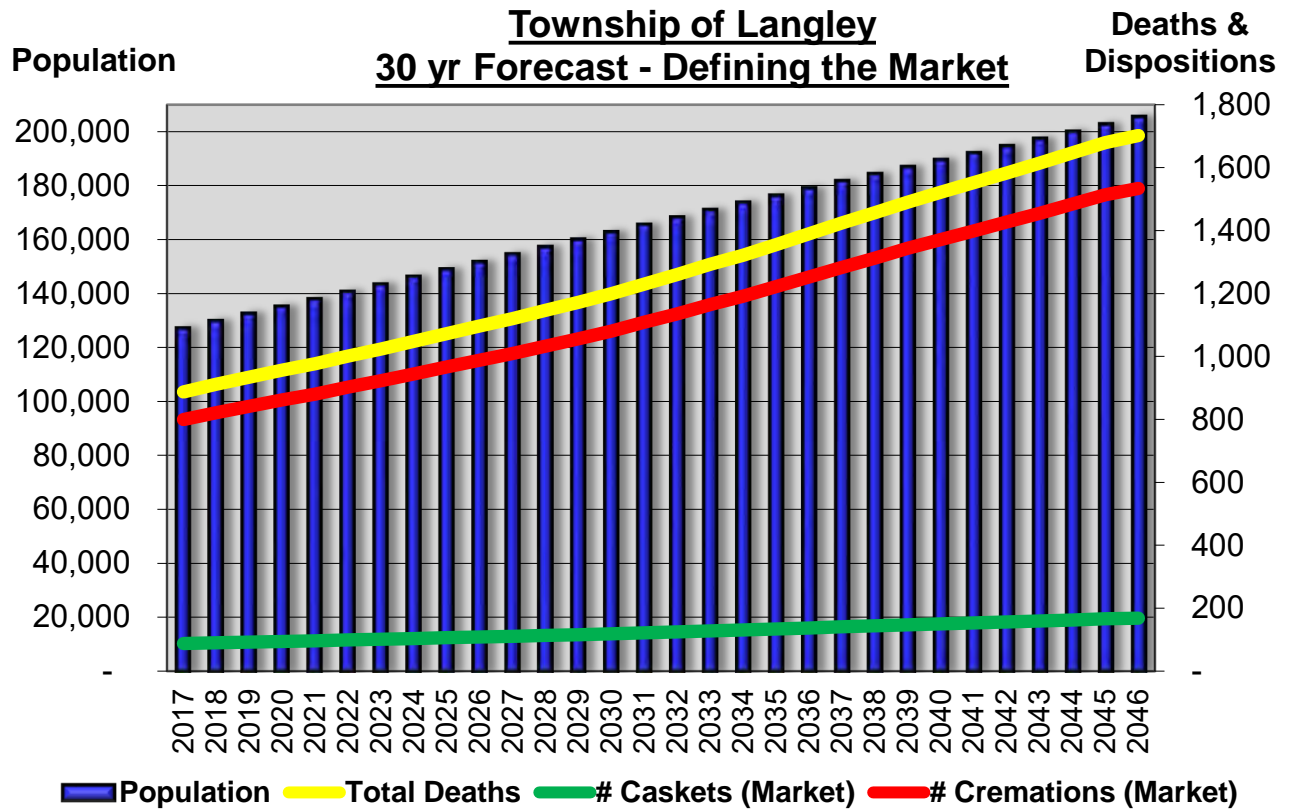


Figure 9: 30 Year Demographic and Disposition Projection for Township of Langley Cemetery Market, Source: LEES+Associates.

This study predicts that over the next 30 years there will be:

- 38,000 deaths of Township of Langley residents;
- 3,800 casket burials of Township of Langley residents;
- 34,300 cremations of Township of Langley residents;
- An increase in Township casket burials from 90 to 170 per year, and
- An increase in Township cremations from 775 to 1,500 per year.

Increases in deaths, burials and cremations will be driven by the Township’s projected population growth. Given the current high rate of cremation within the Township of Langley, the cremation rate is unlikely to rise much higher.

The following graph shows 30 years of activity projected for the Township of Langley cemetery system.

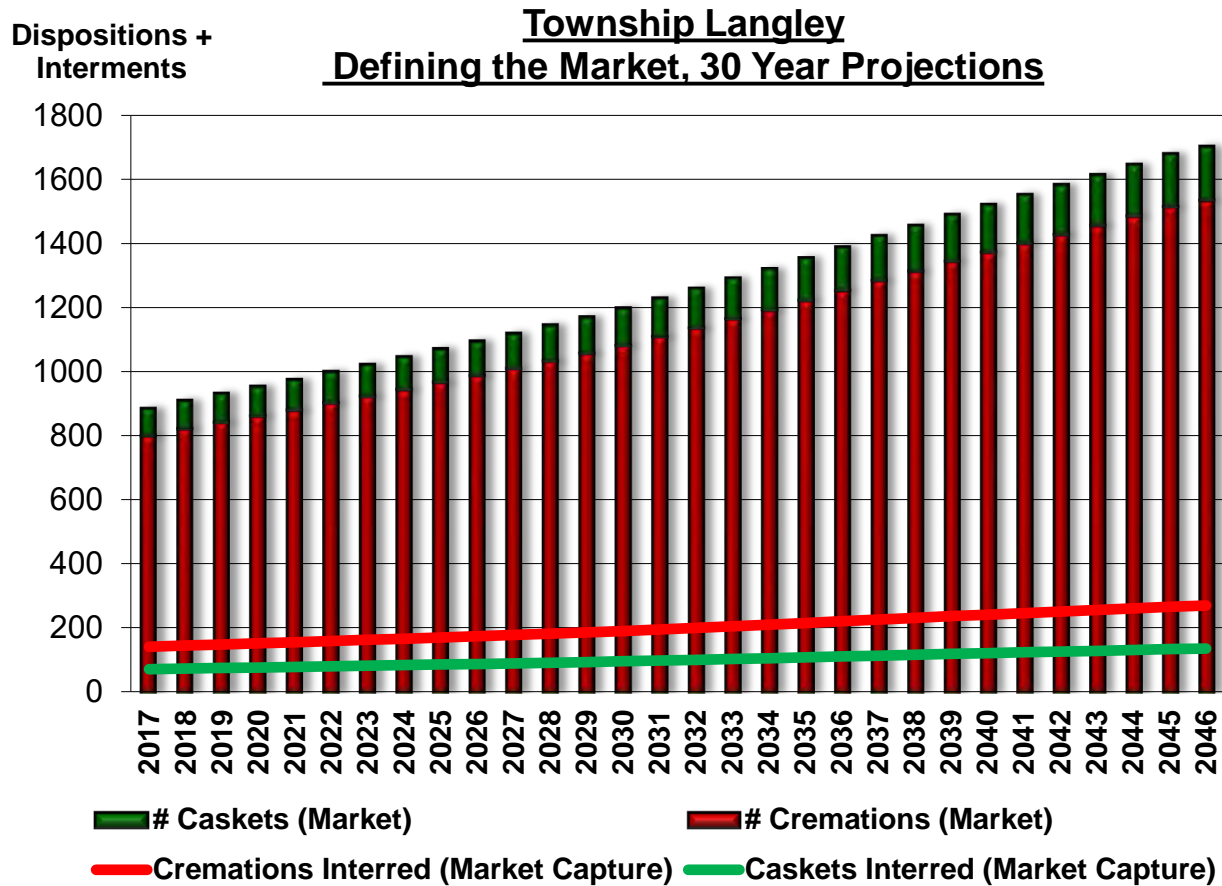


Figure 10: 30 Year Projection for Township of Langley Cemeteries Activity, Source: LEES+Associates.

This analysis assumes that the Township of Langley historic market capture rate and sales trends will be remain consistent over the next 30 years. It also assumes that the Township will continue to develop cemetery inventory to meet demand.

This study projects the following over the next 30 years:

- 3,000 casket burials and 5,300 cremated remains burials;
- 600 cremated remains niche inurnments
- 130 cremated remains scatterings;
- 2,800 casket lot sales and 1,500 cremated remains lot sales, and
- 600 columbaria niche sales.

2.3 ANALYSIS OF INVENTORY + CAPACITY

CEMETERY INVENTORY – EXISTING SUPPLY

The following figure summarizes the existing cemetery inventory in the Township of Langley as of the summer of 2017.

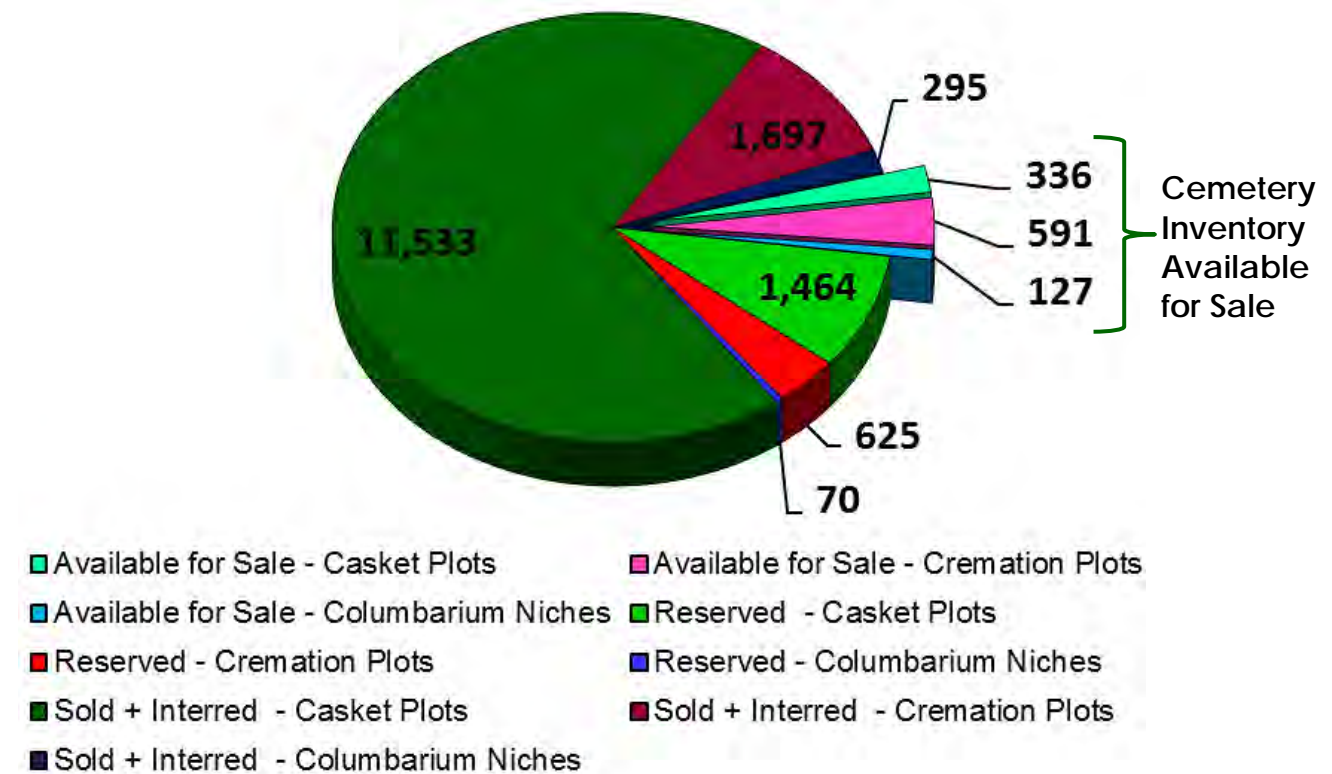


Figure 11: Township of Langley Cemetery Inventory, Source: Township of Langley.

The Township of Langley’s cemetery inventory includes 16,738 lots and niches.

81% of this inventory is sold and occupied, and **19%** of this inventory is was purchased pre-need, is reserved and is available for interment.

The Township of Langley’s remaining cemetery inventory available for sale includes:

- 336 Casket In-Ground Burial Lots;
- 591 Cremation Lots, and
- 127 Columbarium Niches.

INTERMENT LAND FOOT-PRINT

Demand for cemetery land is driven by population growth, a community's ethnic and religious profile, and its corresponding preference for traditional in-ground burials. Casket burial has the largest land footprint among all available interment options.

According to the Township cemetery bylaw, double depth burial is permitted at Township of Langley cemeteries in traditional casket-size lots with burial vaults. Traditional burial lots may be used to inter two caskets, or one casket and up to eight cremated remains. A traditional lot must have been used by at least one full-depth casket interment before cremated remains may be interred there.

Demand for cremation services at cemeteries and crematoria is driven by population growth and the Canada-wide trend towards cremation as the preferred form of disposition. The burial of cremated remains uses less land than a casket-size grave. In addition to burial, cremated remains have a range of alternative options including, columbaria niches, ossuaries, family vessels, and scatterings.

According to the Township cemetery bylaw, each designated cremation lot may be used for two interments.

COMPARING SUPPLY + ANTICIPATED NEED

This section compares the expected demand over the next 30 years to the Township's remaining supply of cemetery lots, niches, and scattering areas. This illustrates the type and quantity of interment areas, niches and scattering areas that need to be developed in the cemetery system.

The amount of sales the Township can expect over the next 30 years:

- 2,800 casket lot sales
- 1,500 in-ground cremation lot sales
- 600 columbaria niches sales
- (+160 scattering services)

This study conservatively assumes that Township of Langley cemeteries will inter 1 casket per casket lot, 2 urns per cremation lot and 1 urn per niche. It should be noted that this estimate is particularly conservative for in-ground cremation usage as many will take place in casket lots. The bylaw allows up to 8 cremated remains in addition to a casket burial in a casket lot.

The Township's existing inventory available for sale, as of the time of the report:

- 336 casket lots – Will last 5 years
- 591 in-ground cremation lots – Will last 14 years
- 127 columbaria niches– Will last 8 years

What needs to be developed over the next 30 years:

The following is extrapolated from the gap between anticipated sales and current inventory.

- 2,464 casket lots need to be developed
- 909 in-ground cremation lots need to be developed
- 473 columbaria niches need to be developed

Lands for development of the additional inventory to meet the gap:

- **Langley Lawn Cemetery** is currently only 50% developed. The remaining area is expected to accommodate the following additional inventory:
 - 2,614 casket lots
 - 942 in-ground cremation lots
 - 920 columbaria niches
- **Fort Langley Cemetery** is expected to provide the following additional inventory as part of the proposed lot layout plan at the north-west end of the cemetery:
 - 461 casket lots
 - 327 in-ground cremation lots
 - 660 columbaria niches
 - Scattering
 - A limited In-fill strategy in the existing developed areas of the cemetery with some casket and cremation in-ground lots
- **Murrayville Cemetery:**
 - A limited In-fill strategy with some casket in ground lots and columbaria niches

While Langley Lawn has enough space to meet the Township's anticipated need for burial and columbaria space for the next 30 years, the development of additional inventory at Fort Langley and Murrayville Cemeteries will provide important additional capacity, while maintaining options for Township families.

Total cemetery capacity should the designs + options in the following chapter be implemented:

- 3411 casket lots – Will last more than 35 years
- 1860 in-ground cremation lots – Will last more than 35 years
- 1707 columbaria niches – Will last more than 80 years

ADDITIONAL OPPORTUNITIES TO EXPAND CAPACITY

The Township has the option to develop additional capacity within its cemetery system through infill. Cemetery infill is a common strategy where space is limited. It typically entails filling in paths and spaces bordering cemetery roadways with cremation lots for additional capacity. It should be noted that infill of some roads may be limited by the presence of underground utilities.

Cemeteries also often seek to increase inventory through the resale of unclaimed lots. These are often lots that were purchased several decades ago but whose owners have not had contact with the municipality since the time of purchase.

Rules concerning how to reclaim a lot are defined in **Section 10** of the current Township Cemetery bylaw.

They are very similar to Canadian best practices for lot reclamation:

1. Identifying individuals and families who have purchased lots more than 50 years ago;
2. Attempt to find the last known lease/lot owner;
3. Advertise in the local media (e.g. newspapers) to find them, and
4. Where no contact can to be established with the buyer or family members, determine the lots to be available.

Unclaimed lots that are determined to be available can then be resold, typically at the current fair market value.

2.4 KEY FINDINGS

- The Township's total market death rate averages 7.1 deaths per 1000 resident. This is on par with the Provincial death rate;
- As the Township's Baby Boomers reach their life expectancy, there will be an increased demand for the Township's cemetery services;
- Township of Langley residents are predominantly Christian with 53% of residents identify as Christian, 5% following other faiths, and 42% claiming no religious affiliation;
- The Township's cremation rate is 5% higher than that of the Province as a whole. Demand for casket burials is expected to decline over the next 30 years;
- The Township will have 38,000 resident deaths over the next 30 years, with approximately 10% being buried and 90% being cremated;
- The Township's cemetery market capture rate is on par with most Canadian cemeteries, which inter 15-20% of cremations and 80-90% of caskets from community residents in local cemeteries;
- Township cemeteries will have 9,000 interments over the next 30 years. 33% of interments will be casket burial, 59% will be burial of cremated remains, 7% will be niche inurnments, and 1% will be scatterings, and
- The Township of Langley needs to develop additional capacity, as it will not be able to meet the expected demand for cemetery services over the next 30 years with existing inventory.

3 SITE ANALYSIS

This chapter reviews the key physical, site care, infrastructure and landscape opportunities and constraints of the Township's three cemeteries: Fort Langley, Langley Lawn and Murrayville Cemetery. Key issues with each site is discussed in this section. Further descriptions can be found in the graphics on the following pages.

3.1 HERITAGE VALUE

Fort Langley and Murrayville cemeteries have been identified on the community heritage register as historic landscapes. Their heritage value is rare for this region of Canada. The cemeteries take a central place in the community through the Remembrance Day gatherings, school tours, and history tours and events. Conservation or rehabilitation of their character-defining elements, including mature trees, cenotaphs, fencing, and stone burial markers is important for the maintenance of sites' heritage values. There is an opportunity to ensure the operations and maintenance procedures, and cemetery design plans enhance this value as well as the function and utility of these cultural landscapes.

Areas of concern include having a succession plan for heritage trees, locating new elements such as columbarium sensitively, and avoiding the alteration or relocation of historic elements.

3.2 PERIMETER CONDITIONS

There is an opportunity to reinforce the perimeters of all three cemeteries with additional vegetation to screen views of non-complimentary land uses. Fort Langley and Murrayville are particularly vulnerable to the negative effects of development or tree removal on bordering lands, as they both benefit from views of "borrowed landscapes" on neighbouring properties that may face development.

Fort Langley Cemetery's border with Fort Langley Park presents an opportunity to benefit from the views, horticultural interest, and mature trees of a landscape that will not be subject to development. This border would allow the cemetery and users to have ease of access from the parking lot, especially as the parking lot is located on land designated for use as a cemetery, but functions almost exclusively as part of the park. It would also increase the integration of the cemetery into the community fabric.

Langley Lawn Cemetery is bordered by non-complementary land uses, such as the Lil' Britches Rodeo and the BMX park. This presents an opportunity to reinforce the vegetative edge to maintain the character of the cemetery, as well as asserting the need for complementary future uses of these Township-owned properties if their leases lapse.

It is important to note that the cemetery's material storage and disposal is occurring on neighbouring properties, including into a ravine that is part of the Murray Creek Watershed. This highlights the need for safe and functional work and storage spaces, constrained to property boundaries, as well as standard operating procedures. It additionally points out the need for fencing, borders, or edging to provide clear visual indication of the site boundary.

3.3 CIRCULATION + ACCESS

Langley Lawn and Fort Langley Cemeteries include important community pedestrian links that could benefit from improvements and more standard pedestrian entries.

Murrayville's original entry was from the north of the site. It would be worthwhile to explore the possibility of re-establishing the past right of way and main entry. Additionally, operation access at Murrayville is challenging due to the lack of turn-around. This translates to wear and tear on turf and gravesites due to the need to use these areas as unofficial service roads and turnarounds.

3.4 HORTICULTURE + TREES

All three cemeteries have a need for horticultural focal areas at key areas including entries, scattering gardens, memorial areas, and columbarium. Additionally, there is a need to plan for the long-term health and succession of the wide range of structural, heritage, and memorial trees to ensure this important aspect of cemetery character and memorialization is maintained into the future. This is particularly keen for the mature trees lining the cemetery drive at Fort Langley, as well as the mature trees that function as integral centerpieces of the boulder cremation garden at Langley Lawn.

Additionally, there is a minimal amount of horticultural maintenance beyond mowing grass and removal of hazards. This affects the aesthetic character of the cemeteries that provide important open spaces for the community, cultural landscapes and places of remembrance. It is inconsistent with the level of maintenance and horticulture that the Township's parks enjoy.

3.5 TURF + GROUND CONDITION

There are significant challenges establishing new turf at the Township's cemeteries, particularly at Fort Langley Cemetery, due to the lack of irrigation or spot watering. In the cenotaph area of Fort Langley Cemetery, there is poor drainage resulting in extremely muddy ground conditions during the winter and rain events.

At Murrayville, there are areas where vehicles have impinged on graves, causing significant damage to the turf. Additionally, sunken graves at Fort Langley and Murrayville present a tripping hazard.

3.6 BYLAW ENFORCEMENT

Ornamentation of graves that is non-compliant with the bylaws is relatively prevalent at all three cemeteries. This presents aesthetic and operational concerns.

3.7 BUILDINGS

The buildings at each cemetery were found to be in good repair, however the customer service areas for meetings with families would benefit from refreshing the interiors to prioritize the customer experience. Consolidation of the customer service meeting areas could be considered for Langley Lawn in the future. Working areas should be reorganized and enhanced to prioritize safety and efficiency.

Finally, the operations and customer service building at Fort Langley Cemetery should be screened to provide a visual and horticultural amenity for the future interment areas surrounding it.

3.8 OPERATIONS AREAS

Each of the operations areas need safe, efficient, and functional storage and work spaces that are arranged to minimize the visual impact on cemetery as a whole.

There is an opportunity at Fort Langley to screen or relocate the operations area at the northeast corner of the site, as well as the parking near the building. These are both relatively prominent and negatively affect the character of the area for future interment.

Murrayville cemetery operations area faces the current main entry and extends beyond the property edge and into the neighbouring creek and ravine, highlighting the need for screened, safe, and functional work and storage space.

Langley Lawn's large operations yard and operations-only roadways could also be reorganized for a more efficient use of space and to make room for a new green burial area.

3.9 SIGNAGE + WAYFINDING

All three cemeteries have a need for updated and accurate signage and wayfinding. Currently the cemeteries lack consistent and apparent lot and section numbers and markers. Township staff compensate for this lack of infrastructure by setting out orange cones for visitors, however, this requires early notice of visits and places a burden on staff resources.

3.10 FURNITURE + SITE AMENITIES

There is an opportunity to integrate seating at all three cemeteries. The columbaria and scattering gardens would particularly benefit from seating that provides views of the columbaria units, as well as a sense of shelter. The Mourning Mothers memorial area at Langley Lawn would benefit from improvements to the seating area to enhance the sense of comfort and shelter for mourners.

3.11 INTERMENT + MEMORIALIZATION

All three cemeteries present a range of interment options, allowing community members a good variety in choices. An exception is the lack of opportunity for green burial at Township of Langley cemeteries.

It is worth noting that there is significant staff and material resources going into casting the concrete marker pads. While this presents some operational benefits for maintenance of turf edges and stability, it is an unusual additional cost and non-standard approach to site care that warrants further consideration.

3.12 CAPACITY + EXPANSION OPPORTUNITIES

Both Fort Langley and Langley Lawn Cemeteries have significant areas for future interment, as well as some infill opportunities within pathways. Though Murrayville is bordered by a Township of Langley-owned lot, it is likely not practical for future expansion due to its significant topographical variation and the lack of operational access through existing burial areas.

3.13 KEY FINDINGS

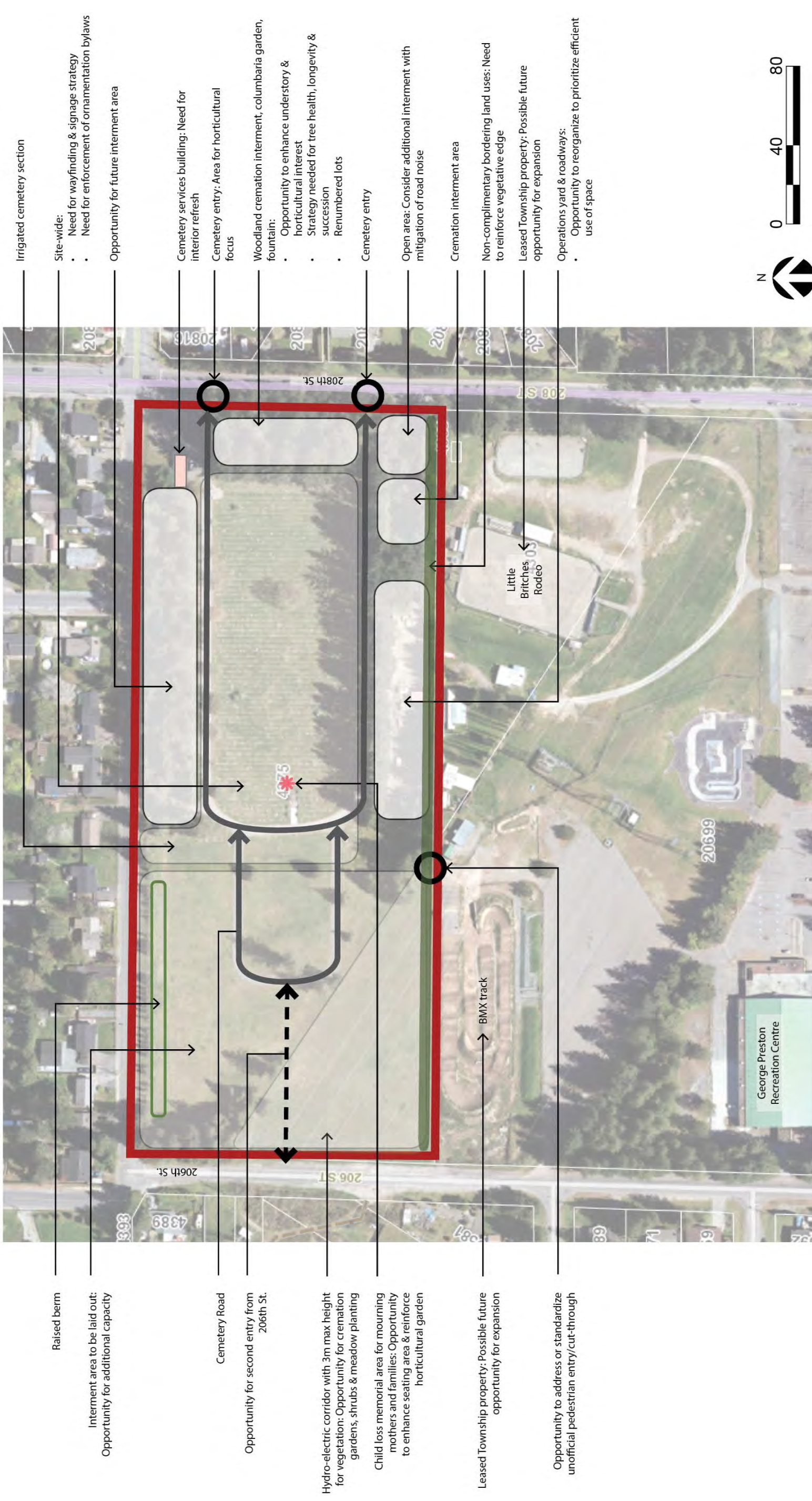
- The **heritage character** of Fort Langley and Murrayville contribute substantially to their characters through their strong lines of mature trees, historic headstones and spatial arrangement;
- All the cemeteries have edges lacking strong **buffers of vegetation**, or have visual buffers that are located on adjoining property. This leaves the cemeteries vulnerable to the visual impacts of non-complimentary uses of neighbouring properties;
- **Perimeter conditions** at Langley Lawn include some non-complimentary land uses such as the rodeo and the bike park;
- Re-establishing the northern entry of Murrayville cemetery as a pedestrian link would provide important passive recreational benefits to the surrounding community, further integrate an important and historic cemetery into the fabric of the Township.

- **Ground conditions** in Fort Langley and Murrayville may present tripping hazards due to sunken graves;
- Ornamentation on graves appears to be not in compliance with the **cemetery bylaw**;
- **Cemetery buildings** are generally in good repair, but would benefit from refreshing the interiors to prioritize the family experience and ensure the consistency of offerings across all the cemeteries;
- **Operations areas** lack visual screening to minimize their aesthetic impacts at each of the cemeteries;
- The cemeteries lack consistent and intuitive **section markers** and there is presence of some outdated signage;
- Many columbaria units lack comfortable and convenient seating, and
- Fort Langley and Langley Lawn offer the greatest opportunities for **expansion** and new capacity.

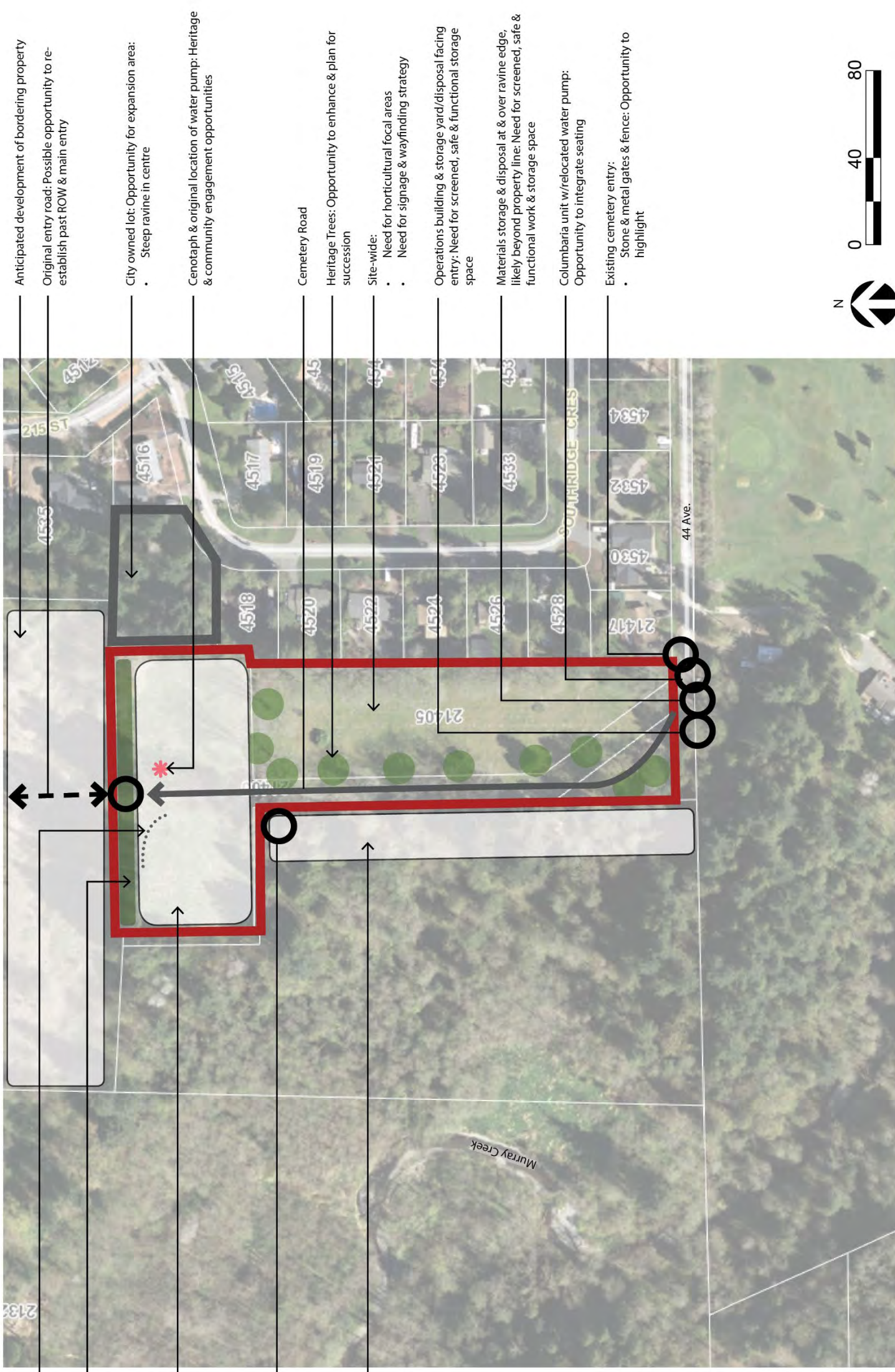
FORT LANGLEY: OPPORTUNITIES + CHALLENGES



LANGLEY LAWN: OPPORTUNITIES + CHALLENGES



MURRAYVILLE: OPPORTUNITIES + CHALLENGES



4 OPERATIONAL ANALYSIS

The goal of this chapter is to study and identify:

- Best practices that would be helpful in improving cemetery operations, safety, efficiency and effectiveness;
- Interment, service and memorialization options for traditional casket burials and cremated remains that meet customer expectations, and
- Opportunities to optimize the cemetery amenities.

4.1 DIVERSITY OF CEMETERY PRODUCTS + SERVICES

The Township’s cemetery system offers distinct rates, cemetery service offerings and interment services to residents, non-residents, adults, children, infants and veterans.

Casket interment options include placement within an in-ground burial lot with a grave liner or a lawn crypt. The bylaw also allows for “natural burial” (also known as a green burial), however no green burial areas have been designated as of yet.

Cremated remains interment options include placement within an in-ground burial lot, columbaria niche and scattering in designated areas.

The Township also offers a wide range of memorial options including cremation boulders, granite benches, and niche wall wreath plates.



Figure 7: Family Vessel at Royal Oak Burial Park, Source: LEES+Associates.

Products and services offered at other Canadian cemeteries but not available at Township cemeteries include:

- Family vessels;
- Mausolea crypts;
- Family estates lots;
- Family columbaria units;
- Green burial lots, and
- Ossuaries.

Family vessels are large, collective urns. They have recently been introduced in Royal Oak Burial Park, Victoria (BC), Kelowna Memorial Park (BC), Town of Slave Lake (AB) and the Regional Municipality of Wood Buffalo (AB). Family vessels allow families to inurn commingled cremated remains or multiple individual urns in one vessel.

An ossuary is a chest, box, building, well, or site that is utilized to store the cremated remains of multiple decedents. They are frequently used where burial space is scarce or as well as for public or indigent burials.

Cemetery Offerings Recommendations

It is recommended that green burial options be added to the cemetery inventory. Space for cremation burial, columbaria and memorialization without interment should be integrated into each new cemetery section. Ossuaries and mausolea are not currently recommended for the Township cemeteries. Recommendations are further discussed in Chapter 5.



Figure 8: Columbarium Niches, Source: LEES+Associates.

4.2 PRICING POLICIES

The cemetery sector's best practice for price benchmarking entails the comparison of prices in communities of comparable supply and demand. This involves examining the rates of other cemeteries with similar business models in communities with similar populations and demographics.

Pricing policies often vary significantly between small and large, rural and urban communities. This is due to the different, competitive markets for cemeteries within each environment and the philosophy of the municipal council regarding cost recovery.

Pricing policies are also very different between municipal, non-profit, religious and private cemeteries. Private cemeteries often charge higher prices to reflect their usual wide range of attractive, premium cemetery offerings. Some religious groups offer higher-end, premium cemetery products and services to their members and the general public. Other religious groups will offer cemetery services to their members for a fee significantly lower than standard market rates.

While higher municipal cemetery fees occasionally result in residents choosing interment outside of the community, this is a relatively rare. Most individuals strongly prefer to be interred in their local community with family and there is limited price sensitivity for interment. Most cemetery operators find that there is little change to interment rates in response to price changes within the typical range.

Municipalities can choose to increase fees in order to move their cemetery systems towards a cost neutral position. As the Township's philosophy is moving toward minimizing or eliminating the cemeteries' reliance on tax revenue, a financial plan is recommended for determination of a strategy to reduce dependence on the Township's tax base.

While analysis of the Township's perpetual care fund (PCF) is beyond the scope of this review, it should be noted that British Columbia provincial legislation mandates that all cemeteries contribute 25% of the right of interment fee for an in-ground grave, 10% of a right of interment for a columbarium or mausoleum, and \$10 for each memorial installed at the place of interment. LEES+Associates has found many B.C. communities contribute more than the provincial minimums to the Care and Maintenance Fund – at 30% of casket lot sales and 20% of columbaria sales. This is a best practice allowing for greater stability and assurance for the health of the cemetery over the long term.

PRICE BENCHMARK COMPARISONS

This section summarizes and compares the Township's main cemetery service fees, to average regional and national cemetery price benchmarks. The communities used for this study's regional benchmark are Surrey, Delta, Abbotsford and Maple Ridge. The regional benchmark rate for residents and non-residents show the average cemetery fees charged by neighboring communities with similar market profiles to the Township of Langley.

Table 6 compares the Township’s **resident rates** for burial and niche right-of-interment fees with the regional and national benchmark rates.

Inventory	RESIDENT RATES			Price Comparisons
	Township	Regional Benchmark	National Benchmark ³	
Adult Casket Lot	\$2,519	\$3,611 to \$3,911	\$1,500 to \$3,500	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ On par with national benchmark
Green Burial Lot (*not currently offered by Township)	\$2,607	n/a	\$1,500 to \$3,500	<ul style="list-style-type: none"> ▪ Unavailable at regional benchmark sites ▪ On par with national benchmark
Child Burial Lot	\$961	\$2,226	\$500 to \$1,500	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ On par with national benchmark
Infant Burial Lot	\$961	\$2,184	\$250 to \$1,000	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ On par with national benchmark
Cremation Burial Lot	\$961	\$1,342 to \$1,617	\$500 to \$1300	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ On par with national benchmark
Veteran Casket Lot	\$1,261	\$3,338	\$750 to \$1,750	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ On par with national benchmark
Veteran Cremation Lot	\$482	\$1,431	\$250 to \$650	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ On par with national benchmark
Columbaria Niche	\$2,040 to \$2,758	\$2,362 to \$3,789	\$1,500 to \$4,000	<ul style="list-style-type: none"> ▪ On par with regional benchmark ▪ On par with national benchmark

Table 3: Township Resident Cemetery Rates Compared to Regional + National Cemetery Rate Benchmarks, 2018, Source: LEES+Associates.

³ LEES+Associates Pricing Benchmark Studies, 2014 to 2018.

Table 7 compares the Township’s **non-resident** rates for burial and niche right-of-interment fees with the regional and national benchmarks.

Inventory	NON-RESIDENT RATES			Price Comparisons
	Township	Regional Benchmark	National Benchmark ⁴	
Adult Casket Lot	\$5,040	\$6,054 to \$6,429	\$2,250 to \$5,250	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ On par with national benchmark
Green Burial Lot (*not currently offered by Township)	\$5,213	n/a	\$2,250 to \$5,250	<ul style="list-style-type: none"> ▪ Unavailable at regional benchmark sites ▪ On par with national benchmark
Child Casket Lot	\$2,879	\$2,474	\$750 to \$2,250	<ul style="list-style-type: none"> ▪ Above regional benchmark ▪ Above national benchmark
Infant Casket Lot	\$1,872	\$2,207	\$375 to \$1,500	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ Above national benchmark
Cremation Burial Lot	\$1,443	\$1,296 to \$1,605	\$750 to \$1,950	<ul style="list-style-type: none"> ▪ On par with regional benchmark ▪ On par with national benchmark
Veteran Casket Lot	\$2,520	\$3,636	\$1,125 to \$2,625	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ On par with national benchmark
Veteran Cremation Lot	\$963	\$1,336	\$375 to \$915	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ Above national benchmark
Columbaria Niche	\$2,309 to \$2,971	\$3,367 to \$5,322	\$2,250 to \$6,000	<ul style="list-style-type: none"> ▪ Below regional benchmark ▪ On par with national benchmark

Table 4: Township Non-Resident Rates Cemetery Inventory Rates Compared to Regional + National Cemetery Rate Benchmarks, 2018, Source: LEES+Associates.

Further detail, including a comparison of the Township rates with regional and national benchmarks for resident and non-resident cemetery service fees, can be found in **“Appendix B – Detailed Price Benchmarking Study.”**

⁴ LEES+Associates Pricing Benchmark Studies, 2014 to 2017.

PRICING PRACTICES

Resident Rates

Typically, non-residents are charged a premium of 25% to 50% on cemetery lots at Canadian Cemeteries.

At the Township's cemeteries, non-residents are charged double the resident price on all cemetery lots. This is significantly higher than seen in most municipal cemeteries, but it is an appropriate approach to the concerns regarding limited remaining burial inventory. Should more capacity be added, this policy may be revisited.

Social Services Rates

The City of Surrey offers lower cemetery rates through the Ministry of Social Development and Social Innovation to impoverished residents.

Many large urban centres across Canada (such as the City of Calgary) follow this practice, offering rates as low as 50% of the normal standard cost for cemetery products and services.

Green Burial Rates

The Township currently prices green burial at a slight premium from standard adult casket burial. Best practices for green burial rates suggests that fees should be maintained on par with standard casket burial rates. The Township currently does not have a rate established for child or infant green burial.

Price Changes

The Township increased the majority of its fees in the period 2016 to 2017 by 3%, for all cemetery products and services.

Having a yearly minimum fee increase corresponding to the rate of inflation is increasingly the standard across Canada. The Bank of Canada's Consumer Price Index reports that inflation has historically ranged from 2% to 3% over the past decade.

Pricing Trends

Cemetery pricing in most Canadian cemeteries follows consistent market trends. For example, larger communities often have higher rates due to the increased demand relative to local supply.

Cemeteries in large urban centres also tend to offer a greater diversity of offerings than smaller communities. Cemeteries with a greater diversity of offerings (particularly private operators) are perceived as a premium sites that may be more attractive and often charge higher rates than other sites.

Families value a variety of interment options and are willing to pay a premium to accommodate their cultural, religious and personal preferences.

Pricing Recommendations:

- Increase the **resident fee** for right of interment for:
 - Casket lots from the current rate of **\$2519** to **\$3,000**;
 - Cremation lots from the current rate of **\$961** to **\$1,300**;
 - Veteran lots from the current rate of **\$1261** to **\$1,500**, and
 - Veteran cremation lots from the current rate of **\$482** to **\$650**.
- Maintain **non-resident fees** in line with general price increases;
- Establish **Social Service rates**;
- Establish pricing for both adult and child **green burial** that is on par with standard casket lot rates, and
- Procure a **financial plan** to determine a strategy to reduce dependence on the Township's tax base.

4.3 RECORDS MANAGEMENT

The Township of Langley's cemetery records are entered and stored on an in-house database. These records are then linked to GIS data by the Township's Information Technology staff. The existing system of cemetery records management is not currently integrated with the Township's financial system.

The Township has been collecting and updating GPS data for its cemetery grave markers for a year. Information collected includes the grave marker's position, description of the headstone, name, birth date and death date. This data is cross-referenced with its current cemetery records database on an ongoing basis.

Staff members have discovered inconsistencies in the cemetery records data set as well as cemetery records not associated with GPS locations. The Township is in the process of ensuring that the Township's records are up to date and accurate.

While the Township has identified a long-term goal of opening a searchable database of cemetery records and mapped locations to the public, for the time being, interested parties must proceed by phoning the Township or approaching cemetery staff on site. After staff has located a grave site, it is marked with an orange cone. This proves inefficient for the public and Township staff.

LOT + SECTION NUMBERING SYSTEMS

The current lot number system has been developed on an ad hoc basis in response to historical and operational factors such as the sequence of interment. This has resulted in a system that is less intuitive and harder to navigate for families, the public and new employees. It presents a particular challenge in

the boulder memorial area of the Langley Lawn cemetery, where interments have been numbered by the sequence of interment, rather than by location. It is noted that the Township is in the process of resolving the issue and establishing an intuitive and logical lot number protocols.

Records Management Recommendations:

- Continue with the digitization and verification process for the Township's records to **ensure consistency in burial records** and GPS data;
- Create an online and **searchable database of cemetery records** and locations;
- Continue with the establishment of an **intuitive and logical lot numbering system** and the creation of protocols.

4.4 CEMETERY MANAGEMENT + MAINTENANCE

Key aspects of cemetery management and maintenance, including cemetery boundaries, site maintenance, standard operating procedures and buildings and customer care, are discussed below. Recommendations are summarized at the end of the section.

CEMETERY BOUNDARIES

The requirement to establish and respect official cemetery boundaries is a primary obligation of cemetery operators under the B.C. Cemetery and Funeral Services Act. However, it is not unusual to see some variations where cemeteries abut undeveloped land or where the cemetery lacks an accurate visual indication of a boundary, such as a fence or hedge on the property line.

Both opportunities and concerns regarding the boundaries of both Murrayville and Fort Langley Cemetery have been noted in the Site Analysis portion of this review. In the case of Fort Langley, a parking lot for an adjoining park and public pool have been located on dedicated cemetery lands. In the long term, this is not the highest and best use of cemetery land, particularly given the strong community interest in the Fort Langley site, its diminishing capacity, and the challenges of acquiring additional lands within the village centre.

At Murrayville Cemetery, storage of cemetery materials has previously extended beyond the cemetery site boundaries. The Township has undertaken an effort to address these challenges through acquisition of a portion of the neighbouring property. Chapter 5 includes recommendations for the creation of safe and functional operational yards that are screened from visibility and contained within the site boundaries at all 3 cemeteries.

Additionally, the columbaria unit and a portion of the operations building at Murrayville Cemetery is located within the municipal road right-of-way. The Township has undertaken a process to regularize the situation through official designation of the road allowance as cemetery.

ASSESSMENT OF SITE MAINTENANCE

Site maintenance of the cemeteries is generally on par with other municipal cemeteries in the Lower Mainland.

Lawn Care

Turf maintenance, currently contracted to an outside provider, presents an overall impression of tidiness and care with the grass mowed and maintained on a regular basis. However, there are challenges with establishing new sod after burials in non-irrigated areas, as well as addressing areas of settlement occurring within the heritage cemeteries of Fort Langley and Murrayville. It is recommended that irrigation at Langley Lawn be expanded to include new burial areas and added to the new, northern section of Fort Langley (closest to the park). Irrigation is not recommended for Murrayville Cemetery.

While the challenges establishing sod negatively affect the site aesthetics and perception of care, the areas of settlement over older graves may present a hazard to staff and the public. This should be addressed in a timely manner and as per Council adopted operations standards. The creation of standard operating procedures to allow for the efficient planning of ongoing and cyclical maintenance activities of the cemeteries is recommended.

Shrub Care

Previously, horticultural maintenance was done by outside contractors and was relatively limited, resulting on the gradual overgrowth of many shrubs on site. The Township is increasing the level of service by bringing this maintenance back in house with the expectation that service levels should be equal with Township parks.

Tree Care

There has been minimal ongoing tree maintenance or assessment, resulting in the loss of important trees on site. It is important to note that the trees lining the cemetery drives in both Murrayville and Fort Langley Cemeteries have been identified as character defining elements that should be maintained within the cemeteries. For these purposes, regular tree assessment, care and replanting of dying or dead trees constitutes an important heritage conservation technique, as well as an important way to maintain the desirability of the cemetery landscapes.

STANDARD OPERATING PROCEDURES

As the Township has recently decided to bring maintenance of cemetery horticulture in house, this is an opportune time to establish standard operating procedures and regular schedules for horticulture, lawn care and arboricultural monitoring and maintenance. By reviewing, enhancing and documenting site maintenance schedules and standard operating procedures, the Township can increase efficiency and service levels.

Additionally, standard operating procedures are an important tool for monitoring the quality of contractors' site maintenance. In Canada, cemetery maintenance deficiencies increase the risk of

declining patronage and decreased profitability. LEES+Associates cemetery market surveys consistently report the cemetery's maintained appearance as a key deciding factor in families choosing to be interred at a cemetery. Studies reviewing ground maintenance practices also report that inefficient labour commonly increases the care and maintenance expense of cemetery operations⁵.

BUILDINGS & CUSTOMER SERVICE

The rooms used for meeting with families, located at Fort Langley and Langley Lawn, would benefit from an upgrade to meet the service levels of many municipal cemeteries and ensure a consistent level of customer service across all cemeteries. The most efficient way to provide an improved environment for families of the deceased would be to consolidate the customer service operations to a single location at Langley Lawn.

CEMETERY MANAGEMENT & MAINTENANCE RECOMMENDATIONS:

- Continue pursuing the regularization of the boundary at Murrayville Cemetery;
- When park or pool to the north of Fort Langley cemetery is redeveloped, a portion of the park's parking lot should be relocated from designated cemetery land;
- Create and adopt Standard Operating Procedures for ongoing and cyclical maintenance including tree assessment and care and horticultural maintenance;
- Consolidate customer service operations to Langley Lawn, and
- Extend irrigation to any new burial areas at Fort Langley and Langley Lawn.

⁵ Grounds Maintenance Roundtable by Lauren Moore, American Cemetery, September 2014.

5 IMPLEMENTATION PLAN

5.1 CONCEPT PLANS

Building on the previous chapters, this section describes the key recommendations for future capital and operational priorities. The concept plans for each of the Township's cemeteries can be seen on the following pages, with areas intended for development within the next one to five years outlined in red and medium and long-term priorities outlined in blue and aqua. Priorities are further discussed in section 5.2.

FORT LANGLEY: CONCEPT PLAN

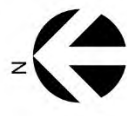


PRIORITY

- High (Red dashed line)
- Medium (Blue dashed line)
- Low (Green dashed line)

LEGEND

- Scattering areas (Light green)
- Shrubs/ Hedging (Dark green)
- Traditional casket burial (Light yellow)
- Gathering space (Purple)
- In-ground cremation lots (Light green)
- Flowering plants (Brown)
- Accessible Pathway (Yellow)
- Columbaria units (White square)
- Family cremation lots (Brown)
- Proposed benches (Purple)
- Memorial wall (Purple)



NOTE: Township to coordinate with Heritage Planner for feedback regarding proposal upgrades

LEGEND

- Existing tree
- New tree
- Memorial wall
- Proposed benches
- Family cremation lots
- Columnaria units
- Accessible Pathway
- Flowering plants
- In-ground cremation lots
- Gathering space
- Traditional casket burial
- Shrubs/Hedging
- Scattering areas

PRIORITY

- High
- Medium
- Low



Proposed pedestrian entrance as part of future neighbouring development

New tree and shrub planting to screen views to adjacent land uses

Min 6m pedestrian right of way to connect to north

New vehicle turn-around

New gathering area

Section 3: New infill casket lots

New materials storage yard screened from view

New planting buffer at top of bank

Section 1: New burial and cremation interment infill, when all unsold burial inventory has been sold. Minimum 2m buffer to adjoining properties

New tree and shrub planting to strengthen cemetery boundary

New tree planting to reinforce traditional allee

Upgrade surface of cemetery road, add curbs

Replace chain link fencing with metal fencing in keeping with heritage character

At entrance: refurbish main entry gates, improve cemetery signage, quality of site furnishings including garbage receptacles. Improve horticultural interest.

Section 2: New columnaria garden, including space for columnaria relocation if needed

Resolve property boundaries to ensure all cemetery operations are on dedicated cemetery land

Cemetery building to be removed

Remove existing building and replant with native plants

Existing columnaria to be relocated to new columnaria garden

MURRAYVILLE: CONCEPT PLAN

LANGLEY LAWN: CONCEPT PLAN



Enhance existing tree planting buffer

Enhance existing evergreen buffer and understory planting

Existing tree

Improve buffer to roadway

Upgrade existing parking lot to improve customer experience

Existing building

New planting area to enhance entry

Enhance existing entry with new gates and signage

Improve understory planting to enhance experience of families interring a family member or visiting the boulder garden

Enhance existing entry with new gates and signage

Section 4: Future cremation and casket interment area

Existing in ground burial

Enhance existing evergreen buffer and understory planting to mitigate road view and noise

Existing Lawn Crypt Area

44 Ave

Create tree buffer along cemetery boundary

208 Street

PRIORITY

- High (Red dashed line)
- Medium (Blue dashed line)
- Low (Green dashed line)

LEGEND

- Scattering areas
- Shrubs/ Hedging
- Traditional casket burial
- Gathering space
- In-ground cremation lots
- Flowering plants
- Accessible pathway
- Columbaria units
- Family cremation lots
- Proposed benches
- Memorial wall
- Entry gates

Green Burial Area

Section 5: Cremation and scattering garden with potential for columbaria

Improve health and age structure of evergreen tree buffer and improve understory planting as part of development of the green burial areas

Relocated operations yard and building

Mourning mothers' memorial garden

Proposed vehicle entry

BC Hydro Right of Way with 3m max vegetation

Existing interment area and vegetation

Gathering space with benches and planting

Central gathering space with reflecting pond

Section 1: New burial and cremation section

Section 2: New burial and cremation section

Section 3: New burial and cremation section

Cremation gardens Columbaria and benches in gathering space

Integrate existing trees into planting buffer

Proposed secondary vehicle entry with new gates and signage



5.2 PROJECT PRIORITIES

It is recommended that new burial areas and improvements at all three cemeteries are delivered in phases. The key recommended development improvements and operational changes are prioritized below and identified as High, Medium and Low Priorities. These priorities are associated with approximate timeframes while the development improvements include high level budget recommendations for construction costs.

The proposed phasing reflects the need to balance:

- Upcoming demand for particular interment types;
- Spreading the cost of development of interment capacity, and
- Optimizing the period of time between phases where there is no construction activity disturbing the cemeteries.

Priorities for each cemetery are further divided into:

- Capital Development Improvement Priorities, and
- Operational/ Maintenance Priorities.

Fort Langley Cemetery Priorities	High Priority: 1-5 years	Medium Priority: 5-10 years	Lower Priority: 10-15 years +
Capital Development Priorities			
New Burial Section 1			
Cremation Garden A	\$105,000		
Cremation Garden B		\$125,000	
Cremation Garden C			\$125,000
Upgrade Existing Building, connect to township sewer system		\$60,000	
Reconfigure & screen materials storage area	\$15,000		
Add irrigation to new burial section	\$40,000		
Expansion of Veterans Section			
Expand Veterans Section		n/a	
Upgrades to Cenotaph Area			
Upgrade Cenotaph Section		\$10,000	
New Burial Section 2			
Develop new burial area			\$15,000
Access to caretaker's property			\$35,000
Cemetery-wide Improvements			
Implement Infill Strategy			n/a
Tree Planting Strategy and Implementation	\$5,000		
Horticultural Improvements	\$5,000		
Boundary hedge improvements	\$20,000		
20% contingency	\$38,000	\$39,000	\$35,000
Construction Budget Recommendations:	\$228,000	\$234,000	\$210,000
Operational/Maintenance Priorities			
Septic Field: Identification of Extents			
Burial Records Project			
Complete Burial Records Project			
Infill Strategy			
Implement Infill Strategy			
Bylaw			
Educate Families and Enforce the Bylaw			
Cemetery Maintenance			
Improve Cemetery Maintenance. Develop SOP's			

Murrayville Cemetery Priorities	High Priority: 1-5 years	Medium Priority: 5-10 years	Lower Priority: 10-15 years +
Capital Development Priorities			
Develop New Burial Areas with Mix of Interment and Memorialization Options			
Section 1: Casket & cremation		\$15,000	
Section 2: Burial infill			\$10,000
Section 3: Cremation Garden		\$125,000	
Main Entry Improvements			
Enhance main entry		\$10,000	
New Materials Storage Yard			
Create new materials storage yard	\$20,000		
Existing Cemetery Driveway Improvements			
Upgrade existing cemetery driveway surface and curbs	\$85,000		
New Entry			
Create new pedestrian-only entry with proposed development on adjacent property	\$20,000		
Remove existing building			
Remove existing building			\$15,000
Cemetery-wide Improvements			
Improve fencing on east and north cemetery boundaries		\$40,000	
Tree Planting Strategy and Implementation	\$10,000		
Horticultural Improvements	\$5,000		
20% contingency	\$29,800	\$40,000	\$10,200
Construction Budget Recommendations:	\$178,800	\$240,000	\$61,200
Operational/Maintenance Priorities			
Land Ownership			
Legal cemetery property to incorporate all cemetery lands			
Purchase strip of land on western edge of cemetery			
Burial Records Project			
Complete Burial Records Project			
Bylaw			
Educate Families and Enforce the Bylaw			
Cemetery Maintenance			
Improve Cemetery Maintenance. Develop SOPs			

Langley Lawn Cemetery Priorities	High Priority: 1-5 years	Medium Priority: 5-10 years	Lower Priority: 10-15 years +
Capital Development Priorities			
Develop New Burial Areas with Mix of Interment and Memorialization Options			
New Burial Section 1	\$105,000		
New Burial Section 2		\$365,000	
New Burial Section 3			\$410,000
New Burial Section 4			\$40,000
New Burial Section 5		\$100,000	
New Green Burial Area (incl. demo of existing building and rehab of yard)	\$190,000		
Add irrigation to new section	\$100,000		
Upgrade Existing Building			
Upgrade existing building and front entry experience	\$100,000		
Relocate Operations Yard and Building			
Relocate Ops yard, add new ops building & servicing	\$720,000		
Create New operations access onto 44 th Ave	\$20,000		
Cemetery-wide Improvements			
Tree Planting Strategy and Implementation	\$10,000		
Horticultural Improvements	\$10,000		
Enhance existing tree buffer to all boundaries	\$40,000		
20% contingency	\$259,000	\$93,000	\$90,000
Construction Budget Recommendations:	\$1,554,000	\$558,000	\$540,000
Operational/Maintenance Priorities			
Burial Records Project			
Complete Burial Records Project			
Infill Strategy			
Implement Infill Strategy			
Mourning Mothers Memorial Garden			
Renew planting of the Mourning Mothers Memorial Garden in partnership w/group			
Bylaw			
Educate Families and Enforce the Bylaw			
Cemetery Maintenance			
Improve Cemetery Maintenance. Develop SOP's			

5.3 CONCLUSION

Implementation of the priorities identified will provide substantial benefits to users of the cemeteries as well as the community at large.

The benefits to cemetery users and family members include an improved customer service experience, the enhancement of the aesthetic character of the cemeteries and a further increase on the system's diversity of offerings with the inclusion of green burial and family vessels. Additionally, the active life of the cemetery will be extended at least another 30 years, ensuring the cemeteries can continue to serve the people of the Township well into the future.

The benefits to the community at large include the preservation of important and rare cultural landscapes, elevation of the aesthetic and environmental quality of the cemeteries, improved pedestrian linkages and further opportunities for respectful and valuable passive recreation in the cemeteries. It is also worth noting that since these community amenities are tied to development of further inventory for interment, they present a decreased burden on tax-based budgets.

APPENDIX

APPENDIX A – DETAILED PRICE BENCHMARKING STUDY

APPENDIX B – GLOSSARY OF CEMETERY TERMS

APPENDIX C – DETAILED INTERMENT PROJECTIONS

APPENDIX A – DETAILED PRICE BENCHMARKING STUDY

Township of Langley - 2018 Rates Comparison												
Item	Township of Langley Resident	Township of Langley Non-Resident	City of Surrey Resident	City of Surrey Non-Resident	City of Delta Resident	City of Delta Non-Resident	Abbotsford Resident	Abbotsford Non-Resident	Maple Ridge Resident	Maple Ridge Non-Resident	Average Resident (w/o Langley)	Average Non-Resident (w/o Langley)
Population 2016		117,285.00		517,887.00		102,238.00		141,397.00		82,256.00		219,701.75
Right of Interment for Plots and Niches												
Adult Casket Plot - MIN	\$ 2,519.00	\$ 5,040.00	\$ 2,400.00	\$ 3,500.00	\$ 5,127.50	\$ 9,229.50	\$ 2,624.00	\$ 5,048.00	\$ 4,292.00	\$ 6,438.00	\$3,611	\$6,054
Adult Casket Plot - MAX	\$ 2,519.00	\$ 5,040.00	\$ 3,600.00	\$ 5,000.00	\$ 5,127.50	\$ 9,229.50	\$ 2,624.00	\$ 5,048.00	\$ 4,292.00	\$ 6,438.00	\$3,911	\$6,429
Child Plot	\$ 961.00	\$ 2,879.00	\$ -	\$ -	\$ 5,127.50	\$ 9,229.50	\$ 1,431.00	\$ 2,753.00	\$ 2,347.00	\$ 3,520.00	\$2,226	\$3,876
Infant Plot	\$ 961.00	\$ 1,872.00	\$ -	\$ -	\$ 5,127.50	\$ 9,229.50	\$ 1,262.00	\$ 2,426.00	\$ 2,347.00	\$ 3,520.00	\$2,184	\$3,794
Veteran Casket Plot	\$ 1,261.00	\$ 2,520.00	\$ 1,900.00	\$ 2,450.00	\$ 5,127.50	\$ 9,229.50	\$ 2,034.00	\$ 3,912.00	\$ 4,292.00	\$ 6,438.00	\$3,338	\$5,507
Natural/Hybrid Plot	\$ 2,607.00	\$ 5,213.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Lawn Crypt - MIN	\$ 3,164.00	\$ 6,329.00	n/a	n/a	n/a	n/a	\$ 2,700.00	\$ 2,700.00	n/a	n/a	\$2,700	\$2,700
Lawn Crypt - MAX	\$ 3,895.00	\$ 7,791.00	n/a	n/a	n/a	n/a	\$ 5,250.00	\$ 5,240.00	n/a	n/a	\$5,250	\$5,240
Cremation Plot - MIN	\$ 961.00	\$ 1,443.00	\$ 950.00	\$ 1,350.00	\$ 2,760.00	\$ 5,000.00	\$ 648.00	\$ 1,246.00	\$ 1,011.00	\$ 1,517.00	\$1,342	\$2,278
Cremation Plot - MAX	\$ 961.00	\$ 1,443.00	\$ 1,400.00	\$ 1,700.00	\$ 2,760.00	\$ 5,000.00	\$ 1,295.00	\$ 2,491.00	\$ 1,011.00	\$ 1,517.00	\$1,617	\$2,677
Veteran Cremation Plot	\$ 482.00	\$ 963.00	\$ 950.00	\$ 1,350.00	\$ 2,760.00	\$ 5,000.00	\$ 1,001.00	\$ 1,924.00	\$ 1,011.00	\$ 1,517.00	\$1,431	\$2,448
Columbaria Niche (Single) - MIN	\$ 2,040.00	\$ 2,309.00	\$ 1,900.00	\$ 2,125.00	\$ 3,282.50	\$ 5,908.50	\$ 1,930.00	\$ 1,930.00	\$ 2,336.00	\$ 3,504.00	\$2,362	\$3,367
Columbarium Niche (Double) - MAX	\$ 2,758.00	\$ 2,971.00	\$ 2,500.00	\$ 2,675.00	\$ 5,012.50	\$ 9,022.50	\$ 3,750.00	\$ 3,750.00	\$ 3,894.00	\$ 5,840.00	\$3,789	\$5,322
Family Estate	n/a	n/a	\$ 14,400.00	\$ 16,200.00	n/a	n/a	n/a	n/a	n/a	n/a	\$14,400	\$16,200
Family Columbaria	n/a	n/a	n/a	n/a	\$ 9,087.50	\$ 16,357.50	n/a	n/a	n/a	n/a	\$9,088	\$16,358
Ossuary / Dedicated Scattering Area	n/a	n/a	\$ 190.00	\$ 290.00	n/a	n/a	\$ 360.00	\$ 360.00	\$ 674.00	\$ 1,011.00	\$408	\$554
Memorialization + Other Fees												
Flat Ground Marker - Setting Fee / Permit Fee	\$ 313.00	\$ 313.00	\$ 300.00	\$ 300.00	\$ 150.00	\$ 150.00	\$ 459.00	\$ 525.00	\$ 282.00	\$ 338.00	\$298	\$328
Late Arrival Fee	\$ 341.00	\$ 341.00	\$ 495.00	\$ 495.00	n/a	n/a	n/a	n/a	n/a	n/a	\$495	\$495
Replacement Certificate - Right of Interment	\$ 44.00	\$ 44.00	\$ 45.00	\$ 45.00	n/a	n/a	n/a	n/a	n/a	n/a	\$45	\$45
Transfer Fee	\$ 112.00	\$ 112.00	\$ 80.00	\$ 80.00	\$ 75.00	\$ 75.00	\$ 147.00	\$ 147.00	\$ 100.00	\$ 100.00	\$101	\$101
Surrender/Sell Back Fee	\$ 112.00	\$ 112.00	\$ 80.00	\$ 80.00	n/a	n/a	n/a	n/a	n/a	n/a	\$80	\$80
Flower Container	n/a	n/a	\$ 195.00	\$ 195.00	n/a	n/a	\$ 78.00	\$ 78.00	n/a	n/a	\$137	\$137
Tent Provision	n/a	n/a	n/a	n/a	n/a	n/a	\$ 76.00	\$ 76.00	n/a	n/a	\$76	\$76

Township of Langley - 2018 Rates Comparison												
Item	Township of Langley Resident	Township of Langley Non-Resident	City of Surrey Resident	City of Surrey Non-Resident	City of Delta Resident	City of Delta Non-Resident	Abbotsford Resident	Abbotsford Non-Resident	Maple Ridge Resident	Maple Ridge Non-Resident	Average Resident (w/o Langley)	Average Non-Resident (w/o Langley)
Population 2016	117,285.00	517,887.00	102,238.00	141,397.00	82,256.00	219,701.75	Opening / Closing Services					
Adult / Veteran Burial - Single Depth	\$ 1,170.00	\$ 1,170.00	\$ 1,150.00	\$ 1,150.00	\$ 1,200.00	\$ 1,200.00	\$ 1,580.00	\$ 1,580.00	\$ 1,202.00	\$ 1,202.00	\$ 1,283	\$ 1,283
Adult / Veteran Burial - Single Depth, Weekends	\$ 2,340.00	\$ 2,340.00	\$ 2,300.00	\$ 2,300.00	\$ 1,200.00	\$ 1,200.00	\$ 3,160.00	\$ 3,160.00	\$ 1,864.00	\$ 1,864.00	\$ 2,131	\$ 2,131
Adult / Veteran Burial - Single Depth, Holidays	\$ 3,510.00	\$ 3,510.00	\$ 3,450.00	\$ 3,450.00	\$ 1,200.00	\$ 1,200.00	\$ 3,160.00	\$ 3,160.00	\$ 1,864.00	\$ 1,864.00	\$ 2,419	\$ 2,419
Adult / Veteran Burial - Double Depth / Second Level	\$ 1,348.00	\$ 1,348.00	\$ 1,150.00	\$ 1,150.00	\$ 1,200.00	\$ 1,200.00	\$ 1,580.00	\$ 1,580.00	\$ 1,202.00	\$ 1,202.00	\$ 1,283	\$ 1,283
Adult / Veteran Burial - Double Depth, Weekends	\$ 2,697.00	\$ 2,697.00	\$ 2,300.00	\$ 2,300.00	\$ 1,200.00	\$ 1,200.00	\$ 3,160.00	\$ 3,160.00	\$ 1,864.00	\$ 1,864.00	\$ 2,131	\$ 2,131
Adult / Veteran Burial - Double Depth, Holidays	\$ 4,045.00	\$ 4,045.00	\$ 3,450.00	\$ 3,450.00	\$ 1,200.00	\$ 1,200.00	\$ 3,160.00	\$ 3,160.00	\$ 1,864.00	\$ 1,864.00	\$ 2,419	\$ 2,419
Lawn Crypt Burial - Double Depth	\$ 1,170.00	\$ 1,170.00	n/a	n/a	n/a	n/a	\$ 500.00	\$ 500.00	n/a	n/a	\$ 500	\$ 500
Lawn Crypt Burial - Double Depth, Weekends	\$ 2,340.00	\$ 2,340.00	n/a	n/a	n/a	n/a	\$ 1,000.00	\$ 1,000.00	n/a	n/a	\$ 1,000	\$ 1,000
Lawn Crypt Burial - Double Depth, Holidays	\$ 3,510.00	\$ 3,510.00	n/a	n/a	n/a	n/a	\$ 1,000.00	\$ 1,000.00	n/a	n/a	\$ 1,000	\$ 1,000
Child Burial	\$ 767.00	\$ 767.00	\$ 450.00	\$ 450.00	\$ 1,200.00	\$ 1,200.00	\$ 1,001.00	\$ 1,001.00	\$ 926.00	\$ 926.00	\$ 894	\$ 894
Child Burial - Weekends	\$ 1,534.00	\$ 1,534.00	\$ 900.00	\$ 900.00	\$ 1,200.00	\$ 1,200.00	\$ 2,002.00	\$ 2,002.00	\$ 1,283.00	\$ 1,283.00	\$ 1,346	\$ 1,346
Child Burial - Holidays	\$ 2,301.00	\$ 2,301.00	\$ 1,350.00	\$ 1,350.00	\$ 1,200.00	\$ 1,200.00	\$ 2,002.00	\$ 2,002.00	\$ 1,283.00	\$ 1,283.00	\$ 1,459	\$ 1,459
Infant Burial	\$ 447.00	\$ 447.00	\$ 300.00	\$ 300.00	\$ 900.00	\$ 900.00	\$ 784.00	\$ 784.00	\$ 926.00	\$ 926.00	\$ 728	\$ 728
Infant Burial - Weekends	\$ 893.00	\$ 893.00	\$ 600.00	\$ 600.00	\$ 900.00	\$ 900.00	\$ 1,568.00	\$ 1,568.00	\$ 1,283.00	\$ 1,283.00	\$ 1,088	\$ 1,088
Infant Burial - Holidays	\$ 1,341.00	\$ 1,341.00	\$ 900.00	\$ 900.00	\$ 900.00	\$ 900.00	\$ 1,568.00	\$ 1,568.00	\$ 1,283.00	\$ 1,283.00	\$ 1,163	\$ 1,163
Cremated Remains (+Veterans) First Burial	\$ 541.00	\$ 541.00	\$ 550.00	\$ 550.00	\$ 350.00	\$ 350.00	\$ 500.00	\$ 500.00	\$ 443.00	\$ 443.00	\$ 461	\$ 461
Cremated Remains (+Veterans) Weekend Burial	\$ 1,082.00	\$ 1,082.00	\$ 1,100.00	\$ 1,100.00	\$ 350.00	\$ 350.00	\$ 1,000.00	\$ 1,000.00	\$ 749.00	\$ 749.00	\$ 800	\$ 800
Cremated Remains (+Veterans) Holiday Burial	\$ 1,822.00	\$ 1,822.00	\$ 1,650.00	\$ 1,650.00	\$ 350.00	\$ 350.00	\$ 1,000.00	\$ 1,000.00	\$ 749.00	\$ 749.00	\$ 937	\$ 937
Wall / Columbaria Niche Inurnment	\$ 420.00	\$ 420.00	\$ 350.00	\$ 350.00	\$ 350.00	\$ 350.00	\$ 275.00	\$ 275.00	\$ 255.00	\$ 255.00	\$ 308	\$ 308
Wall / Columbaria Niche Inurnment - Weekends	\$ 839.00	\$ 839.00	\$ 700.00	\$ 700.00	\$ 350.00	\$ 350.00	\$ 550.00	\$ 550.00	\$ 561.00	\$ 561.00	\$ 540	\$ 540
Wall / Columbaria Niche Inurnment - Holidays	\$ 1,260.00	\$ 1,260.00	\$ 1,050.00	\$ 1,050.00	\$ 350.00	\$ 350.00	\$ 550.00	\$ 550.00	\$ 561.00	\$ 561.00	\$ 628	\$ 628
Ossuary / Scatter Garden Interment	\$ 300.00	\$ 300.00	\$ 220.00	\$ 220.00	\$ 362.50	\$ 362.50	\$ 360.00	\$ 360.00	\$ 398.00	\$ 398.00	\$ 335	\$ 335
Disinterment - Adult Casket Single Depth	\$ 2,338.00	\$ 2,338.00	\$ 1,150.00	\$ 1,150.00	\$ 3,000.00	\$ 3,000.00	\$ 3,180.00	\$ 3,180.00	n/a	n/a	\$ 2,443	\$ 2,443
Disinterment - Adult Casket Double Depth	\$ 3,509.00	\$ 3,509.00	\$ 1,150.00	\$ 1,150.00	\$ 3,000.00	\$ 3,000.00	\$ 3,180.00	\$ 3,180.00	n/a	n/a	\$ 2,443	\$ 2,443
Disinterment - Adult Casket Double Depth, Occupied	\$ 5,652.00	\$ 5,652.00	\$ 1,150.00	\$ 1,150.00	\$ 3,000.00	\$ 3,000.00	\$ 3,180.00	\$ 3,180.00	n/a	n/a	\$ 2,443	\$ 2,443
Disinterment - Child Casket	\$ 1,534.00	\$ 1,534.00	\$ 450.00	\$ 450.00	\$ 3,000.00	\$ 3,000.00	\$ 2,502.00	\$ 2,502.00	n/a	n/a	\$ 1,984	\$ 1,984
Disinterment - Infant Casket	\$ 895.00	\$ 895.00	\$ 300.00	\$ 300.00	\$ 3,000.00	\$ 3,000.00	\$ 1,847.00	\$ 1,847.00	n/a	n/a	\$ 1,716	\$ 1,716
Disinterment - Cremated Remains Plot	\$ 1,080.00	\$ 1,080.00	\$ 550.00	\$ 550.00	\$ 500.00	\$ 500.00	\$ 1,136.00	\$ 1,136.00	n/a	n/a	\$ 729	\$ 729
Disinterment - Cremated Remains Niche	\$ 1,080.00	\$ 1,080.00	\$ 1,100.00	\$ 1,100.00	\$ 500.00	\$ 500.00	\$ 300.00	\$ 300.00	n/a	n/a	\$ 633	\$ 633

APPENDIX B – GLOSSARY OF CEMETERY TERMS

- AT-NEED

 - At the time of, or immediately following, death. Usually refers to the time of purchase of funeral or cemetery services.
- BOOK OF MEMORIES

 - Plaque with list of names of the deceased who typically are located in areas not readily accessible. A type of memorial monument.
- BURIAL

 - A form of interment where a body or cremated remains are placed in a grave.
- BURIAL LINER

 - Similar to a burial vault, however, it only covers the top and sides of the casket.
- BURIAL PERMIT

 - A legal document issued by a regulatory authority authorizing final disposition of human remains.
- BURIAL VAULT

 - A protective, sealable outer receptacle, into which a casket or urn is placed, designed to restrict the entrance of gravesite elements into the casket or urn.
- BYLAWS

 - The written regulations, rules or laws governing the organization, management and operation of a cemetery, mausoleum, columbarium or crematorium.
- CAPACITY

 - The maximum amount of cemetery inventory that a site can potentially contain, as defined by its geographic limits, after all unused land is fully developed.
- CARE AND MAINTENANCE FUND (also known as PERPETUAL CARE FUND or CARE FUND)

 - An irrevocable trust fund established, held and administered in accordance with applicable law, with the income from the fund to be used for the upkeep and repair of a cemetery, mausoleum or columbarium.

- CASKET
- A rigid container usually constructed of wood, metal or similar material, ornamented and lined with fabric, designed for the encasement of human remains.
- CASKET ENTOMBMENT
- When a casket is interred in a mausoleum.
- CEMETERY SERVICES
- The disposition of human remains by interment or cremation including the supply of goods incidental to the provision of such service, but excluding the sale of lots.
- CEMETERY URBANISM
- A naturalized cemetery in an urban setting that provides synergistic capabilities for maintaining plant ecosystems, environmental stewardship and low maintenance landscape
- COLUMBARIUM
(plural: COLUMBARIA)
- A structure, building, an area in a structure or building that contains, as an integral part of the structure or building or as freestanding sections, niches for the inurnment of cremated remains.
 - Can be “Individual,” “Family” or “Community,” based on the number of niches, and how they are sold.
- COMMEMORATION
- A ceremony, service or symbol of memory for a person/people or event.
- COMMINGLING
- The mixing of the cremated remains of more than one deceased person.

CONTAINER

- A self-contained receptacle or enclosure other than a casket, made of rigid cardboard, pressed wood or other similar material that is of sufficient strength to hold and conveniently transport human remains, but does not include a metal or fiber glass casket, receptacle or enclosure made of plastic or similar substance, or a pouch or bag.

CREMATED REMAINS

- The human bone fragments that remain after cremation that may also include the residue of any other materials cremated with the human remains.

CREMATION

- The irreversible reduction of human remains to bone fragments through the application of flame and intense heat; in some jurisdictions this may include the repositioning or movement of the body during the process to complete the cremation; and the manual or mechanical reduction of the bone fragments after removal from the cremation chamber.

CREMATION LOT

- A space used, or intended to be used, specifically for the interment of cremated remains. Typically, a smaller than full-sized lot.

CREMATORIUM

- The building or part of a building that is fitted with approved appliances for the purpose of cremation human remains and includes everything incidental or ancillary to it.

- CREMORIAL
- A memorial property or columbarium niche that contains cremated remains.
- CRIB GRAVE
- A grave lot surrounded by a small picket fence.
- CRYPT
- One kind of lot.
 - Typically, a space in a mausoleum used or intended to be used for the entombment of human remains.
- DEATH CERTIFICATE
- A legal document certifying the vital statistics pertaining to the life and death of a deceased person.
- DIRECT (or IMMEDIATE)
DISPOSITION
- The final disposition of human remains without any formal viewing or visitation, ritual, rite, service or ceremony.
- DISINTERMENT
- The removal of human remains, along with the casket or container or any remaining portion of the casket or container holding the remains, from the lot in which the remains had been interred.
- DOUBLE DEPTH LOT
- A lot dug at extra depth at the time of the interment of the first casket to allow for the accommodation of a second interment at regular depth.
- EASEMENT
- The right acquired, whether or not supported by a certificate, to interment in a lot.

- | | |
|--------------------|---|
| ENTOMBMENT | <ul style="list-style-type: none"> ▪ One form of interment. ▪ The placement of human remains in a mausoleum crypt. |
| FAMILY COLUMBARIUM | <ul style="list-style-type: none"> ▪ See columbarium |
| FAMILY ESTATE LOTS | <ul style="list-style-type: none"> ▪ A family estate lot contains 6-12 lots together. |
| FAMILY VESSEL | <ul style="list-style-type: none"> ▪ A large urn for several cremated remains. Remains may be comingled or may be contained in smaller, individual urns, held within the larger vessel. |
| FLAT MARKER | <ul style="list-style-type: none"> ▪ A grave marker set flush with the ground. |
| FUNERAL SERVICES | <ul style="list-style-type: none"> ▪ The arrangements, care and preparation of human remains for interment, cremation or other disposition and includes the supply of goods incidental to the arrangements, care and preparation, but does not include the sale of lots. |
| GRAVE | <ul style="list-style-type: none"> ▪ One kind of lot. A portion of ground in a cemetery, used or intended to be used, for the burial of human remains or cremated remains. |
| GRAVE LINER | <ul style="list-style-type: none"> ▪ A fiberglass or concrete structure installed over a casket once it has been placed in the grave. |
| GRAVE MARKER | <ul style="list-style-type: none"> ▪ Can be in-ground (flat) or upright. |

GREEN BURIAL

- A more environmentally conscious alternative to “traditional burial.” Typically includes:
 - no embalming;
 - burial directly in the ground, without a grave liner or vault;
 - a fully biodegradable burial container (casket or shroud);
 - interment sites planted with indigenous ground cover, and
 - no individual grave markers.
 -

INTERMENT

- It is a common misnomer in the cemetery sector for stakeholders to refer to internments rather than interments. To clarify:
 - **Interment** means the placement and/or burial of a decedent in a burial of human remains or
 - cremated remains in a grave, entombment of human remains in a mausoleum, crypt, or the inurnment of cremated remains in a columbarium niche or a scattering garden, typically with funeral rites, whereas...
 -
 - **Internment** means putting a person in prison or other kind of detention, generally in wartime.
 -

INVENTORY

- Represents the total amount of currently developed and installed interment spaces available for sale, including grave lots, crypts and columbaria niches.

INTERMENT RIGHTS HOLDER

- Also known as a “lot holder” in other parts of Canada, this is the person in whose name the right of interment in a lot is registered in the records of a cemetery and, where the interment has taken place, includes the person who has legally acquired ancillary rights to the lot.

INURNMENT

- One form of cremated remains interment. The process of placing cremated remains in a receptacle including, but not limited to, an urn and placing the urn into a niche.

LAWN CRYPT

- A concrete or other durable and rigid outer receptacle installed in a grave prior to burial.

LOT HOLDER

- Also known as the “interment rights holder” in Ontario, this is the person in whose name the right of interment in a lot is registered in the records of a cemetery and, where the interment has taken place, includes the person who has legally acquired ancillary rights to the lot.

MAINTENANCE FUND

(also known as CARE FUND or PERPETUAL CARE FUND)

- A fund established for the upkeep and repair of a cemetery, mausoleum or columbarium.

MAUSOLEUM

(plural: MAUSOLEA)

- A structure or building that contains interior or exterior crypts designed for the entombment of human remains.

MAUSOLEUM CRYPT

- A chamber of a mausoleum or sufficient size for entombment of human remains.

MEMORIAL

- A product, meeting the bylaw standard of a cemetery, used or intended to be used to identify a lot or to memorialize a deceased person interred or to be interred in a lot, including but not limited to:
 - a marker, headstone, tombstone monument, plaque, tablet or plate on a lot; or
 - a tablet inscription, lettering or ornamentation on a crypt or niche front, or
 - a tree, boulder or other feature so identified;
 - A ceremony, rite or ritual commemorating the life of a deceased individual without the human remains being present.

NICHE

- One kind of lot.
- A space, usually within a columbarium, for placing a receptacle containing cremated remains.

OSSUARY

- A vessel for the interment of two or more cremated remains.
- Typically, the cremated remains are commingled.

OUTER CONTAINER

- A receptacle, which is designed for placement in a lot to accept the placement of a casket or urn.

PERPETUAL CARE FUND

(also known as

CARE FUND or MAINTENANCE FUND)

- An irrevocable trust fund established, held and administered in accordance with applicable law, with the income from the fund to be used for the upkeep and repair of a cemetery, mausoleum, columbarium and monuments.

PRE-NEED

- Any time prior to death.
- Usually refers to the time of purchase of funeral or cemetery services.
- “Pre-need planning” refers to the process of making arrangements and/or entering into contracts regarding future cemetery services for one or more persons who are still alive at the time.

REGISTRAR

- The person responsible for the administration and enforcement of applicable laws and regulations relating to cemetery and funeral services.

SCATTERING

- The irreversible dispersal of cremated remains over land or water, or commingling in a defined area in a cemetery.

SCATTERING GARDEN

- An area within a cemetery, usually providing an attractive natural or ornamental setting, dedicated to the scattering of cremated remains.

SPIRIT HOUSE

- A wooden shelter over a grave to house the spirit of the dead, typical of First Nations cemeteries.

UPRIGHT MARKER

- A grave marker that is not flush with the ground is mounted on a footing and intended to be visible over the surrounding finished grade.

URN

- A receptacle for holding cremated remains.

APPENDIX C – DETAILED INTERMENT PROJECTIONS

As some cemetery services are pre-sold, it's important to plan for funding to support continuing interment operations within the cemeteries, even after sales have ceased.

Anticipated demand for Township of Langley interment services over the next 30 years:

Projected 30 Year Township Cemetery Demand	Interments
Casket	3,000 burials
In-Ground Cremation	5,300 burials
Columbaria Niches	600 inurnments
Scattering Areas	160 scatterings

Table 5: Anticipated Demand for Township Cemetery Interment Services over the next 30 years, Source: Township of Langley Cemetery Records + LEES+Associates' Analysis.

This study conservatively assumes that Township of Langley cemeteries will inter 1 casket per casket lot, 2 urns per cremation lot and 1 urn per niche. It should be noted that this estimate is particularly conservative for in-ground cremation usage as many will take place in casket lots. The bylaw allows up to 8 cremated remains in addition to a casket burial in a casket lot.

Future interments in existing pre-sold lots and niches, as of the time of the report:

Current Township Inventory	Existing Lots to Be Interred	Anticipated Year to which Interments will Continue
Casket Lots	1,800 lots	Until 2038
Cremation Lots	1,216 lots	Until 2034
Columbaria Niches	197 niches	Until 2030
Total Current Inventory	3,213 lots & niches	

Table 6: Number of Years until all Developed Inventory is Used at Township of Langley Cemeteries, Source: Township of Langley Cemetery Records + LEES+Associates Analysis.

Interments if Proposed Capacity is Developed

The table below summarizes the Township of Langley’s cemeteries interments and lifespan should the design and management options recommended in following chapters be implemented.

Existing + Proposed Township Interments	Existing + Proposed Lots to Be Interred	Anticipated Year to which Interments will Continue
Casket Lots	4414	Until 2058+
Cremation Lots	2158	Until 2043+
Columbaria Niches	1117	Until 2063+
Total Current + Proposed Inventory	7589 lots + niches	

Table 7: Number of Years until Proposed Inventory is Used at Township of Langley Cemeteries, Source: Township of Langley Cemetery Records + LEES+Associates Analysis.

“Lots awaiting interment” includes currently presold and available lots and niches and proposed lots and niches.

