

**TO:** CITY MANAGER

1999 June 14

**FROM:** DIRECTOR PLANNING AND BUILDING

**SUBJECT: REGULATION AND DEFINITION OF MAUSOLEUMS AND  
LAWN CRYPTS  
PROPOSED TEXT AMENDMENT**

**PURPOSE:** To respond to the concerns of the delegation on 1999 May 03 regarding lawn crypts

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**RECOMMENDATIONS:**

1. **THAT** Council authorize an amendment to the Burnaby Zoning Bylaw to provide a definition for mausoleums, as described in Section 2.2 of this report.
2. **THAT** a copy of this report be sent to Mr. Pat Ryan, 3890 Garden Grove Drive, Burnaby, B.C. V5G 4A7.

**R E P O R T**

**1.0 BACKGROUND**

- 1.1 On 1999 May 3 Council received a delegation from Mr. Pat Ryan, representing the Greentree Village Concerned Citizens' Committee regarding the construction of interment structures on Forest Lawn Cemetery. In his presentation, Mr. Ryan expressed concern regarding the potential development of lawn crypt structures on Forest Lawn Cemetery, particularly along the steeply sloping western edge of the site.

Arising from that presentation, Council directed staff to report back on the construction of interment structures, issues arising from any conflict between the Provincial Cemeteries Act and the recently passed City Bylaws, as well as the life span of interment and entombment structures and questions related to their environmental impacts.

**2.0 GENERAL DISCUSSION:**

- 2.1 The presentation by Mr. Ryan referred to the Province approving Service Corporation International (SCI's) application to develop the deforested areas of Forest Lawn and Ocean View as in-ground crypts and Council requested comment on this matter. The Registrar, Cemetery and Funeral Services wrote to this Department on 1999 April 07 regarding an application by SCI to amend its Certificate of Operation for Forest Lawn. The Certificate of Operation approves the layout and use for interment of certain areas within the designated

cemetery lands. In the letter the Registrar indicated that her jurisdiction and power in approving or not approving a Certificate of Operation is quite limited in scope and that Forest Lawn will be informed that the Certificate of Operation will be provided upon confirmation of completion of the project. However, the letter from the Registrar to SCI on this application also indicated that the issuance of an amended Certificate of Operation for the proposed interment areas would not affect SCI's legal responsibilities with regard to municipal setback requirements and tree removal bylaws. Therefore, Burnaby will continue to pursue compliance with municipal regulations.

Mr. Ryan's presentation also indicated that according to the Registrar, the definition of an in-ground crypt is determined by the City, not the province. The Cemetery Act does not define in-ground crypts, but it does define a mausoleum as "a structure or building that contains interior or exterior crypts designed for the entombment of human remains". Municipalities may define land uses and regulate the size and dimensions of structures and buildings and the siting of uses. Therefore, the City may essentially define and regulate the siting of both in-ground crypts and mausoleums and regulate the siting and dimensions of buildings and structures.

There are two common methods of in-ground burial which are practiced in British Columbia. Under both practices, while it is not required by Provincial regulations, most cemeteries have bylaws which require caskets to be placed in a grave liner. Grave liners can be either individual, sealed, rigid structures made of bronze, copper, steel, fiberglass or copper, known as vaults, or concrete chambers. The first, most common method is in - ground burial of individual caskets in grave liners. The other practice is that of building crypts consisting of a concrete chamber that is buried in the earth, with a covering of soil and turf, for the caskets to be placed in at a later date. These engineered underground structures are often double depth and referred to as double depth lawn crypts.

- 2.2 The central point of Mr. Ryan's presentation was that there is the potential for the development of in-ground crypts along the western edge of Forest Lawn which could be quite unsightly and create an unacceptable loss of privacy. Mr Ryan noted a development in the northwestern corner of Forest Lawn called Imperial Gardens as an example. Imperial Gardens is a combination of lawn crypts, with wall crypts (crypts placed in the face of retaining walls) and a number of small "Private Walk-In" mausoleum units, arranged in a series of man made terraces in a sloping site location, with the faces visible on the exposed vertical wall planes. Mr. Ryan pointed out that these structures are clearly visible above ground, and look like and function as mausoleums.

The P4 Cemetery District requires public mausoleums to be located not less than 30 m (98.43. ft.) from any lot line, nor less than 61m (200.13 ft.) from any lot in an A, R or RM District. Imperial Gardens conforms to the 200 foot set back requirement. However, concern has been expressed that such a form of development would be unsuitable in closer proximity to residential properties.

Specific forms of interment are not specifically mentioned in the Zoning Bylaw but the Bylaw requires that all uses on P4 zoned land be set back 18 m (59.06 ft.) where the lot abuts a lot in an R or RM District and that a setback of 6m (19.69 ft.) be provided where the lot is separated from a lot in an A, R or RM District by a street.

Interment or entombment structures which are wholly or substantially below grade, of course, have negligible or limited visual impact on surrounding properties, other than grave markers or monuments. Hence, traditional in-ground crypts or double depth lawn crypts would be permitted anywhere on cemetery land, other than in the specified setback areas. Structures that have significant portions elevated or exposed above the adjacent grade, on the other hand, tend to have a physical presence that may visually impact adjacent properties. The intent of the present regulation affecting mausoleums is to provide a spatial separation between such structures and abutting land uses.

If Council wishes to ensure that all interment structures which have exposed faces extending above the ground be required to be setback in the manner mausoleums are, the Zoning Bylaw could be amended to define mausoleums and for that definition to include any structure used for the interment or entombment of human remains in crypts, which has any exterior face exposed more than one foot measured vertically above the adjacent natural or finished grade.

In order to ensure that this includes exposed vertical elements of crypts which might be constructed as part of the finished grade, but cut into the existing grade, thus exhibiting a visible vertical element, the height would be measured at the face of the crypt, from the natural or finished grade, whichever is lower. This definition does not conflict with the definition of mausoleum in the Cemetery Act, and would ensure that structures such as Imperial Gardens, which have exterior surfaces exposed substantially above the level of the adjacent finished grade, are set back at least 200 feet from any residential properties.

- 2.3 With respect to the life span of the structures and environmental issues, the structures are made of concrete and granite and they are expected to last indefinitely. Mausoleums and structures such as Imperial Gardens are commonly constructed on top of a bed of gravel with an interior venting/drainage system that is used to equalize pressure within the crypts, circulate air, and decrease the moisture level inside crypts. The small weep holes are a precautionary system used to drain off any liquid which may accumulate - the amount of which is minimal and which is mostly either evaporated or absorbed within the crypt. Though not environmentally sealed, such construction appears to be standard in the industry. Neither mausoleums nor lawn crypts are sealed and both typically have small weep holes. Only structures known as vaults - containers in which the casket is placed and which may then be placed in either mausoleums or directly in-ground - are completely sealed from the elements. There are no regulations related to burial practices that deal with specific issues such as drainage or design.

Regardless, the potential for unconfined decomposition is not of concern to the Environmental Services Division of the Engineering Department, who indicate that the process of decomposition, as well as the actual entombment or interment of bodies, will most likely occur gradually, thus releasing waste products at a very insignificant rate. Any fluid that would enter the ground beneath the structure would be broken-down organic matter that would be both filtered by the soil microorganisms and diluted by water percolating through the soil. Little research has been conducted regarding cemeteries and such environmental concerns and the potential impact on aquatic life is unknown. However, a 1992 study by the Ontario Ministry of the Environment sampled water from domestic/irrigation wells located down gradient of cemeteries and concluded that cemeteries are not a significant source of groundwater contamination by formaldehyde (a chemical preservative). The study also concluded that calculated loading estimates for formaldehyde and nitrates support a low potential for groundwater contamination. While the Environmental Services Division advises that there are likely no implications for human health, Simon Fraser Health Region is looking into the issue as it relates to human health and if Council is interested in more detailed information on this issue, more information could be provided once Simon Fraser Health Region concludes their research.

**3.0 CONCLUSION:**

3.1 In consideration of Council's concerns regarding the potential for interment structures which are partially or largely above grade to be unsightly and generally incompatible with adjacent residential land uses, particularly on steeply sloping sites, it is recommended that the Burnaby Zoning Bylaw be amended to define mausoleums and that the definition include any structure used for the interment or entombment of the dead which protrudes more than one foot above existing or finished grade and that the height be measured at the front or exposed side of the crypt. This would ensure that all in-ground crypts which have a visible vertical appearance are setback at least 200 feet from all residential properties.

With respect to the question of life span and environmental seal of interment structures, while it is clear that these structures are not environmentally sealed, the treatment described in this report is typical in the industry and from information staff have collected, it appears unlikely that there are health concerns related to this practice.

If Council adopts the recommendation in this report, the City Solicitor will prepare the necessary bylaw amendment and it will be advanced to the next available Public Hearing.



D. G. Stenson  
Director Planning and Building

BW: gk  
cc: City Solicitor  
Chief Building Inspector  
Director Engineering, Environmental Services Division