Council Resolution

MINUTES – VICTORIA CITY COUNCIL
MEETING OF THURSDAY, APRIL 11, 2013, AT 7:32 P.M.

Reports of the Committee

5. Governance and Priorities Committee – April 4, 2013
   1. Pioneer Square Management Plan
      It was moved by Councillor Madoff, seconded by Councillor Isitt, that Council:
      1. Approve the revised budget attached to the report dated March 18, 2013, and approve the Pioneer Square Management Plan as revised;
         a. Change the pilot closure of Rockland Avenue to high priority.

Carried Unanimously
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Executive Summary

Pioneer Square is a small, rectangular park adjacent to Christ Church Cathedral. Also known as the “old burying ground,” it served as the City’s cemetery from 1855 to 1873. It has been a City park since 1908. Pioneer Square features mature trees and plantings and is home to close to 1,300 interments, marked by a number of heritage tombstones and bench tombs.

This management plan is a community-based project committed to identifying future improvements for the success of Pioneer Square. The development of the Management Plan concludes an 18-month process which has examined prior reports, hosted two public open houses, created and worked with a Pioneer Square Advisory Group, and completed an internal operations review. It responds to views expressed by the public as well as contributions from staff, findings from previous studies and current trends in the City of Victoria.

The primary vision of this plan is to preserve and enhance the rich historical value of the cemetery while maintaining a park space that suits the needs of the surrounding community. People will recognize Pioneer Square as a historic burial ground and will visit the space to share the stories of the past. Commemorative monuments and associated events will continue to have a place within the Square. The space will also provide an area for relaxation or reflection within the heart of Victoria.

Heritage designation and the design of the memorial feature, plaza area and park identification signage should be undertaken as priority projects. It is proposed that all construction activity be undertaken as one phase in order to minimize disruption to park users. Stone preservation will occur over time as funding is secured. The timeline for construction is contingent on approved budgets but could commence in 2013 if funding were available.

Purpose

The Victoria Gazette of 1859 summed up how the people of that age envisioned Pioneer Square when it was in the planning stage: the new burial ground would be “a place where our children and children’s children, as they wander through the winding avenues of that “City of the Dead” or sit within the shade of some secluded dell...(may) look upon the mossy looks hanging from the ancient and venerable trees...(and) call to remembrance the early dead, and contemplate upon the mighty past.”

Since that time there have been several attempts to preserve the site and restore some of the remaining monuments including a proposal by the Old Cemeteries Society of Victoria in 1991.

The purpose of this plan is to build on past recommendations to create a high level, long-term vision for Pioneer Square. It is reflective of the City of Victoria’s corporate values by celebrating our history, engaging our community and building for our future. It sets specific goals, objectives and recommendations intended to deal with key management issues such as rehabilitation of park space, preservation of monuments, interpretation of historical significance, public amenities, maintenance and social conditions.

Some of the specific strategies and recommendations can be implemented with current knowledge and resources, while other recommendations will require additional resources if they are to be acted upon. These are identified in the implementation section of the plan.
Introduction and Background

Context

Pioneer Square is a small, rectangular park adjacent to Christ Church Cathedral. Also known as the “old burying ground,” it served as the City’s cemetery from 1855 to 1873. It has been a City park since 1908. Pioneer Square features mature trees and plantings and is home to close to 1,300 interments, marked by a number of heritage tombstones and bench tombs.

It is bounded by Quadra Street to the west, Rockland Avenue to the south, Meares Street to the north and multi-family housing to the east. It is officially in the Fairfield neighbourhood but also serves Harris Green and downtown.

Site History

Pioneer Square has had a rich history since its establishment as a cemetery in 1855. The following information is from an article compiled by John Adams and available on the Old Cemeteries Society of Victoria’s website.

The Old Burying Ground (1855 to 1873)

Intended as a public cemetery, the site was originally staked out in May 1855 with separate sections for Catholics and Anglicans. In future years, distinct areas for Royal Navy personnel and Chinese were also laid out. There is also some evidence that a distinct area for Kanakas (Hawaiians) also existed.

In 1859, corpses and tombstones from the abandoned Fort Victoria graveyard (near the corner of Douglas and Johnson Streets) were relocated into the ‘new’ cemetery. The cemetery continued to be used throughout the 1860s, however due to the growing population of the city, it was known that this location would soon be full. In addition, the condition of the cemetery was often complained about and, in 1868, a public meeting was convened to improve the cemetery which, at that point, was in a state of neglect due to wandering cattle and swine as well as vandals. Later that year, a problem of site drainage was brought to City Council with the outcome being the installation of drainage and the commencement of the search for another burying ground location outside of the city boundaries. In 1872, Ross Bay Cemetery was selected and in 1873, the Quadra Street Cemetery was closed.

The Transformation to City Park (1873 to 1990s)

Following closure of the cemetery, citizens of Victoria were critical of City Council for the continuing neglect and decay. In 1907, plans accepted by Council included the transfer of ownership from provincial to civic ownership, completing an inventory and plan of the existing graves, relocating all monuments and stones to the eastern edge of the grounds, and installing a memorial fountain in the middle of the Square. Portions of the plan were carried out in 1908 but it was never entirely completed.

Over the years, there was continuing decay of the monuments and tombstones as well as vandalism. In the mid-1980s, the Parks department began to recognize the importance of the grave markers and began to remove them from the site and store them. In the 1990s, the Old Cemeteries Society was given permission to move most of the remaining monuments into storage.

Relatively recent additions to the Square include the 16th Canadian Scottish Regiment’s cenotaph (original wooden cross installed in 1938, current granite marker installed in 1951) and the Victoria Branch of the Royal Canadian Naval Association’s granite marker in the ‘Naval Corner’ of Pioneer Square (installed in 1993).

In 1991, the Old Cemeteries Society prepared a proposal towards the preservation of Pioneer Square. In 1992, Council approved some of the recommendations from the Old Cemeteries Society Report. Only a portion of these recommendations have been completed to date.
Pioneer Square Today

Today Pioneer Square provides a respite from downtown’s “concrete jungle” and is often used by area office workers as a lunch spot during the warmer months or by those just seeking a place to sit on the grass and rest or read. Significant mature trees grace the site and provide welcome shade on a hot summer day.

The diagonal pathways provide a unique cut-through for pedestrians and offer a brief chance to escape the hustle of road-side sidewalks along their way.

Christ Church Cathedral is a significant backdrop and helps to define the site’s space. There is also a key view from the Square down Broughton Street to St. Andrews Presbyterian Church.

The Square is home to several significant military memorials, providing strong symbolic and memorial value to the military associations that erected them. Annual Remembrance Day ceremonies are held at the cenotaph.

The various markers and monuments offer an opportunity to reflect and remember those events that have shaped us. The east grouping of stones and other monuments and bench tombs located throughout the site offer a glimpse of the history of the site, and indeed, of the City's beginnings, but they continue to decay and are occasionally subject to vandalism.

Social issues such as homelessness, poverty and undesirable behaviour affect the site and lead to a sense of insecurity, especially in the evenings.

There are four garbage cans, 10 benches, four light posts and one safe needle deposit box currently in the Square. Signage on the site is predominately regulatory in nature (i.e. Paws in Parks, no camping, park hours and other bylaws). There is one interpretive stone near Quadra Street. The remainder of the interpretation found on the site is the information provided (if legible) on existing monuments and markers.

Official Community Plan Consistency Statement

This management plan is consistent with and aims to advance various objectives, goals and policies identified in particular in Section 9: Parks and Recreation in the City’s Official Community Plan. Specific related policies include:

- Integrating parks and open spaces, and other common destinations into the Greenways network (Policy 9.7.1);
- Considering ways to recognize and celebrate the value of history and place in parks design, interpretation and other initiatives (Policy 9.21.4);
- Protecting and stewarding cultural heritage landscapes as consistent with the National Standards and Guidelines for the Conservation of Historic Places in Canada (Policy 9.21.5); and,
- Integrating celebratory and contemplative spaces in parks planning and design (Policy 9.21.6).

Other Related Planning Documents

The following documents were reviewed for their relevance to the planning of Pioneer Square. A brief synopsis of the main findings is included below.

- 1991 Old Cemeteries Society Proposal
- 1995 Official Community Plan
- 2001 Heritage Strategic Plan
- 2003 Greenways Plan
- 2004 Cathedral Precinct Plan
- 2007 City of Victoria Parks Survey
- 2011 Downtown Core Area Plan
1991 Old Cemeteries Society Proposal

The proposal’s goal was to “re-establish the identity of Pioneer Square as the Old Quadra Street Burying Ground and put back enough of the monuments to create a vision of what was once there”. The proposal provided a series of 19 major recommendations to (a) prevent further deterioration of historical assets of Pioneer Square and (b) long range plans for conservation and restoration needs and guidelines.

Preventative measures that were undertaken as a result of the proposal included removing most monuments temporarily to safe storage, changes to some maintenance practices and removing the vegetation surrounding some of the monuments.

Other recommendations included starting a monument conservation process; creating replicas of some of the monuments; creating three new groupings of monuments; building a small storage/exhibit structure; and, pathway, lighting and furniture upgrades.

1995 Official Community Plan

As the bulk of the management plan was prepared during the course of the City’s Official Community Plan being updated, the 1995 Official Community Plan was included in the document review. Heritage and parks objectives related to Pioneer Square include:

- Encouraging the preservation and conservation of sites, buildings and structures of historical significance
- Promoting public awareness, understanding and appreciation of heritage resources
- Maintaining and developing principles and guidelines for the rehabilitation of heritage resources
- Providing parks and open spaces that meet the changing recreational needs of Victoria’s citizens and that attain the greatest public benefit from public open green space
- Located within Development Permit Area (DPA) 34, the Cathedral Hill Precinct enables City Council to approve the particulars of the exterior design and finish of all buildings and structures and also to establish landscaping standards. Other guidelines that apply in this DPA and are relevant to Pioneer Square include Standards and Guidelines for the Conservation of Historic Places in Canada; Advisory Design Guidelines for Buildings, Signs, and Awnings (1981); and, Guidelines for Fences, Gates and Shutters (2010).

2001 Heritage Strategic Plan

The mission of the City of Victoria’s Heritage program is to conserve its significant heritage resources in all its diverse neighbourhoods that are conserved, and the human and natural history of Victoria; and, educating Victorians and visitors to Victoria about the Heritage program and heritage conservation, and encouraging their participation in heritage activities.

2003 Greenways Plan

Rockland Avenue is identified as a People Priority Greenway between Quadra Street and Vancouver Street. A ‘People Priority Greenway’ is described as “designed for pedestrians, bicycles and other non-motorized rolling traffic, and motor vehicles” and will include traffic calming measures.

2004 Cathedral Hill Precinct Plan

Pioneer Square is located in Cathedral Hill Precinct, a six-block area in the northwest corner of Fairfield that provides a transition between the “high density” of downtown and the “medium” to “low” density neighbourhood.

Objectives and policies related to Pioneer Square reference the significance of the Square as a heritage landscape, and identify that it should be considered for municipal heritage designation as well as the implementation of the proposed people priority Greenway along Courtney Street and Rockland Avenue.
2007 City of Victoria Parks Survey

While this survey was city-wide, inferences can be made that the highest percentage of respondents were from the Fairfield area (29.3%).

The survey determined that the highest character and amenity values were placed on local neighbourhood parks, natural parks and urban forest, access to water and beaches, as well as trails and pathways in parks. This was closely followed by greenway connections and boulevards and parks with quiet passive areas.

The top three major barriers to the use of parks were cited as lack of time, concerns about social issues, and concerns about safety issues.

2011 Downtown Core Area Plan

While technically outside of the plan area, Pioneer Square has two boundaries, namely Quadra Street and Meares Street, which do fall within the plan. As a result, the plan was reviewed in the context of any outside adjacency impacts on the Square. Related items include:

- Ensuring parks and open spaces are integrated with the pedestrian network and greenways.
- Identifying Quadra Street as a key pedestrian street.
- Considering view-sheds to heritage landmarks, both of which Christ Church Cathedral and St. Andrews Presbyterian Church (visible from the park down Broughton Street) are identified.
- Identifying the area as a potential public art candidate location.
Planning Process

The Pioneer Square Management Plan was informed through phased stakeholder consultation including an advisory group and outreach opportunities including a paper and online survey, and two information sessions for the public to provide input.

In addition, information was available on the City of Victoria's website throughout the planning process. Media outreach was effective in increasing broad awareness and encouraging participation in consultation.

Advisory Group

Community involvement in the preparation of the management plan started very early in the process with the creation of a public advisory group.

The purpose of the advisory group was to help provide two-way communication between stakeholder groups and the City; assist with the collection of background materials; review documents and information brought forward by the chair and other committee members; review successive drafts of the plan and provide comment; and finally, to approve the final draft prior to Council submission.

The group was chaired by City of Victoria staff and consisted of representation from:

- City of Victoria Council
- Old Cemeteries Society of Victoria
- Hallmark Society
- Victoria Police Department
- Downtown Business Association
- Canadian Scottish Regiment
- Christ Church Cathedral
- Fairfield Gonzales Community Association
- Terra Rosa Strata
- City of Victoria Youth Council
- YMCA-YWCA of Greater Victoria

This group met nine times during the course of the planning process.

Public Consultation Round 1

The purpose of the first round of public consultation was to disseminate information about the management plan process and to help gather information on use and opinions about the Square. This included an open house, several info booths as well as a survey available either as a paper copy or online.

Open House and Info Booths

An open house was held at Christ Church Cathedral on June 21, 2011. An info booth was set up in the park during two days in June 2011 over the lunch hour from 11:30 a.m. to 1 p.m. and again in the afternoon from 3:30 p.m. to 5 p.m. to try and capture as wide a range of park users as possible. A third info booth was set up at the YMCA-YWCA of Greater Victoria on Broughton Street.

The displays included information about the history of the Square and some of the key management issues previously identified by the advisory group.

For those not able to attend these events, the display panels were available for viewing at the Parks Office and online on the City’s website from June 22 to July 8, 2011.

Public Survey #1

As part of the first round of public consultation, a survey was developed. Paper copies of the survey were available at the open house and info booths as well as available for pick-up from the Parks office. The survey was also available online on the City’s website.
What We Heard

Approximately 330 completed surveys were received. Of the respondents, approximately 42% lived or work within a five-minute walk of Pioneer Square. The top three reasons cited for visiting the Square were for leisure, commuting through the park and viewing the tombstones.

When asked what they most enjoyed about the Pioneer Square, the following were the words most often referred to: history/historical, greenspace, trees, quiet and peaceful, and place to rest/read. With regards to the context of the Square, its proximate location to the Cathedral and downtown was often stated.

When asked how to improve the site, there was very strong support to preserve or restore the tombstones and other monuments in the Square as well as re-installing those currently stored elsewhere. Also cited was interest in greater interpretation of the historical elements of the Square; improved general maintenance (more landscaping, cleanliness, resurfacing pathways); and, the need for additional facilities (seating, picnic tables).

While most survey respondents did not feel there was a safety issue during the day, over 50% felt unsafe in the Square at night and many commented on the need for improved safety including more security and the possibility for more lighting.

With regards to fencing, there was highest support for either no fencing or fencing around specific tombstones or monuments. A perimeter fence around the site with openings at access points had the lowest support.

While there were several comments around the need for an off-leash dog park in the area, the majority of respondents did not feel that off-leash dog use in the Square was suitable out of respect for those buried there.

There was strong support for continuing to use the Square for commemoration of future (non-burial) events.

When asked about the possibility to close a portion of Rockland Avenue, even though this question was worded incorrectly on the online survey, given the number of responses from the paper copies as well as the comments received on the online survey, there was strong support for closing the west portion of Rockland Avenue to motor vehicles, reallocating a portion to greenway, and integrating the remaining area into the Square.

Public Consultation Round 2

The purpose of this round of public consultation was to present and gain feedback on the draft plan. This consisted of an open house and a survey available either as a paper copy or online.

Open House

An open house was held at Christ Church Cathedral on March 28, 2012. The displays presented information about the vision and management recommendations.

For those not able to attend these events, the display panels were available for viewing at the Parks Office and online on the City’s website from March 29 to April 16, 2011.

Public Survey #2

The survey was the key mechanism to capture community input on the vision and recommendations. Paper copies of the survey were available at the open house and info booths as well as available for pick-up from the Parks office. An online version was available on the City’s website.

What We Heard

Approximately 80 completed surveys were received. 48% of respondents lived within a five minute walk from the Square. 63% visited the park frequently (more than once a week to a few times a month). Approximately 90% of respondents agreed with the overall vision presented in the plan. In general, there was strong support for all the recommendations. Items with less support included the conversion of a portion of Rockland Avenue to non-motorized vehicles and to the development of a small plaza area at the entrance to the Square.

Heritage Advisory Committee

The draft management plan was reviewed by the Heritage Advisory Committee at their June 12, 2012 meeting and was recommended for approval.
Vision

This management plan is committed to identifying future improvements for the successful planning of Pioneer Square. The vision statement defines the long-term context for the goals and objectives of this management plan.

The primary vision of this plan is to preserve and enhance the rich historical value of the cemetery while maintaining a park space that suits the needs of the surrounding community. People will recognize Pioneer Square as a historic burial ground and will visit the space to share the stories of the past. Commemorative monuments and associated events will continue to have a place within the Square. The space will also provide an area for relaxation or reflection within the heart of Victoria.
Park Management Themes

Park management theme areas include:
- Preserving the historic cultural landscape
- Future commemorative monuments
- Public interpretation and education
- Community use as greenspace
- Operations and maintenance
- Oversight of management plan implementation

Preserving the Historic Cultural Landscape

Objectives:
- Recognize Pioneer Square as an important historic site.
- Maintain and preserve monuments that are representative of the historic cemetery and the commemorative aspect of the site.

According to the Standards and Guidelines for the Conservation of Historic Places in Canada (2nd edition, 2010), conservation is defined as “all actions or processes aimed at safe-guarding the character-defining elements of a historical place to retain its heritage value and extends its physical life” and may involve preservation, rehabilitation or restoration or a combination thereof. Of these, preservation is the appropriate treatment for Pioneer Square.

Preservation refers to “protecting, maintaining and stabilizing the existing form, material and integrity of an historic place or individual component while protecting its heritage value” and includes both short-term and long-term actions to protect the site and to prevent further deterioration.

The Standards and Guidelines for the Conservation of Historic Places in Canada provides nine general standards for preservation:

1. Conserve the heritage value of an historic place. Do not remove, replace or substantially alter its intact or repairable character-defining elements.
2. Conserve changes to an historic place that, over time, have become character-defining elements in their own right.
3. Conserve heritage value by adopting an approach calling for minimal intervention.
4. Recognize each historical place as a physical record of its time, place and use. Do not create a false sense of historical development by adding elements from other historic places or other properties or by combining features of the same property that never coexisted.
5. Find a use for an historic place that requires minimal or no change to its character-defining elements.
6. Protect and, if necessary, stabilize an historic place until any subsequent intervention is undertaken. Protect and preserve archaeological resources in place.
7. Evaluate the existing condition of character-defining elements to determine the appropriate intervention needed. Use the gentlest means possible for any intervention.
8. Maintain character-defining elements on an ongoing basis. Repair character-defining elements by reinforcing their materials using recognized conservation methods.
Statement of Significance

As part of the management planning process, a Statement of Significance was prepared which outlines the heritage value of Pioneer Square as well as its character-defining elements. This report can be found in its entirety as Appendix A of this document but the key items are noted below:

Heritage Values:
- Most significant colonial era cemetery in the Province of BC
- Contains some of the oldest carved headstones in BC
- Some of the province’s most prominent settlers are interred here
- It is a direct link to the formative years of the City of Victoria, at the time of its evolution from a Hudson’s Bay Company outpost to the first incorporated city in western Canada
- It is a symbol of Victoria’s multicultural origins and as a physical testament to the pioneering spirit of the early community of Victoria
- Links to local military history as a location of naval interments and memorials as well as its continuance as an active place of commemoration
- The site is significant for its continuity as a designed landscape – first as a Victorian-era burying ground and for over a century as a City park. Today, it continues to function as one of the only urban green spaces near downtown Victoria.

Character-Defining Elements:
- Location near downtown with frontages on Quadra Street, Rockland Avenue and Meares Street and adjacency to Christ Church Cathedral
- Continuous use of park as designed landscape since 1855, first as cemetery then as an Edwardian-era park, with open spatial qualities and diagonal paths with a central circular focus
- Associated use of the space as a park for reflection and relaxation for over a century
- Existing monuments which represent outstanding examples of Late Victorian funerary and commemorative architecture
- Unique memorial elements such as burial vaults and bench tombs, which are the only remaining examples on the West Coast of Canada
- Variety of headstone styles, materials and symbols
- Military memorials and later historical commemoration monuments
- Associated landscape features such as grassed terrain and many mature trees and plantings

Heritage Designation

A municipal heritage designation is intended to provide long-term protection to heritage property. In general, it is a form of legal protection, not merely a commemoration. Municipal heritage designation would be the first step in any potential designations at a Provincial or Federal level.

The process for the heritage designation of Pioneer Square would be a City-initiated request for heritage designation to the City’s Planning and Development Department. A staff report would be prepared for review by the Heritage Advisory Committee and City Council. This report would contain a Statement of Significance outlining the site’s heritage values and character-defining elements, and would also address the relevant supporting policies from the Official Community Plan and Neighbourhood Plans, its relationship to existing zoning and land use policy, its condition and economic viability, and need for financial support.

Following review by the Heritage Advisory Committee, the report would be considered by the Planning and Land Use Standing Committee of City Council and by Council. A motion to approve in principle the heritage designation would be followed by preparation of the Bylaw. The application is then scheduled first, second and third readings and for a Public Hearing following notification Procedures in the Local Government Act. The procedures for a Municipal Heritage Designation are proscribed in Sections 976 and 968 of Part 27 of the Provincial Local Government Act.
Routine maintenance procedures which the City Parks Division wishes to implement on a regular basis without requiring a Heritage Alteration Permit, will be specified as part of the terms of the Heritage Designation Bylaw. This method was used in the case of Ross Bay Cemetery to specify certain tasks to be exempt from the requirement for a Heritage Alteration Permit such as opening and closing of graves, adding graves, engraving text, adding curbstones, etc. Possible exemptions for Pioneer Square include items identified for implementation in this management plan, including the removal of monuments for preservation purposes and the re-installation of preserved monuments.

Provincial designation as a heritage site is relatively rare and would heavily regulate the site. A permit would be needed for most works, including work to preserve stones or pathway improvements. It is recommended that Provincial designation not be sought at this time.

Federal designation as a National Historic Site is purely commemorative and would not regulate the site in any way. Criteria for such designation includes historical significance from a national perspective. Applications are made to the Historic Site and Monuments Board of Canada and can take up to two years to complete. Given that the nature of the site may be of more municipal, regional or provincial interest as opposed to federal, it is recommended that only exploratory work be conducted to determine if the site potentially meets the criteria.

It should be noted that any sites listed with municipal heritage designation appear on the BC Register of Historic Places as well as the Canadian Register of Historic Places (CRHP).

Preservation of Stone Monuments

In order to retain the historical components of the site, preservation of the monuments will be necessary.

In June 2011, Parks staff commissioned a Stone Conservation Report for Pioneer Square (Appendix B). This document outlines basic preservation tools for all monuments and markers and provides specific recommendations for each of the tombstones and monuments in the Square as well as those in storage.

The Standards and Guidelines for the Conservation of Historic Places in Canada provides the following general guidelines for the preservation of built features:

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Not Recommended</th>
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<tr>
<td>Protecting and maintaining the built features by using non-destructive methods in daily, cyclical and seasonal tasks. This may include ...the reapplication of protective coating systems in kind.</td>
<td>Using maintenance practices and materials that are abrasive or unproven; for example, using potentially damaging cleaning methods such as grit blasting on wood, brick or soft stone, or using harsh chemicals on masonry or metals.</td>
</tr>
<tr>
<td>Retaining sound built features or deteriorated built features that can be repaired.</td>
<td></td>
</tr>
<tr>
<td>Stabilizing a deteriorated built feature by using structural reinforcement, weather protection, or correcting unsafe conditions, as required, until repair work is undertaken.</td>
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</table>
Stabilizing a deteriorated built feature by using recognized conservation methods. Repairs may also include the limited replacement in kind of those extensively deteriorated or missing parts of built features.

Removing a deteriorated built feature that could be stabilized or repaired.

Repairing extensively deteriorated built features by using non-destructive methods and materials.

Replacing an entire built feature when repair or limited replacement of deteriorated or missing parts is possible.

88% of respondents to Public Survey #1 indicated support for the conservation and preservation of the tombstones. The conservation of tombstones and memorials in Pioneer Square can be reduced to one of protection from the elements and vandalism. In general terms, monuments should be preserved in their current condition within Pioneer Square using the best technologies available.

The monuments in Pioneer Square are made from various types of stone including sandstones, granites and marbles, and are set on various materials including concrete, granites and native soil. Each type of stone has different strengths, absorption, and physical properties affecting their wear and care.

Cleaning and applying water repellent: It is recommended that all sandstone monuments within the Square be treated with an appropriate water repellent after cleaning to extend the life of the sandstone. Stones made of granites and marbles are not as vulnerable to environmental degradation but should be cleaned appropriately. The marbles would benefit from the application of an appropriate water repellent but the granites would not.

Strengthening the tablets: A vertical restraint fabricated of un-reinforced concrete or stainless steel should be attached to the back of each individual tablet.

Adding a concrete and mortar base: The installation of a base of greater mass would help to reduce the possibility of the tablets being overturned. In addition, concrete bases added to sandstone markers would limit the amount of water absorbed from below.

Other techniques and technologies may be needed for some of the most damaged stones. Use of these technologies should be considered on a stone-by-stone basis.

Priority of Repair and Preservation

Priority of repair and preservation will be based on the current state of repair and legibility. Stones in the best condition will be preserved first followed by stones in mediocre condition. Stones in poor condition will be repaired last. Costs for the initial preservation of stones will be part of the implementation budget for Pioneer Square. Should family members or community members desire improvements to a specific stone outside of this prioritizing, costs will be born by the family or community organization.

Following preservation efforts, stones will remain in the Square until such time as their overall form is lost due to general weathering. At that time, they will be removed and disposed of appropriately.

Tombstone Arrangement

Given that the current Edwardian layout of Pioneer Square is considered a character-defining element, the fragile state of the tombstones in the Square, and the costs associated with moving the tombstones, it is most appropriate to retain the current locations.

An additional grouping in the northwest area of the Square in close proximity to the Pritchard tomb would help to reinforce the Square's historical character as well as provide visual confirmation along the Broughton Street view corridor. The location of this grouping is shown on the site plan found as Appendix C of this document.

Unrepairable Monuments and Markers

There are a number of monuments, in particular headstone tablets, which are beyond repair. For the most part, these have already been removed from the site and are currently held in storage.

These markers should remain on site or be returned to the site. A commemorative or interpretation wall/seating area could be developed using these pieces. Markers should remain on site until they are no longer recognizable and then disposed of appropriately.

For large tombs that may pose a danger in the future, a small tasteful fence should be installed with appropriate warning signage (see Appendix C: Site Plan).
RECOMMENDATIONS:

1. Using a variety of funding mechanisms, preserve the existing stones in Pioneer Square by using the best technologies available.
2. Over time, as stones are preserved, return stored tombstones to Square and arrange in eastern grouping and northwest corner.
3. Seek municipal designation and continue to explore the potential of federal designation.

Future commemorative monuments

Objectives:

- To ensure future monument proposals for the Square are in keeping with the current war memorials and past burials.

Pioneer Square has been used recently for various commemorative monuments including the Canadian Scottish Regimental cenotaph, Royal Canadian Air Force memorial and the Royal Navy memorial. 85% of Public Survey #1 respondents indicated support for the addition of future commemorative monuments at Pioneer Square.

Commemorative monuments serve both public art and community memory functions. They help to shape a city’s memory of past events or people while adding character and interest to public space.

According to Elizabeth Burling in her thesis *Policy Strategies for Monuments and Memorials*, often memorial decisions are made on an ad-hoc basis as they are typically commissioned by a specific organization to tell their story. She argues that the “values connected to monuments or memorials can and should be enhanced by policy decisions that determine placement, enhance design, provide for maintenance, and strengthen the common memory of a city”.

For any future memorial requests, it is important to clarify the types of memorials and monuments that fit within Pioneer Square, specifically as well as within the overall parks system and to outline a policy for concept approval as well as monument location and design.

Particular locations may reach a saturation point and it is appropriate to consider the limitations of the site for future commemorative monuments. There are a select few remaining locations within Pioneer Square that may be suitable. Commemorative monuments will only be considered within the naval corner of Pioneer Square. This location is indicated in *Appendix C: Site Plan*.

Future commemorative monuments to be considered for Pioneer Square must:

- Be relevant to the site: Proposed monuments should be related to past burials or war memorials and should commemorate a significant event or group relevant to the City of Victoria.
- Be consistent with the aesthetic value of the Square: The design of the monument should be in keeping with the monuments currently installed in the Square.
- Be designed for longevity and minimal maintenance: Adequate provisions in the design should be made for continued future maintenance. Monuments should be made from durable materials, such as granite or other stone that will stand up over time.
- Be installed at no capital cost to the City: Design, manufacturing and installation will be paid for by the proponent.

Assuming the successful municipal heritage designation of Pioneer Square, any applications for commemorative monuments within the park would be required to seek a Heritage Alteration Permit. Approval for commemorative monuments will not be granted in perpetuity but will have a lifespan of 25 – 30 years. Following that time period, the monument may be removed from the site, in consultation with the proponents.
RECOMMENDATIONS:

4. Adopt the above guidelines for future commemorative monuments in Pioneer Square.

Public Education and Interpretation

Objectives:

• Share the cultural knowledge of the site through both personal and non-personal interpretation

Interpretation helps to connect visitors to the park. It “translate[s] that which is perceived into that which relates personally and to bring into focus the truths that lie beyond what the eyes see” (Tilden, 1977).

A successful interpretive program is integral to successful park management as it provides information enabling discussion; encourages thoughtful use to help minimize human impacts; and, promotes public understanding of management goals and objectives.

Interpretation can be personal or non-personal. Examples of non-personal mechanisms include signs, brochures and cell-phone apps or QR codes. Personal mechanisms include public/school programming, guided walks and tours.

Existing interpretive elements include walking tours (various tours are hosted by Old Cemeteries Society and by Discover the Past); and a burial database and self-guided tour brochure by the Old Cemeteries Society as part of the BC 150 Legacy Fund. In addition, there is one rock with engraved information near the front entrance to the park from Quadra Street.

There was strong interest (84% of public survey #1 respondents) in seeing increased interpretation of the history of Pioneer Square, so long as it is fitting with the ambience/context of the park.

Potential themes for additional interpretation include:

• From cemetery to park – general history of the cemetery including conversion to park
• Victoria's prominent pioneers
• Ghost stories
• Naval corner
• Chinese corner

The interpretive program for Pioneer Square should provoke thought and encourage the visitor to respect the site by sharing historical stories that capture the visitor’s interest and emotions but should not affect the overall ambience of the park. Any interpretive signage not directly relevant to a specific stone will be installed on the perimeter of the park.

A memorial feature highlighting the names of the 1,300 interred at the site will be developed with the specific location to be identified through the design process.

RECOMMENDATIONS:

5. Design and implement an interpretive plan for Pioneer Square which includes:

  a. A memorial feature providing the names of the 1,300 people interred
  b. Stone-specific signage for several of the larger monuments
  c. Interpretive signage for the plaza area
Community Use

Objectives:
- Identify specific on-site improvements to encourage broader community use
- Identify improvements to create a safer and more inviting park space
- Build relationships with groups interested in utilizing the Square

Pioneer Square is a passive greenspace and provides a reflective and contemplative space for park users. The Square’s history and context are key factors in any contemplated improvements to this space.

Through the first round of public consultation, beyond preservation of monuments, the most common cited improvements included: more landscaping, more seating, better lighting and repairs to pathways.

Park Entrances and Pathways

There are five access points into the Square. Park information signage will be installed at all entrances to the Square. A small plaza area will be developed and new park identification sign will be designed and installed. (See Appendix C: Site Plan). The sign will be in keeping with the history of the Square.

The current pathways range in width from approximately 1.5 metres to 2.7 metres. The pathways will be widened to a minimum width of 2 metres and the feasibility of re-surfacing with exposed aggregate concrete will be explored.

Dog Management

Due to the historical nature of Pioneer Square and out of respect for the 1,300 interred at the site, the current policy of no dogs will remain.

Rockland Avenue

To further the objectives of the City of Victoria’s 2003 Greenways Plan, the potential to close a portion of Rockland Avenue between Vancouver Street and Quadra Street to motor vehicles was explored through public survey #1 as well as a Traffic Impact Assessment conducted by City of Victoria Engineering staff.

To evaluate the potential impact on nearby streets resulting from a partial closure of Rockland Avenue, the Engineering Department collected traffic data in the surrounding area. This data was then input into traffic simulation software with traffic signal timing information to create a traffic model based on highest hourly traffic volumes thus providing a “worst case scenario” model. A second model was then created to simulate the impact of a partial closure of the 900 Block of Rockland Avenue by allocating existing traffic volumes on Rockland Avenue to neighbouring streets by considering likely origins, destinations and alternate routes.

Based on existing and projected levels of service for intersections surrounding the 900 Block of Rockland Avenue, the partial closure of this street would result in minimal impacts to intersection safety and capacity in the area. In addition, the report indicates that Rockland Avenue currently has a relatively high mode share of existing pedestrian and bicycle traffic during peak periods (35%) and that a partial closure would benefit these users and may attract additional pedestrians and cyclists to the corridor.

The frontage to Rockland Avenue is identified as a character-defining element in the Statement of Significance. In addition, closing the road should not change the relationship of the Square to the Christ Church Cathedral.

The area will be used as multi-use path greenway as well as additional grassed passive space. The multi-use pathway will be constructed to be accessible for emergency and maintenance vehicles. A cost-effective and reversible closure will be implemented for a period of not less than a year. Permanent upgrades will be installed in the future as roadway or service improvements are contemplated.
Fencing
In the first public survey, there was limited support for the addition of fencing with the exception of around specific monuments. A suitable wrought iron fence will be installed around significant historical monuments with a small plaque that provides the history/overview of the monument as well as a historical photo showing it in a more original condition, where possible. Markers identified for this treatment include the Charles Rufus Robson marker, Pritchard memorial, and the John Carroll marker (see Appendix C: Site Plan).

Lighting
There are currently four lamp standards in the Square. Due to the location of the Square in the downtown area and in an effort to reduce vandalism of significant historical monuments and stones, lighting within the Square should be upgraded. This will include the upgrading of lighting along the pathway, lighting on the cenotaph and a few other major monuments. In addition, pedestrian-scale lighting will be installed along the Rockland Avenue greenway. Any lighting installed in Pioneer Square will be dark sky compliant.

Park Regulations
Within the Parks Regulation Bylaw, a person must not enter or remain in Pioneer Square between the hours of one hour after sunset of one day and one hour before sunrise of the next day. No change to this current by-law is contemplated.

Furnishings
Existing furnishings will be updated in keeping with the context and use of the Square as required to meet current park standards.

Vegetation
Significant mature trees grace the site. As part of the management planning process, a tree management plan was developed. Findings from this report are described below and a copy is included as Appendix D.

The Square is home to 74 trees with 20% being native species and the remaining being ornamental or non-native plantings. An examination of the trees described 34% of the trees in good health, 65% in fair health and 1% in poor health.

The present canopy coverage and spacing of existing trees is suitable for the area of this Square. There are few available spaces where trees could be planted without conflicting with adjacent trees. Planting spaces are available for two large-growing trees along Rockland Avenue and two smaller trees along Quadra Street.

The report identifies the removal of two flowering cherry trees due to declining health and 11 other trees due to their invasive nature or high maintenance requirements. Thirteen trees were identified for additional testing. Any trees removed would be replanted to ensure a similar canopy cover.

There is currently one large shrub bed along the eastern perimeter of the Square. Trees and shrubs in this area were recently limbed up to improve sightlines. The majority of the trees located behind the eastern tombstone grouping is identified in the arborist report as species that should be removed due to their high maintenance and susceptibility to disease and insect infestation. These should be removed and replaced with a low, mixed evergreen hedge along the eastern property edge (see Appendix C: Site Plan). Other trees located in this area should be retained with the exception of the English Yew which forms a hiding place for less desirable park uses and should be considered for removal.
RECOMMENDATIONS:

6. Close Rockland Avenue from Quadra Street to the parking lot entrance to vehicle traffic and develop a 5 metre multi-use pathway.
7. Remove trees identified in tree management plan and replant.
8. Upgrade with site appropriate furnishings to meet current park standards.
9. Upgrade existing pathways to minimum 2 metre width.
10. Upgrade existing and install additional lighting along pathways and install decorative lighting on several key monuments.
11. Design and install a small plaza area and park identification sign.

Operations and Maintenance

Objectives:

- Develop a feasible operations plan for the management of the Square

The operations and maintenance is perhaps the most critical element in ensuring the future success of the Square. Improvements to the Square will be conducted in a manner that considers maintenance and operational needs. For instance, this includes ensuring that furnishings are installed by trails in a manner that allows for vehicle movement.

Turf

It is anticipated there will be minimal increase in the total amount of mowing required in the Square, however, there will be additional monuments to mow around including the new northwest grouping and within the existing eastern gravestone grouping, where the spacing between rows of gravestones will widen with turf installed between rows. Concrete mow strips will be installed as part of the monument preservation process. Any wrought iron fence panels will be installed at a sufficient height to allow mower movement.

Irrigation and Drainage

Irrigation in the flower bed and grass area within the cenotaph will be upgraded. No other irrigation is contemplated for the remainder of the Square due to the issue of water damage on stone monuments. Drainage improvements may be needed near the northeast corner of the Square and the area will be monitored. Possible solutions to explore further if needed include hooking up to the street or constructing a swale to a California Drain.

Horticulture

With the potential exception of the final design of the plaza area and the central area along the eastern perimeter of the park, no new horticultural areas are anticipated in the Square. Input from horticulture staff will be solicited in the preparation of the plaza design. A portion of the existing shrub bed on the east side of the property will be replanted as a low mixed hedge or shrub bed. The gravel surfacing in the existing east grouping will be removed and replaced with turf.

Arboriculture

It is anticipated that the existing canopy cover will be retained. In addition, trees identified as danger trees as well as those identified as high maintenance, disease prone trees, will be removed. Young trees will be planted in their place. This will help ensure tree succession within the Square. Consideration of coniferous versus deciduous tree re-planting will consider ease of leaf pick-up.

Garbage Collection and Other Operating Considerations

No new garbage cans are anticipated in the Square. One of the existing garbage cans may be relocated to service the proposed plaza area.
Operating Budget Considerations

Current practices are recommended to continue. Annual additional maintenance will be required for the additional horticultural bed at approximately 30 hours per year plus materials. The estimated additional operational budget is $1,500 per year.

RECOMMENDATIONS:

12. Upgrade surfacing within the existing eastern grouping.
13. Upgrade irrigation in flower bed and grass within cenotaph.
14. Invest additional staff and funding to address implementation items identified.

Oversight of Management Plan Implementation

An advisory group should be established to ensure the implementation of this plan in a manner fitting with the Square's heritage, commemorative and greenspace aspects.

This advisory group should consist of the following representation:

- City of Victoria – Parks Staff
- City of Victoria – Heritage Planning Staff
- Old Cemeteries Society
- Hallmark Society
- Canadian Scottish Regiment
- Christ Church Cathedral
- Fairfield Gonzales Neighbourhood Association
- Terra Rosa Strata

RECOMMENDATIONS:

15. Establish an implementation group that meets 2–3 times per year to oversee the implementation of this management plan.
**Implementation, Phasing and Budget**

The following table outlines the estimated budget needed to implement this plan as well as the priority for implementation.

<table>
<thead>
<tr>
<th>Heritage/Tombstone Improvements</th>
<th>Budget</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heritage Designation</strong></td>
<td>–</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Detailed tombstone repair phasing and layout plan</strong></td>
<td>–</td>
<td>Low</td>
</tr>
<tr>
<td><strong>In Square: Eastern Grouping: surfacing improvements; gravestone repairs</strong></td>
<td>$170,000</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>In Square: in-situ stones rated Good to Excellent</strong></td>
<td>$40,000</td>
<td>Low</td>
</tr>
<tr>
<td><strong>In Square: in-situ stones rated Fair to Very Poor</strong></td>
<td>$40,000</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Fencing around three monuments</strong></td>
<td>$15,000</td>
<td>Low</td>
</tr>
<tr>
<td><strong>In storage: Northwest Grouping: Gravestone repairs and installation</strong></td>
<td>$140,000</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>$405,000</strong></td>
<td>Medium</td>
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<tr>
<td><strong>Community Use Improvements</strong></td>
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<td></td>
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<tr>
<td><strong>Furnishing upgrade</strong></td>
<td>$50,000</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Irrigation in cenotaph area</strong></td>
<td>$10,000</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Pathway Upgrades</strong></td>
<td>$65,000</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Tree removals and shrub plantings</strong></td>
<td>$15,000</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Lighting Upgrades</strong></td>
<td>$65,000</td>
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<tr>
<td><strong>Closure of Rockland Avenue to vehicle traffic</strong></td>
<td>$20,000</td>
<td>Low</td>
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<td><strong>SUBTOTAL</strong></td>
<td><strong>$215,000</strong></td>
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<tr>
<td><strong>Interpretive Improvements</strong></td>
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<td></td>
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<tr>
<td><strong>Memorial Feature/Plaza/Park ID Design</strong></td>
<td>$15,000</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Interpretive Signage Design</strong></td>
<td>$10,000</td>
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<tr>
<td><strong>Memorial Feature/Plaza/Interpretive Signage Install</strong></td>
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<tr>
<td><strong>Park ID Sign Install</strong></td>
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<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>$70,000</strong></td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$700,000</strong></td>
<td>Medium</td>
</tr>
</tbody>
</table>

*Medium priority upgrades – temporary measures to convert Rockland Avenue to non-motorized use using bollards and other removal features. Low priority upgrades – full conversion to pathway and greenspace. This work could be timed to be undertaken when underground utility improvements or servicing is contemplated.*

The estimated budget for upgrades is $700,000. The majority of this cost will be fulfilled in capital budgets under park management plan implementation in 2013 – 2015, subject to Council approval.

Of the total implementation budget, approximately $405,000 is for gravestone related repairs. $210,000 of this will be fulfilled in capital budgets under park management plan implementation and will be used to preserve the stones currently found on site. This will include the intact headstones and bench tombs currently found in the Eastern Grouping and the remainder of in-situ stones rated good, very good and excellent in the *Stone Preservation Report*. The stones in good to excellent condition will be preserved first because there is a better chance at retaining their existing form and character the sooner they are treated. The remainder of the tombstones in-situ as well as those in storage will be preserved and returned to the site based on fundraising initiatives and matching dollars. A reasonable funding match would be approximately 25 cents to the dollar.
Heritage designation and the design of the memorial feature, plaza area and park identification signage should be undertaken as priority projects. It is proposed that all “Community Use Improvements” be undertaken as one phase in order to minimize disruption to park users. The timeline for construction is contingent on approved budgets but could commence in 2013 if funding were available.

Acknowledgements

The City of Victoria acknowledges the Pioneer Square Advisory Group for their valuable input:

- Councillor Pam Madoff
- Canadian Scottish Regiment – Mike Heppell
- Christ Church Cathedral – Janet Davies, Wendy Clay, Logan McMenamie
- City of Victoria Youth Council – Kelsey Singbeil
- Downtown Business Association – Rob Caunter
- Fairfield Gonzales Community Association – Jim Masterton, Mike Masson
- Hallmark Society – Glenn Parfitt
- Old Cemeteries Society – Don Reksten
- Terra Rosa Strata – Richard Marshall
- Victoria Police Department – Mike Russell, Nicky Schnare
- YMCA-YWCA of Greater Victoria – Mark Dodd
- City of Victoria – Steve Barber – Senior Heritage Planner

References


Green, Susan. Registrar, Province of BC Heritage Branch. Personal Interview. February 2012.


Old Cemeteries Society. Website. www.oldcem.bc.ca.
Appendices

Appendix A – Statement of Significance
Appendix B – Stone Conservation Report
Appendix C – Site Plan
Appendix D – Tree Management Plan
PIONEER SQUARE
STATEMENT OF SIGNIFICANCE

JUNE 2012

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1. STATEMENT OF SIGNIFICANCE

HISTORIC NAMES
- Victoria Cemetery
- Quadra Street Cemetery
- Quadra Street Burying Ground
- Old Burying Ground
- Old Cemetery
- Pioneer Square

Date of Establishment: 1855
Active as Cemetery: 1855-1873
City of Victoria Park: 1908-Present

DESCRIPTION OF HISTORIC PLACE
Pioneer Square occupies a rectangular site on the edge of downtown Victoria, situated to the north of Christ Church Cathedral, with frontages on Quadra Street, Rockland Avenue and Meares Street. The site contains at least 1,300 interments, marked by a number of surviving gravestones and bench tombs. Since 1908, Pioneer Square has been a City of Victoria park, and retains its formal Edwardian-era layout with diagonal paths and a central circular focus, grassed flat terrain and mature trees and plantings. There are also a number of other, later memorials located within the park setting.
HERITAGE VALUE OF HISTORIC PLACE

Pioneer Square is valued as the most significant colonial-era cemetery in the Province of British Columbia, and is inextricably linked with the pioneer community of Victoria. It was established as a burying ground in 1855 following the closure of the Fort Victoria Graveyard. Between 1855 and 1873, Pioneer Square was Victoria’s primary cemetery. It contains some of the province’s oldest carved headstones, and embodies a collective memory of British Columbia’s colonial era. Many of the province’s earliest and most prominent settlers are interred here, including: James Murray Yale (1796-1871), Hudson’s Bay Company Chief Trader; David Cameron (1804-1872), first Chief Justice of the Colony of Vancouver Island and his wife Cecilia, sister of Governor James Douglas; John Work (1792-1861), Hudson’s Bay Company chief factor; and Dr. John Sebastian Helmcken (1824-1920), the remains of his wife Cecilia and their three infant children.

This burying ground is a direct link to the formative years of the City, at the time of its evolution from a Hudson’s Bay Company outpost to the second incorporated city in western Canada, and illustrates the importance of the Wakefield System at the time of colonial settlement. The townsite that the Hudson’s Bay Company laid out around the Fort starting in 1852 was based on the philosophical and social precepts of Edward Gibbon Wakefield’s theory of colonization. This provided a controlled system of land development, by providing reserves of land for public use including schools, churches, hospitals and parks that was the template for the ultimate development of Victoria’s urban structure. Pioneer Square is located within the original Church Reserve, an integral component of the city’s infrastructure and a reflection of Wakefield’s ideals of an ordered, properly-organized society.

Pioneer Square is additionally significant as a symbol of Victoria’s multicultural origins and as a physical testament to the pioneering spirit of the early community of Victoria. A wide variety of people were interred at the cemetery including different ethnic, secular and religious groups, and many community members who reflect the history, development, heroics and tragedies of Victoria, with local, provincial and national associations. The cemetery initially had designated sections for Anglicans, Catholics and Royal Navy personnel, but as the city’s population diversified so did the cemetery. The influx of settlers from the 1858 Fraser River Gold Rush resulted in the allocation of space to the Chinese community in the northeast section of the cemetery. Situated adjacent to the Chinese section was a designated area for Kanakas (Hawaiians). Presbyterians, Methodists, Baptists and Congregationalists were also accommodated. The cemetery also had direct ties to local military history, and the southwest corner was the location of naval interments and memorials. Since its closure as a cemetery, Pioneer Square continues to be used as an active place of commemoration.

Pioneer Square is also significant for its continuity as a designed landscape, first as a Victorian-era burying ground and for over a century as a City park. Its original rambling, picturesque character reflected the 19th century aesthetics of death and memorialization. With the opening of Ross Bay Cemetery in 1873, the Quadra Street Burying Ground was officially closed, and ultimately neglected. In 1908, the provincial government issued a Crown Grant for the cemetery to the City of Victoria. The undergrowth was cleared and most of the monuments were removed. Typical of park design of the Edwardian era, meandering diagonal paths and a central circle originally intended for a fountain were installed. Tombstones, curbing and grave fences were removed, with some installed in a new grouping to the east side. Today, historic Pioneer Square continues to function as one of the only urban green spaces near downtown Victoria.

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CHARACTER-DEFINING ELEMENTS

Key elements that define the heritage character of Pioneer Square include its:

- location on the edge of downtown Victoria adjacent to Christ Church Cathedral, with frontages on Quadra Street, Rockland Avenue and Meares Street;
- continuous use as a designed landscape since 1855, first as a Victorian-era cemetery then as an Edwardian-era park, with open spatial qualities and diagonal paths with a central circular focus;
- associated use of the space as a park for reflection and relaxation for over a century;
- earliest areas in the cemetery including the Anglican section, the Catholic section, the Chinese section and the Naval Corner;
- existing monuments including the Carroll and Pritchard monuments and the Sutlej Memorial, which represent outstanding examples of Late Victoria funerary and commemorative architecture;
- unique memorial elements such as burial vaults and bench tombs, which are the only remaining examples on the West Coast of Canada;
- variety of headstone styles such as shouldered and screen headstones, and flat plaque markers;
- variety of headstone materials such as carved granite, cement and sandstone;
- variety of gravestone symbols such as epitaphs, religious or animal symbolism, body symbolism, and connections to fraternal and social organizations;
- military memorials and later historical commemoration, including Naval Corner and the Canadian Scottish Regimental Cenotaph; and
- associated landscape features such as grassed terrain and many mature trees and plantings.
POINEER SQUARE STATEMENT OF SIGNIFICANCE

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- military memorials and later historical commemoration, including Naval Corner and the Canadian Scottish Regimental Cenotaph; and
- associated landscape features such as grassed terrain and many mature trees and plantings.
2. ARCHIVAL IMAGES

“A Plan of the Town of Victoria Shewing Proposed Improvements,” [ca. 1852]. Cartographer: Joseph Despard Pemberton. The Fort Victoria Graveyard is visible, upper left, at the edge of the Johnson Street Ravine. [Hudson’s Bay Company Archives, Archives of Manitoba HBCA G.2/38]
PIONEER SQUARE STATEMENT OF SIGNIFICANCE

Church Reserve, from Town of Victoria Map, J. Despard Pemberton, Surveyor General, 1861 [ViHistory website]

Victoria District Church, later Christ Church Cathedral. This was the first Anglican church in BC, and the first church built in BC. It was opened in 1856 after several years of construction. It stood where the Law Courts are today, burned in 1869 and was replaced on the same site by another wooden structure with a square tower. [United States Library of Congress LC-DIG-ppmsca-08566]

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First Christ Church Cathedral; Naval Corner in the foreground, circa 1865
[British Columbia Archives A-02556]

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Quadra Street Cemetery: Dedicated to the Men of the HMS Sutlej; Naval Corner at the left; First Christ Church Cathedral at right, circa 1866-69 [British Columbia Archives E-09945]
PIONEER SQUARE STATEMENT OF SIGNIFICANCE

Map of the City of Victoria, Published by T.N. Hibben & Co., 1872 [VIHistory website]

Second Christ Church Cathedral, opened 1872, circa 1880
[British Columbia Archives G-04844]

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PIONEER SQUARE STATEMENT OF SIGNIFICANCE

View northeast from Christ Church Cathedral, Pioneer Square at far left, circa 1871-75
[British Columbia Archives A-03423]

View northeast from Church Hill: Pioneer Square and Quadra Street at centre, circa 1875
[British Columbia Archives I-81267]

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PIONEER SQUARE STATEMENT OF SIGNIFICANCE

Birds’ Eye View of Victoria: 1878 above; 1889 below [VIHistory website]

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PIONEER SQUARE STATEMENT OF SIGNIFICANCE

Pioneer Square Cemetery seen from Meares Street, 1902 [British Columbia Archives B-09523]
PIONEER SQUARE STATEMENT OF SIGNIFICANCE

From Quadra Street and Rockland Avenue, 1908 [City of Victoria Archives]

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Bench Tombs of Charles Dodd and John Work, circa 1930 [British Columbia Archives A-01041]

Meares Street east of Quadra Street, 1947 [British Columbia Archives I-02111]
3. HISTORY

Condensed from the Old Cemeteries Society of Victoria Website

3.1 QUADRA STREET CEMETERY
In August 1856, construction of the Victoria District Church was completed on its site atop Church Hill, where the British Columbia Law Courts are situated today. While the church was still under construction the first known burial took place in a small parcel of land adjacent to the Church Reserve. This followed exactly the vision, which Governor James Douglas had enunciated as early as 1853, that when churches were built in the colony, burying grounds would be laid out around them. The first documented burial in the new site was on February 20, 1855 when Father Lootens interred the remains of "Adélaïde femme Stékine, épouse de Léon Morel" and noted in his register: "Nouveau Cimetière". However, the new burying ground was not formally staked out until May 1855 by Acting Colonial Surveyor B.W. Pearse, who allocated half to the Catholic Church and the other half presumably to the Anglican Church. A year later the Catholic section was fenced and gated by George Deans and the Bishop informed his congregation that "we now had a burying ground." The entire cemetery was a small one by modern standards, barely a half city block. Nevertheless, in 1855 it probably seemed more than adequate for the small population of Fort Victoria.

Prior to 1855 the residents of the fort and surrounding farms had used the Fort Victoria Graveyard for burying their dead. This was a small site on the banks of the Johnson Street Ravine, where the corner of Douglas and Johnson Streets is today. Brothers Island, which lies off the entrance to Esquimalt Harbour, was also being used for burials of some Royal Navy personnel at this time. According to the first written references, for some time the new cemetery on Church Hill seems to have had no formal name. For example, an entry in the diary of Martha Cheney Ella describes the funeral of her uncle, Thomas Blinkhorn: "Poor Uncle was Buried in Victoria churchyard, by the Revd Edward Cridge Vancouver’s Island, Oct. 16th, 1856." Several other names in both English and French were informally bestowed on the burying ground, but eventually the name Quadra Street Cemetery was adopted for it.

For the first few years the cemetery may have appeared to many people such as Martha Cheney Ella to be an Anglican churchyard, considered part of the Church Reserve for what some presumed was the Established Church in the Colony of Vancouver Island. The Anglican Victoria District Church (later Christ Church Cathedral) sat across Quadra Street half a block away, so the burying ground gave every appearance of belonging to that church. When the first Anglican Bishop, George Hills, arrived in the colony in 1860, he attempted to exert his ecclesiastical authority over the entire cemetery by the simple act of placing Bishop’s Close, his own home and garden, on Church Reserve property adjacent to the south side of the burying ground, and in 1860 having a fence with a narrow gate erected around them. By doing so he effectively obstructed the access of hearse to the gate, which George Deans had put in for the Catholic Church four years previously. Although Hills had a new gate for the Catholics installed off Meares Street on the north side of the grounds, he did so without notifying Bishop Demers. Unfortunately, however, in wet weather the road to the new gate was very bad, so in order to gain easy access to their portion of the cemetery, the Catholics "had to take the coffin out and carry it a distance of about an acre“ through Bishop Hills’ yard in order to take it through the old gate.

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In May 1861, Demers won a lawsuit in the Supreme Court of Vancouver Island over Hills with regard to gaining unobstructed access to the burying ground. This landmark case refuted the notion that the Anglican Church was the Established Church on Vancouver Island and proved that, in spite of its appearance, the cemetery was not the churchyard for Christ Church Cathedral, but was, in fact, Victoria’s public cemetery. Each church kept its own burial registers, but sometimes included the burials of those who were not members of their respective churches. However, after the Gold Rush of 1858 clergy and missionaries of many other denominations arrived in Victoria and took over the task of conducting funerals for their own congregations. In the records that have been located for the period 1855-1872 there are about 630 entries in the Anglican register, which account for the majority of interments in the burying ground, there are about 225 in the Roman Catholic register; and St. Andrew’s Presbyterian records include eighty-eight entries.

Apart from the arbitrary division of the cemetery into two halves in 1855, distinct areas for Royal Navy personnel (in reality a corner of the Anglican portion) and for Chinese (after 1858) also existed. In a series of articles about Victoria’s old cemeteries in Island Events in 1948, Cecil French also claimed that an area for Kanakas (Hawaiians) was allocated adjacent to the Chinese section. Edgar Fawcett maintained that individuals held outright ownership to specific plots, and there is evidence from at least one person that the cemetery was laid out in consecutively numbered plots, but no key to this plan has yet been located. In 1859, the removal of corpses and headstones from the abandoned Fort Victoria Graveyard was started in response to a petition by two hundred people who complained about the condition of the old ground. The work was done by the chain gang, but still was not complete two years later. At least two stones that made the move have survived and are the oldest known headstones now in British Columbia. One is for Eliza Kennedy who died in 1850 and the other is for Sarah Jane Finlayson who died in 1853.

With the influx of newcomers to Victoria came critics of some of the established institutions and ways of doing things. The cemetery did not escape their criticism. The Victoria Gazette of January 8, 1859 contained a letter entitled "City of the Dead" which severely criticized the location and appearance of the old burying ground:

> The grave yard of Victoria, on Church Hill, is to me one of dreariness, desolation and gloom; my very blood chills as I pass by, to look at it; nothing of nature is left to beautify or adorn it; but, barren and desolate, it seems like a place where the dead are deposited only to be forgotten. From its location, it will soon be surrounded with the homes of the living, and the time is not remote when it must be closed, and the remains now resting there be removed to other places.

The writer went on to wax eloquent about the type of "Rural Cemetery" which he envisioned taking the place of the cemetery. He suggested that the civic cemetery should be moved to a more appropriate place before bodies were moved into it from the former Fort Victoria Graveyard. The new cemetery would be a place:

> where our children and our children’s children, as they wander through the winding avenues of that "City of the Dead", or sit within the shade of some secluded dell . . . [may] look upon the mossy locks hanging from the ancient and venerable trees . . . [and] call to remembrance the early dead, and contemplate upon the mighty past.
He concluded with a sentiment that might summarize the feelings of many even today. Cemeteries, he wrote, "... are like an open book, and the curious can there read upon each monument a page in the history of the town."

In keeping with the opinions expressed in the Gazette, In 1861 Robert Burnaby introduced a motion in the Colonial Legislature "to close cemeteries existing within the limits of Victoria Town and to provide for and regulate an Extra-Mural Cemetery in their stead." From both the letter in the Gazette and from Burnaby’s motion, it is clear that the cemetery did not meet the criteria for what some thought a cemetery should be like. It was an anachronism in a city bent on progress. In its place they wanted a cemetery that fitted into the model then popular in Britain, France and the United States where cemetery reform had been in practice for several decades.

One of the best contemporary descriptions of how the old burying ground functioned came from the pen of Edgar Fawcett whose excerpted account here was published in 1912 in his Reminiscences of Old Victoria:

As a boy, I had a great weakness for funerals, and living only a block from Quadra Street, I attended scores in my day. I naturally liked the naval funerals best, for there were soldiers and sailors, and bands of music, with three volleys over the grave, so I missed few. The funerals came from Esquimalt, generally by water, in large boats propelled by oars, and landed at the Hudson’s Bay Company’s wharf. By the inscriptions, a large majority were young men and sailors, and many were the result of accidents in Esquimalt harbor by drowning. I well remember the funeral of Captain Bull, of H.M. surveying ship Plumper, who died at the age of twenty-seven years, the coffin being fastened to a gun carriage and pulled by bluejackets. The state of Victoria’s streets at that time was such that it required a great deal of power to propel any vehicle, and especially was this the case with Quadra Street. I have often seen a funeral come to a dead standstill and the hearse dug out of the mud, as also teams loaded with stones for the monuments in the cemetery. We will suppose the hearse has been dug out, and in the cemetery near the grave, in many cases men might be seen bailing out the grave, one below and one on top; especially was this the case with the Roman Catholic ground. And I have known when it was necessary to hold the coffin down in the water with shovels or have a man get down and stand on the coffin until enough soil was thrown on it to keep it down. What must the friends have thought at this time, as the dirty water was forcing its way into the coffin?

Throughout the 1860s, the cemetery continued to be used, but with the growth in the size of Victoria’s population it was inevitable that the place would soon be full. Its appearance was similar to that of older style cemeteries elsewhere: a forest of upright monuments of sandstone, white marble or wood, most surrounded by grave fences. Among the grandest monuments erected were several of special note. The Sutlej Obelisk was erected to men of HMS Sutlej who had died while serving on the Pacific Station; the broken mast honoured Lieutenant Charles Rufus Robson who survived a heroic ordeal at sea while rescuing a foundering ship, only to die a few weeks later when thrown from his horse; the Pritchard Tomb, likely the finest nineteenth century tomb in British Columbia, commemorates that wealthy family and was designed by Thomas Trounce and John Teague, two of Victoria’s most prominent architect builders at the time; the Carroll Monument was designed by Edward Richardson, son of a famous London sculptor, and it featured a tall cross flanked by two winged angels on top of a sandstone and marble pillar adorned with Classical columns, Gothic tracery and winged cherubs’ heads.
In spite of the elegant monuments, however, the cemetery became a mess. A public meeting was convened in 1868 to improve the condition of the cemetery, which was then in a state of great neglect. It seems wandering cattle, swine and vandals had taken their toll on numerous monuments that lay toppled and smashed, while unchecked vegetation threatened to engulf the grounds. A subscription list was opened under the trusteeship of three prominent citizens, and by January 1870 $438 had been collected and spent to grade and gravel paths, renew the gate, and plant shrubs and trees. They concluded by requesting the colonial government to appoint cemetery trustees to ensure that their work would be kept in order in the future. In 1868, another serious problem concerning the cemetery had come before Victoria City Council. It was the recurring problem of drainage, partly "on general sanitary grounds" as well as "the inconvenience arising from the Graves becoming filled with water." A committee of three appointed by Mayor and Council recommended that the situation could best be rectified by building a network of costly box drains around and through the burying ground. Instead, however, it conceded that a cheaper single drain could be constructed, but as part of the solution suggested "the desirability of discontinuing interments in the present Cemetery as soon as a suitable burying ground can be obtained at a greater distance from the centre of population." In 1870 Governor Musgrave appointed three men to serve as the first Cemetery Trustees for Victoria. They began a search for a new cemetery site, which culminated in the selection of Ross Bay Cemetery in 1872. When it opened in March 1873 the Quadra Street Cemetery was officially closed.

While attention was focussed on the new cemetery, which was laid out according to many of the accepted principles of the day, the old burying ground fell into greater disrepair. Over the next several decades newspaper editors and leading citizens frequently returned to the topic of the deteriorating cemetery right in the middle of town. When the City of Victoria asked the provincial government to help remedy this situation, it agreed, provided that the Corporation in the future would be responsible for all upkeep in the old burying ground. In spite of the Provincial Secretary's dictum that the City of Victoria assume responsibility, however, a decade later the situation was as bad as ever because the local government had not kept up its part of the agreement. From 1899 to 1907, a barrage of newspaper articles and letters to City Council were critical of the continuing "neglect and decay" at the cemetery. Edgar Fawcett was one of the most vocal and in 1907 he and his colleagues succeeded in convincing the City to develop a plan to improve the situation. The work of reviewing the options was assigned to the Cemetery Committee whose recommendations were accepted by Council in November 1907.

The plans in their day must have seemed quite drastic. They called for the burying ground to be transferred from provincial to civic ownership, for photographs, an inventory and plan of the existing graves to be made, for unsightly growth and rubbish to be removed, for all monuments and stones to be relocated to the eastern edge of the grounds, and for a memorial fountain to be erected in the middle. In spite of such unprecedented intervention, however, in 1908 the plan was carried out almost to completion, but never was entirely finished.

The work that was actually done totally transformed the cemetery into a grassy lawn, devoid of all but a few of the larger monuments. About half of the estimated more than two hundred grave markers and fragments were taken away or buried and all but about twenty-five (which found their way eventually to the patio of a private home) have never since been seen. All grave fences were removed except that around the Pritchard Tomb, but it, too, was taken away later. Eight of the tallest monuments were left standing, along with six box tombs, but about nineteen other box tombs were dismantled and the tops only were placed flat in the ground to form the outer semi-circle of a new grouping on the eastern edge.

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of the cemetery-cum-park. Behind them were arranged six other semi-circular rows of monuments containing about one hundred in total. No recorded rationale for the selection or new placement of monuments has been found recorded and none is apparent. Likely, however, preference was given to the monuments that were grand in scale or design, commemorated a famous person, and were least damaged, although some stones in almost perfect condition were among those discarded.

One contemporary reaction to the cleanup was written by Rev. A. E. Alston, an Anglican clergyman from England who visited Victoria in June of 1909 after an absence of over thirty years. He was born in the city in 1862 and moved away when still a boy. His observations were published in the Colonist on November 28, 1909 and are quoted here in part:

Looking up a street to the right I caught sight of an obelisk in the distance. "There is the Old Cemetery," thought I, "and I will go and visit my Mother's grave." On getting nearer I fairly gasped with dismay! Here was no cemetery, but a sort of "People's Park: Keep Off the Grass!" A few monuments in bad repair were standing here and there, but the grave that had been one of the chief objects of my pilgrimage was nowhere to be seen. Noticing what seemed to be a stonemason's yard on the far side of the ground, I went over to investigate, and there discovered a collection of woebegone monuments, symmetrically arranged like the books on the round table of a lodging house parlor, and among these was the large flat stone recording the burial of Elizabeth Caroline Alston in 1865. I was assured afterwards by those in authority that the best had been made of a bad job, but the reader will perhaps sympathize with the resentment that I felt at what seemed, and still seems, to be the unnecessary removal of a monument of considerable size and solidity, though others had been left untouched, and the banishment of the inscribed stone to the melancholy collection aforesaid. . . . I marvel that the place where the bodies of so many Victorian pioneers had been laid to rest should have been allowed by the present generation to fall into such a state as to warrant the drastic action of the city fathers.

Rev. Alston was not alone in his negative opinions about the cleanup. In fact, the project proved to be so controversial it led directly to the resignation of D.D. England, Superintendent of Parks under whose direction the work had been done. The original plan for Pioneer Square, as the cemetery began to be called during the 1930s, included a fountain in the centre, but this was never constructed. Therefore, in 1938 when the 16th Canadian Scottish Regiment was searching for a location for a memorial cross to honour its members who had died in France during World War I, the vacant space was available. City Council endorsed their application and the Parks Committee subsequently approved the installation of a wooden cross that had once stood at Vimy Ridge. In 1951, it was replaced by a tall gray granite stylized Celtic cross surrounded by granite pillars and a chain. By its size, color and position, this monument became the dominant feature in the park and overshadowed the few crumbling sandstone tombs that still lay nearby. The old wooden cross now is proudly displayed at the Canadian Scottish Regimental Museum in Victoria.

At almost the same time that the war memorial was put into place, the British Columbia Historical Association received permission from the City to install six cement markers beside the monuments of prominent pioneers: Dr. J.S. Helmcken, Hon. David Cameron, Hon. John Work, Capt. Charles Dodd, James Murray Yale, and the Cridge family.

Clearly, the work in the 1930s did not address the main complaint, namely that the original monuments were relegated to a back corner and placed in such a way as to increase their deterioration. To make matters worse, the vandalism and natural decay of the stones was allowed to continue unchecked and,
until well into the 1980s, monuments that crumbled or were toppled over in most instances were taken away and dumped. Fortunately by the mid-1980s the Parks and Recreation Department began to recognize the importance of keeping the grave markers and began to store them instead of discarding them. In the early 1990s the Old Cemeteries Society was given permission by City Council to remove most of the remaining monuments and put them into storage with the others. Lack of space prevented all of the monuments being removed in this way. Removal was considered a temporary means of saving the stones that were being vandalized or otherwise destroyed at a rate of at least three per year in the 1980s.

3.2 NAVAL CORNER

The sailors of Her Majesty's Ships on the Pacific Station evidently felt very strongly that their shipmates left behind should receive a decent burial and be properly remembered. Through the efforts and largesse of the various ships' companies a number of fine monuments were commissioned and erected in the Quadra Street Cemetery. The southwest corner (corner of Quadra St. and Rockland Ave.) became known as the 'Naval Corner' and it was there, for the most part, that the remains of the deceased sailors were interred and/or memorialized. To understand how the Old Burying Ground came to be the final resting place for over fifty British sailors and marines one needs to know a bit about the operations of the Royal Navy on the Pacific Station in general, and in the waters of southern Vancouver Island, in particular. As early as the 1820s, the Royal Navy had ships operating on the west coast of South America – usually headquartered at Valparaiso, Chile – protecting the interests of British trade and shipping. When the Hudson's Bay Company established trading posts in the Pacific Northwest, navy ships were sent north to show the flag in those areas. HMS Modeste entered the Straits of Juan de Fuca in August of 1844 and made contact with HBC officers at the newly-established Fort Victoria. Annual visits were then begun and the charting of Victoria and Esquimalt harbours commenced in 1846. By 1848, naval ships were able to enter both harbours, although Esquimalt remained the preferred anchorage. At first the ships only visited during the summer and wintered in the Sandwich Islands or Valparaiso, but the Crimean War with Russia (1854-56) persuaded naval authorities to establish a more permanent shore base at Esquimalt. Over the ensuing years it was not uncommon to have a squadron stationed at Esquimalt.

The earliest recorded naval burial was that of Benjamin Topp of HMS Cormorant, a corporal with the Royal Marines. He was interred in the Fort Victoria Graveyard (corner of Johnson and Douglas Streets) on October 22, 1846. This site saw four more naval burials before the Quadra Street Cemetery opened in 1855. Eventually, it was decided to move the remains of all those interred in the Fort Victoria Graveyard to the new cemetery. In the mid-1850s the Royal Navy commenced burying some of its dead on Deadman's Island (Brothers Island) near the entrance to Esquimalt Harbour. According to the commemorative plaques in the chapel at Veterans Cemetery, some eighteen officers and men were interred there between 1855 and 1863. Some accounts say that only lower-deck ratings were buried there and the officers were interred at the Quadra Street Cemetery but that practice was not consistent.

The naval burials at the cemetery were attended by officers and men from the ships in Esquimalt who marched or rowed to town. The funerals were conducted with pomp and ceremony even for non-commissioned personnel. Quite often, one of the ships had a band that accompanied the cortege to the cemetery. Most deaths were accidental, but a few were caused by diseases contracted in foreign ports. Drownings were frequent and often the bodies were not found until days or weeks later, or not at all. At least one individual was murdered and two committed suicide.
Naval burials continued at the cemetery and Deadman’s Island until 1868 when the Royal Navy authorities instructed the Admiral to purchase a plot of ground near Esquimalt for the purposes of a cemetery for deceased officers and seamen belonging to the Fleet. This plot, consecrated on July 14 1868, was situated on the old road to Skinner’s Farm (Puget’s Sound Agricultural Company’s farm). When the threat of another war with Russia arose in the late 1870s, the remains of those interred on Deadman’s Island were removed to the new cemetery to make room for a gun emplacement. Veterans Cemetery is now a beautifully maintained sanctuary, complete with an historic chapel, totally surrounded by the Gorge Vale Golf Course.

From available records and newspaper accounts it seems that there were at least five substantial memorial monuments erected in the Naval Corner by various ship’s companies, plus a number of smaller ones. These men then sailed away secure in the knowledge that they had left behind lasting memorials to their deceased shipmates. Unfortunately, as was the case with the rest of the cemetery, the Naval Corner was allowed to deteriorate rapidly, especially after 1873. Every few years, outraged citizens wrote to the newspapers decrying the abysmal state of the cemetery and the monuments. A Colonist article dated June 23 1899 clearly states the condition of the Naval Corner: “The Esquimalt correspondent of the Naval and Military Record says: ‘Naval men are, as a rule, somewhat sensitive with regard to the respect paid to their dead, and many will regret to learn that in a prominent position in Victoria there is an old cemetery, now disused, which shows every sign of neglect. The wooden railings around it are guiltless of paint and tumbling down, while inside the place is so overgrown with broom (which some enthusiastic person introduced into the island as a remembrance of home, but which has now become a nuisance), that only the tops of gravestones, or the highest monuments can be seen above it. Eventually, only the Sutlej monument and the base of the Charles Rufus Robson monument remained standing in the Naval Corner.

In 1993, the Victoria Branch of the Royal Canadian Naval Association commissioned a large granite marker to be erected in the Naval Corner. On both faces are listed the names of many of the Royal Navy and Royal Marine men who died here while their ships were on station. The attached bronze plaque reads: “This monument is dedicated to the memory of 55 men of the Royal Navy and one City of Victoria Police Constable who died while serving the Crown during the years 1846-1868 - WE SHALL REMEMBER - Commissioned, erected and dedicated by the Royal Canadian Naval Association; Victoria Branch - 12 Sept. 1993”

It is gratifying to see that navy men still look after their own. Even though every one of these British sailors has been dead for more than 140 years, each Remembrance Day a wreath in their memory is placed around the anchor atop the monument.

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4. CHRONOLOGY

1844
Fort Victoria Graveyard was established – adjacent to the Johnson Street Ravine, at what is now the southwest corner of Johnson and Douglas Streets. Charles Ross was buried here; his remains and tombstone were later moved to the Quadra Street Cemetery.

1853
Governor Douglas indicated that new burying grounds would be laid out around churches when they were built in the Colony.

1855
The Quadra Street Burying Ground was established, and served as Victoria’s civic cemetery until 1873. The first burial in the “Nouveau Cimetière” was of a Catholic, on February 20, with the service conducted by Father Lootens. In May, Acting Colonial Surveyor B.W. Pearse staked out the burying ground, with one-half for Anglicans and one-half for Catholics.

1856
The first Christ Church Cathedral, which was started in 1853, was consecrated. It was located on Church Reserve, at the site that is now occupied by the Law Courts. First known Anglican burial was held at the Quadra Street Cemetery.

1857
Ironwork churchyard gates were installed.

1859
A petition signed by 200 people for the removal of the bodies from the Fort Victoria Graveyard to the QSBG was presented to the Colonial Legislature of Vancouver Island. The work commenced by the end of 1859 but was not completed until the summer of 1861.

1860
The Jewish cemetery, on Fern Hill Road at Cedar Hill Road, was consecrated. The first burial occurred in 1861.

1862
The Carroll family monument was erected at a cost of $3,000.

1866
The contract was let for the Sutlej memorial.

1868
There are public complaints about the condition of the Quadra Street Cemetery. A public subscription raised enough money to grade and gravel the paths, renew fences and gates, and plant ornamental trees and shrubs the following year.
PIONEER SQUARE STATEMENT OF SIGNIFICANCE

1869
The First Christ Church Cathedral burned down.

1870
Cemetery Trustees were appointed.

1872
The Second Christ Church Cathedral, designed by H.O. Tiedemann, was consecrated. The Pritchard family monument was erected.

1873
The burial of Sosthenese Driard, the last known to have taken place while Quadra Street Cemetery was still in official use. The Quadra Street Cemetery was officially closed when Ross Bay Cemetery was opened (March 3).

1874
The Quadra Street Cemetery was already falling into disrepair. Many of the trees were dying, cattle and swine were ravaging exposed graves, and fences and headstones were falling down.

1884
There was a continuing public outcry about the condition of the Quadra Street Cemetery. The provincial government paid to have the Quadra Street Cemetery placed in a “reasonable state of repair” including a substantial new perimeter fence. The province’s agreement was that the City would take care of it in the future.

1892
The competition for the third Christ Church Cathedral was won by architects Evers & Keith.

1894
“The work of cleaning up and beautifying the Quadra street burying ground has been energetically initiated.” Victoria Daily Colonist, May 1, 1894, page 5.

1903
The Chinese Consolidated Benevolent Society bought land at Harling Point for a Chinese cemetery; over the next five years many of the Chinese remains at Ross Bay Cemetery were exhumed and re-interred at this location.

1908
The provincial government passed an Act to issue a Crown Grant to Victoria for the Quadra Street Cemetery. Undergrowth was removed, most of the monuments were removed and the lawns were graded and seeded. A simple pathway system was installed, with meandering diagonal paths and a central circle originally intended for a fountain. Tombstones, curbing and grave fences were removed, with some installed in a new fan-shaped grouping to the east side. The work was undertaken under the direction of Parks Superintendent D.D. England, who was criticized and forced to resign in 1909.

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PIONEER SQUARE STATEMENT OF SIGNIFICANCE

Third Christ Church Cathedral, J.C.M. Keith, Architect, 1920s [British Columbia Archives B-03600]

1920
The last interment in the Quadra Street Cemetery occurred when the ashes of J.S. Helmcken were buried at his wife’s grave.

1926
The cornerstone was finally laid for the third Christ Church Cathedral, at its current location; the plans had been revised by architect J.C.M. Keith from the original design.

1929
Third Christ Church Cathedral was consecrated; the second Christ Church Cathedral was demolished.

1938
City Council granted permission to the 16th Canadian Scottish Regiment to erect a memorial to its members who died in France. It was placed in the central circle where a fountain was originally planned.

1939
The name “Pioneer Square” began to be commonly used for the Quadra Street Cemetery.

1951
The new 16th Canadian Scottish Regiment memorial was erected, with a tall granite stylized Celtic cross surrounded by granite pillars and a chain.
PIONEER SQUARE STATEMENT OF SIGNIFICANCE

5. RESEARCH SOURCES

ARCHIVAL SOURCES

• British Columbia Archives: Maps, Archival Photographs, Vital Events and Colonial Correspondence.

• City of Victoria Archives: Maps, Archival Photographs and Parks Department Records

PUBLISHED SOURCES


• Old Cemeteries Society Website

• VI History Website

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The Pioneer Square Statement of Significance was undertaken for the City of Victoria in 2010-12. The project team consisted of:

- Donald Luxton, Principal, Donald Luxton & Associates
- Penny Robertson, Heritage Consultant, Donald Luxton & Associates
- Dorothy N. Mindenhall, Senior Historian
- John Adams, Principal, Discover the Past

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We also acknowledge the extensive and invaluable background work undertaken by the Old Cemeteries Society of Victoria, which has been involved for many years in researching and understanding the significance of Pioneer Square / the Old Quadra Street Burying Ground.
PIONEER SQUARE STONE CONSERVATION REPORT  
JUNE, 2011  

PREPARED FOR THE CITY OF VICTORIA BY:  
KEN JOHNSON HERITAGE CONSERVATION  

SUMMARY:  

The historic stone grave markers in Pioneer Square have experienced damage due to natural weathering and vandalism. Recommendations as the methods of conservation include cleaning and the application of a water repellent material to selected stones as well as measures to re-set and/or re-slope bases to reduce the risks associated with ground-source salts and vandalism.  

Further recommendations are made as to budgetary elements and products of restoration.  

PIONEER SQUARE  

This report is the third in a series of similar reports which have been prepared and presented regarding the gravestones and monuments in Pioneer Square, also known as the Old Quadra Street Burying Ground.  

The purpose of this document is to make specific recommendations as to the future conservation of the gravestones and monuments currently in place in Pioneer Square and in storage at the City of Victoria Parks Department Works Yard.  

In preparing this report we reviewed the available published materials to determine if previous investigations could provide indications as to what would be the best course of action.  

A 1991 report, prepared on behalf of the Victoria Civic Heritage Trust by the Old Cemeteries Society of Victoria, been included in the materials given to the 2011 Pioneer Square Committee to develop a fuller understanding as to the historical and cultural significance of the site. While this report ventures into some specific conservation issues, it is mainly concerned with recommendations regarding the use and appearance of the site.  

In 1993, the Old Cemeteries Society (OCS) engaged Andrew Todd, a professional B.C. conservator, to prepare a conservation report on the gravestones which were, at that time, in storage at the City of Victoria Parks Department Works Yard.
Pioneer Square. This report, which can be viewed at the OCS website, 
http://www.oldcem.bc.ca/psp/html/reports/todd/index.htm, describes, in a general manner, the 
types of stone which could be used for gravestones and memorial markers, the problems 
associated with each type of stone and some indications as to the steps which could be taken to 
effect conservation of these materials. The report also makes specific recommendations as to the 
cleaning of stone in an outdoor environment.

The intent of this report is not to duplicate the previous works. The previous reports, 
especially the report of 1991, are very well done and clearly make recommendations which are 
applicable to this date. Some of these recommendations concerning the conservation of the 
historic monuments have been carried out during the ensuing 20 years, others recommendations 
have yet to be implemented and may be reiterated in this report. In the final analysis, the 
conservation of the monuments in Pioneer Square will be dependent upon the action taken 
following the tabling of the reports.

Materials

The monuments within Pioneer Park are made from of various types of stone; sandstones, 
granites and marble. These stones are set in and on various materials; concrete, granites, and 
simply upon the native soils. The soils around the Eastern Grouping consist of a reasonably well 
draining organic soil mixed with a fine gravel. The organic materials would appear to have 
accumulated over an extended period.

The sandstones and granites are of local origin while the marble headstones and inserts 
would be imported. Local sandstones used in the period from the 1850s through to the 1880s 
would have been from the Cowichan deposits, which consist of unmetamorphosed sediments of 
the Cretaceous and possibly Lower Tertiary periods (approximately 65 million years ago). These 
sandstones vary in hardness and durability dependent upon the age of the deposit and the amount 
and type of cementing or binding agent. Cementing agents are ferrous and ferric oxides with 
isignificant amounts of carbonates. When the stone is first exposed, it will exhibit a blue grey to 
greenish grey colour which slowly changes to a buff upon oxidation of the cementing compounds.

Early stone would have been quarried from easily available sources, accessible by water to 
facilitate transportation and capable of being worked with the tools available at the time.

The earliest stone which was quarried for use as a ‘worked’ product (as opposed to blasted 
rubble stone) would have been sandstones from the Booth Bay area of Salt Spring Island or from 
the Nanaimo area of Newcastle Island -- Jack Point. These locations were close to the small 
centers of population and the stone could be quarried from the beach. Later, stone was quarried 
from Denman Island, Hornby Island, Saturn Island, Gabriola Island and Pender Island – in all 
cases the operation of individual quarries was dependent upon the ability of the quarriers to 
easily extract the stone close to water access and to work the product into a finished state.
**GENERAL CONSERVATION ACTIONS**

As a general statement, the conservation of the gravestones and memorials in Pioneer Square can be reduced to one of protection from the elements and vandalism. As each type of stone responds differently to each of the hazards present, with higher strength, lower absorption, and physical properties being the significant elements, it is difficult to create a prescriptive basis for conservation. A careful conservation plan can, at best, recommend that each piece of historic fabric be treated with the care and respect it deserves. This will mean individual testing of the recommended treatments on each monument, regardless of the level of intervention. For the gravestones and monuments at Pioneer Square the level of intervention as defined by the *Standards and Guidelines for the Conservation of Historic Places in Canada* is that of “Preservation”.

Under the rubric of “Guidelines for Landscapes”, the *Standards and Guidelines for the Conservation of Historic Places in Canada* recommend that for “Built Features: within that landscape:

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Not Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protecting and maintaining built features by using non-destructive methods and daily, cyclical and seasonal tasks. ..... repointing masonry to match existing mortar material, colour and profile.</td>
<td>Failing to undertake preventative maintenance for built features, resulting in their damage or loss. Utilizing maintenance practices and materials that are harsh, abrasive or unproven, for example using aggressive and potentially damaging cleaning methods such as grit blasting on wood, brick or soft stone, or using harsh chemicals on masonry or metals.</td>
</tr>
<tr>
<td>Retaining sound built features or deteriorated built features that can be repaired. Retaining the relationships between the landscape and its built features.</td>
<td>Replacing or rebuilding built features that can be repaired. Removing or relocating built features or objects, such as removing stones that are integral to an Aboriginal sacred site, thus diminishing or destroying the relationship between the landscape and these features.</td>
</tr>
<tr>
<td>Repairing and stabilizing deteriorated built feature elements by structural reinforcement or weather protection, or correcting unsafe conditions, as required, until any additional work is undertaken. Repairs should be physically and visually compatible.</td>
<td>Removing deteriorated built features that could be stabilized, repaired or conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile elements.</td>
</tr>
<tr>
<td>Evaluating the overall condition of built features to determine whether more than protection, maintenance and limited repair or replacement in kind are required; i.e., if more extensive repairs to structures, furnishings or objects will be necessary.</td>
<td>Failing to undertake adequate measures to protect the landscape’s built features.</td>
</tr>
</tbody>
</table>
Routine maintenance is an often-underappreciated aspect of preventive conservation. There is an increasing emphasis on doing something not only to the stone itself but also to the environment in which the stone is found. This reflects a growing awareness of the importance of preventive conservation, of the principle of minimum intervention, and of the need to limit the use of materials that might prove harmful to either the stone or to the environment. Also, now that there is a better understanding of decay mechanisms, a conservation strategy can be designed to reduce the rate of damage by focusing on points of leverage that can mitigate some decay processes.

The use of stone as grave and memorial markers is ancient as the process of burial itself. The stone presents some sense of eternity; that the memory of the departed will last as long as the stone itself, but, in the early years of Victoria, the type of stone used was often determined by availability and cost. Markers placed within a short period after the time of death would have been fabricated from readily available and worked local materials: those placed at some later date may have included the more costly marbles, which would have been imported, and granites, which may be local or imported. The date of death may or may not coincide with the date the marker was manufactured and installed.

Of the types of stone present in the Park, the sandstone is most vulnerable and, even within this general grouping, the physical properties of the stone can vary widely. As is evident with the passage of time, some stones should not have been used under any circumstances. The physical properties of the stone are such that, although they can be easily extracted and worked, they exhibit no properties of durability and fail rapidly and continually even under reasonable weathering conditions.

Local sandstones, which would have been used at the time the cemetery was in operation, have compressive strengths ranging from 8,000 psi to 27,000 psi. These strengths would be reduced by 1/3 when the stone was wet. The absorptions range from 2% to 5%. In comparison, the compressive strength of local granites is 35,000 psi and the absorption is 0.2%. Marble, used for exterior ornamental purposes, can have compressive strengths as high as 27,000 psi and absorption as low as 0.2%.

These physical factors, when taken to include the propensity of sandstones to have weak, clayey layers which deteriorate and swell when wet, help to explain why the sandstone monuments have sustained the greatest damage in Pioneer Park. The weaker sandstones have deteriorated rapidly while those sandstones with higher compressive strengths, lower absorptions, and fewer clayey layers have survived relatively well.

The best solution to the problems with sandstone deterioration is to ensure that the stone stays as dry as possible and that, where strength is the problem, notably on the tablet styled stones, that measures are taken to reinforce the stone.

Other than removing the sandstones to a completely dry environment, the best way to extend their life to is apply a water repellent that has been tested and shown to reduce the absorption while allowing any water which has been trapped within the stone to evaporate. The
water repellents which provide the best levels of protection have been found to be based on small molecular materials which do not simply lie upon the surface of the stone but which will penetrate into the pores. Two of the best available are manufactured by firms specializing in masonry conservation materials; Cathedral Stone Ltd and ProSoCo.

We recommend that all sandstone monuments within the Park be treated with either R97 by Cathedral Stone or Siloxane WB Concentrate by ProSoCo as recommended in Appendix B. Such work is best carried out after the cleaning of each individual stone in accordance with the recommendations of Appendix A with a suitable period of drying to ensure good penetration of the water repellent.

Gravestones and memorial markers fabricated of marbles and granites are not as vulnerable to environmental deterioration and should be appropriately cleaned. The marbles would benefit from the application of an appropriate water repellent but the granites would not.

The best way to strengthen the tablets which are so vulnerable to vandalism is to provide a vertical restraint, fabricated of unreinforced concrete or stainless steel and attached to the back of each individual tablet. Most tablets are inscribed only on one face and a reinforcing element, while an intrusion on the historical fabric, can be reversed at a later date should this be necessary. As well, any tablets to be restored to the Eastern Grouping, should have a buried concrete base of a greater mass to reduce the possibility of overturning.

Many sandstone markers within Pioneer Square are subject to the absorption of water from below. This drawing up of moisture from the ground is frequently accompanied by the movement of deleterious salts which, when left in the stone, cause rapid loss of surface materials due to delamination. Markers which are not currently situated on a concrete base should be deconstructed, lifted, a new, larger, concrete base placed below them and then the marker would be reset. This can be a laborious and costly endeavour but is the best way to ensure the markers are not destroyed from below. The marker should not be set directly into the concrete but should be placed into a slot cast into the concrete and then affixed with a bed of mortar as can be seen in Figure 1. The mortar should be Type N and sloped to facilitate water drainage away from the stone. The use of the mortar will allow the later removal of the stone should this prove necessary.

**THE EASTERN GROUPING**

The eastern grouping consists of 78 to 80 monuments or fragments of monuments which were placed in or near their current positions in 1908. In
the early 1990s, many monuments had been damaged due to vandalism.

There are four basic types of monument in the eastern grouping: the embedded tops of old bench tombs, tablets, obelisks and a ledger.

**Bench Tomb Tops**

The tops of the bench tombs are simply embedded into four to six inches of the soils earlier described. It would appear that they had been placed in the soils in a fairly level configuration but minor settlement has occurred and, as a result, some have a slight tilt. Most of the bench tombs were fabricated out of local sandstones or sandstone in combination with marble and their current condition is highly dependent upon the ability of the particular stone to resist deterioration.

The tomb tops, which are approximately six inches in thickness, are simply placed upon the base materials and are dependent upon that material for drainage. The rate of deterioration of individual tomb tops varies with the type of stone used and the original and current potential for the accumulation of water and freeze/thaw damage. None of the tomb tops were placed in a manner to promote the drainage of water off of the top surfaces.

**Recommendation for Conservation of Bench Tomb Tops in Eastern Grouping**

As a general action, these should be raised up and supported by a sloped unreinforced concrete base (Figure 2). An angle of ten degrees would be sufficient to promote the flow of water
and would facilitate the drying of the stone. The concrete base should be constructed of a low sulphate cement with a high proportion of an admixture designed to reduce possible transfer of sulphates and other salts into the overlying bench tomb top and should be designed and constructed to allow water drainage away from the sides and bottom surfaces of the stone. Such an action would cost $5500 to $6000 per bench tomb top but would alleviate the continuing deterioration of these elements. We also recommend the application of a suitable proprietary water-repellent in accordance with the manufacture’s recommendations. Recommended products would be R97 by Cathedral Stone or Siloxane WB Concentrate By ProSoCo. Either of the products imparts water repellence without affecting colour and with little effect on the ability of the stone to transmit vapour.

Headstones/Tablets

Due to the very nature of their construction, tablets are extremely vulnerable to the damage suffered as a result of vandalism. The tablets within the Eastern Grouping are set into a small concrete base which, while providing some support, was of insufficient mass to prevent the stone from being overturned and, in some cases, the stone and the base, as an assembly, were overturned and removed to the Parks Department storage facility. Even with a larger concrete base, this type of marker would be easily damaged as a result of the leverage provided by their vertical alignment and thin shape.

Recommendation for Conservation of Tablets in Eastern Grouping.

Most of the tablets in the Eastern Grouping have been removed to the Parks Department storage facility as a result of vandalism. The remaining ones are of a lower profile, are thicker or were manufactured of the stronger granites. The units that are currently in storage should be returned to Pioneer Park and restored public view. Long term storage at the Parks Department, while providing a safe environment, does little to enhance the interpretation of the park as a cemetery and the broken lower sections remaining in the ground are indications of a lack of care.

The best solution for the return of these elements is to repair and strengthen individual tablets. The repair procedures would entail the
insertion of stainless steel pins and the fastening together of the fragments with suitable epoxy or methyl methacrylate resins and the provision of larger mass of concrete as a base material. In order to overcome the effects vandalism, the backs of the stones should be reinforced with a fiber-reinforced column of concrete or with a stainless steel bracket consisting of angle or channel sections fastened to the tablet with stainless steel pins and the appropriate resins (Figure 6). Again, the subsequent application of a suitable water repellent would lengthen the life of the stone and reduce the effects of the growth of lichens. A reasonable budget for this would be in the order of $2500 - $3000 per stone.

**Obelisks in the Eastern Grouping.**

There are a number of obelisks within the Eastern Grouping that, due to their size, mass, and material, have experienced few problems. The one unit which has been overturned had no pins to fasten the base to the shaft and, from the indications on site, the base had settled allowing the shaft to be overturned.

**Recommendation for Conservation of Obelisks in the Eastern Grouping**

The overturned stone should be righted after the base is lifted and re-set in a concrete footing. The shaft of the obelisk should be fastened to the base with stainless steel pins and the joint pointed. The application of a suitable water repellent would lengthen the life of the stone and reduce the effects of the growth of lichens. Budget amount: $2000.

**Stones in Storage from the Eastern Grouping**

The stones in storage from the Eastern grouping have sustained some level of damage, ranging from natural deterioration through to vandalism, consist of monuments or fragments of monuments, and were removed to storage at the City of Victoria Parks Department Works Yard in the early 1990s. The storage conditions are suitable in that the stones are protected from the elements and are within a secure area. The condition of these stones varies widely, some are only fragments, unidentifiable and beyond repair or basic conservation. These stones have been inventoried by the OCS and, from that inventory, an Excel spreadsheet, attached with this report, has been prepared allowing a quick comparison of types of stone and date of manufacture.

From the attached spreadsheet we can readily see that the monuments that had to be removed were of the “tablet” type and that they were manufactured of sandstone of marble, both stones having a relatively low strength. This type of monument is particularly vulnerable to damage through overturning of fracture from malicious blows and that this type of damage was a factor in the removal of the monuments is evidenced by the breaking away of the stones at or near the base. The recommendations for the restoration of these stones to the Eastern Grouping is detailed.
A number of the stones in storage are in very poor condition as a result of vandalism, loss of fragments or as a result of the deterioration of the sandstone. To return these stones (the ones in poor condition) or their fragments to the Eastern Grouping will neither enhance the experience nor the interpretation of the cemetery. We suggest the Parks Department explore the possibility of placing these into the low retaining walls framing the north east entrance to Pioneer Square. The existing stone walls would have to be removed and replaced with a concrete structure incorporating special drainage conditions behind the wall to prevent water from permeating through the wall and into the exterior stone. As well, a wall cap would have to be constructed incorporating a water proof barrier to prevent water from dripping downwards. A small interpretive plaque describing what and why they stones are in their present location would be appropriate.

**GRAVESTONES AND MONUMENTS WITHIN THE REMAINDER OF THE PARK**

Within the remainder of Pioneer Park there are twenty gravestones signifying actual burial locations or memorial monuments to individuals or organizations of military or historical significance to Victoria and British Columbia.

The condition of these markers varies greatly with age and the materials used. We have created the following table to facilitate the conservation efforts of the stakeholders.

<table>
<thead>
<tr>
<th>Marker Name: Cameron, David</th>
<th>Marker Type: Bench Tomb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Date: 1872</td>
<td>Marker Material(s): Marble and brick</td>
</tr>
<tr>
<td>Marker Condition: Fair</td>
<td>Recommendations:</td>
</tr>
</tbody>
</table>

A bench tomb with a brick masonry base and a marble top. Marble seems OK but does need some cleaning. Brick base is suffering from efflorescence and brick deterioration with some small brick loss. Was probably parged originally but parging would have failed due to moisture being caught in the bricks. Bricks need some work to remove salts. Drainage needs correcting.

<table>
<thead>
<tr>
<th>Marker Name: Canadian Scottish</th>
<th>Marker Type: Military Memorial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Date:</td>
<td>Marker Material(s): Granite</td>
</tr>
<tr>
<td></td>
<td>Marker Condition: Excellent</td>
</tr>
</tbody>
</table>

**Recommendations:**
Condition is very good. Granite is clean. Mortar joints need repointing.

**Action:** Repoint the mortar joints around the base of the monument. Budget: $1200

<table>
<thead>
<tr>
<th>Marker Name: Carroll, John D.</th>
<th>Marker Type: Monument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Date: 1862</td>
<td>Marker Material(s): Sandstone</td>
</tr>
<tr>
<td></td>
<td>Marker Condition: Poor</td>
</tr>
</tbody>
</table>

**Recommendations:**
Large monumental assembly of stone is badly deteriorated. Very little original details are left. Once had a marble insert on all four sides but these are now missing. Size - sits on a 6' x 6' base and is currently about 10 feet high. May be best left to deteriorate completely or to be removed and replaced with a monument in better condition from storage.

**Action:** While still large enough to present an impressive appearance, this monument would be difficult to restore. Filling in some voids that gather water and the application of a sealer could extend its life but it will continue to slowly crumble away. Budget: Indeterminate.
<table>
<thead>
<tr>
<th>Marker Name: Carter, John Thomas</th>
<th>Marker Type: Bench Tomb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark Date: 1869</td>
<td>Marker Material(s): Sandstone</td>
</tr>
<tr>
<td>Marker Condition: Good</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations:**

A sandstone bench tomb. Top is properly laid and is in fairly good condition. Ends are starting to deteriorate due to delamination. Needs cleaning and sealing. May be best to lift and place new base below.

**Action:** Record and measure. Determine how top is fastened. Lift off top. Disassemble base. Construct new concrete footing. Reassemble base and place top. Clean and seal. Budget $8200

<table>
<thead>
<tr>
<th>Marker Name: Cridge, Children</th>
<th>Marker Type: Headstone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark Date: 1865</td>
<td>Marker Material(s): Sandstone/Marble</td>
</tr>
<tr>
<td>Marker Condition: Fair</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations:**

A re-assembled marker consisting of a sandstone base with a marble tablet. All are set on a concrete base. Tablet may be a later addition. Needs cleaning and the application of a siloxane sealer.

**Action:** Clean and seal. Budget: $1200
Marker Name: Dodd, Charles  
Marker Date: 1860

Marker Type: Bench Tomb  
Marker Material(s): Sandstone  
Marker Condition: Poor

Recommendations:
A bench tomb consisting of a sandstone top and sides. Bench is placed on a slight rise and drainage is good. The top is placed with the bedding planes in a horizontal position and is wearing well although the bottom is failing as water permeates through and causes delamination. The ends have ornately carved dolphins. The ends are starting to delaminate and need some work. Suggest raising up slightly onto a concrete base and treating with a consolidant and/or a siloxane sealer.

Marker Name: Helmcken, John  
Marker Date: 1865

Marker Type: Bench Tomb  
Marker Material(s): Sandstone  
Marker Condition: Fair

Recommendations:
This is a sandstone bench tomb on a concrete base which was probably installed in the 1920 interment of JSH's ashes. The bench ends are deteriorating with areas of delamination.

The assembly would be best conserved through the application of consolidants or repair procedures. The application of a sealer would also be warranted.

Action: The assembly would be best conserved through the application of consolidants or repair procedures. Cleaning followed by the application of a sealer would also be warranted. Budget: $3700
### Marker Name: Interpretive Stone
**Marker Date:**

**Marker Type:** Monument  
**Marker Material(s):** Granite  
**Marker Condition:** Very Good

**Photo:**

**Recommendations:**
- **Action:** Needs cleaning and restoration of the message.
- **Budget:** $1500

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### Marker Name: Medana, Paul
**Marker Date:** 1868

**Marker Type:** Obelisk  
**Marker Material(s):** Sandstone  
**Marker Condition:** Good

**Photo:**

**Recommendations:**
- This is a fine-grained sandstone obelisk, consisting of five pieces. Currently tilted 5 - 10 degrees to the North. The marker is in generally good condition with some deterioration of the sandstone around the base. The base is 30" x 30" and the total height is approximately 7’. The top exhibits some vertical cracking of the sandstone. Suggest pinning and a cap. The soils around the base are depressed & drain water towards and below the monument. Lift and reset on a concrete pad raised up 1"

- **Action:** Lift and reset on a concrete pad raised 1" above restored soil levels. Pin obelisk with stainless pins and epoxy. Fabricate and place a plastic cap to reduce water entering from top. Clean and apply a water repellent. **Budget:** $7700
<table>
<thead>
<tr>
<th>Marker Name: Phillips, Andrew</th>
<th>Marker Type: Obelisk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Date: 1870</td>
<td>Marker Material(s): Sandstone</td>
</tr>
<tr>
<td>Marker Condition: Good</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations:**
This monument consists of a sandstone base and an obelisk. The assembly is tilted about 15 degrees W. The obelisk is cracking vertically and should be pinned and capped. Straighten and reset on a substantial concrete base.

Action: Disassemble and place a new concrete base. Pin obelisk and fabricate a cap. Clean and seal.
Budget: $8300

<table>
<thead>
<tr>
<th>Marker Name: Pritchard, Thomas</th>
<th>Marker Type: Monument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Date: 1871</td>
<td>Marker Material(s): Sandstone &amp; marble</td>
</tr>
<tr>
<td>Marker Condition: Fair/Good</td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations:**
This is a large sandstone monument with marble inserts. It sits on a sandstone base with a perimeter border. Curbs formerly had railings set in lead. Sandstone was previously consolidated and some repairs were made in 2000. Some signs of flaking - possibly where sandstone had de-bonded prior to the time of consolidation. Old graffiti on marble needs removal - it is currently just painted over. The iron cramps which were used to attach the marble are corroding and causing the marble to fail. These should be cored out and replaced with stainless and epoxy. A siloxane sealer should be applied.

Action: Remove graffiti and the paint that was used to cover it. Remove iron cramps attaching marble - replace with stainless steel. Apply water repellent
Budget: $6800.
<table>
<thead>
<tr>
<th>Marker Name: RCAF</th>
<th>Marker Type: Military Memorial</th>
<th>Marker Material(s): Granite</th>
<th>Marker Condition: Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Date:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photo:</td>
<td>Recommendations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This monument is in good condition. No remedial work required.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marker Name: Robson, Charles Rufus, Cdr.</th>
<th>Marker Type: Monument</th>
<th>Marker Material(s): Sandstone</th>
<th>Marker Condition: Very Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Date: 1861</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photo:</td>
<td>Recommendations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This sandstone monument sits on a sandstone base that is nearly buried. There was formerly a circular obelisk on top but this is now missing. Any carvings or inserts are also missing. The sandstone is badly deteriorated. Mortar joints are open and allowing water to enter into and below the monument.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Action: Little can be done with this marker as it is badly deteriorated. It is best dealt with as the Carroll monument with the addition of repointing some of the lower joints.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Budget: Indeterminate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Marker Name: Ross, Charles  
Marker Date: 1943  

Marker Type: Memorial  
Marker Material(s): Granite  
Marker Condition: Excellent  

Photo:

Recommendations:
Monument is in good condition. No remedial work required.

Marker Name: Royal Navy Memorial  
Marker Date: 

Marker Type: Military Memorial  
Marker Material(s): Granite  
Marker Condition: Excellent  

Photo:

Recommendations:
Monument is in excellent condition. No remedial work required. Suggest further investigation regarding iron stains at bottom joint.

Budget: $300
<table>
<thead>
<tr>
<th>Marker Name: Sanders, Lucy</th>
<th>Marker Type: Memorial Bench</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Date: Later than 1947</td>
<td>Marker Material(s): Granite</td>
</tr>
<tr>
<td></td>
<td>Marker Condition: Very Good</td>
</tr>
</tbody>
</table>

**Recommendations:**

Bench was manufactured of granite and needs cleaning only.

Budget $550

---

<table>
<thead>
<tr>
<th>Marker Name: Sutlej</th>
<th>Marker Type: Military Memorial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Date: 1867</td>
<td>Marker Material(s): Sandstone</td>
</tr>
<tr>
<td></td>
<td>Marker Condition: Poor</td>
</tr>
</tbody>
</table>

**Recommendations:**

This is large sandstone monument on a sandstone base. Base is about 5 feet square and is topped with an obelisk about 16 feet high. Sandstone is deteriorating. There have been past repairs and these have failed as well. All names and ornamentation has disappeared with the exception of the crest "RN" in a wreath on the obelisk shaft. Obelisk has vertical cracking and need pinning and a cap. Open joints on lower areas. Marble tablet installed on 1962.

Action: Pin vertical cracks on top with stainless steel. Fabricate a plastic cap. Repoint lower joints. Clean and seal

Budget: $5400
Marker Name: Wallace, Catherine  
Marker Date: 1869

Marker Type: Obelisk  
Marker Material(s): Sandstone/Granite  
Marker Condition: Good

Recommendations:
This is a sandstone obelisk on a granite base. Base is 36" x 36"; top consists of a 20" x20" x 20" shaft topped by a 14"square x 48" high obelisk. There is vertical cracking in obelisk. The base is in excellent condition. Soils are depressed around perimeter. Clean all, pin obelisk, place a cap on, remedy depressed soils. Apply a sealer.

Action: Clean all, pin obelisk, place a cap on, remedy depressed soils. Apply a sealer. Budget: $5200

Marker Name: Work, John  
Marker Date: 1861

Marker Type: Bench Tomb  
Marker Material(s): Sandstone  
Marker Condition: Poor

Recommendations:
Bench tomb - ends have a temple motif with nice cresting. Top has no slope and is delaminating. Lower area has sides which have accumulated rubble. Ends are delaminating. Clean, and consolidate or seal. Should be lifted and re-set atop a concrete base.

Marker Name: Yale, James Murray  
Marker Date: 1871  
Marker Type: Unknown  
Marker Material(s): Sandstone  
Marker Condition: Poor

Recommendations:

This grave is marked by a portion of a sandstone block essentially buried in the soils. The stone may have been lifted up by the large oak immediately adjacent. Should be excavated and, if in suitable condition, re-set.

Action: Excavate and expose the remnants of the marker. Make a conservation plan based upon the condition of the marker. Budget: Indeterminate
APPENDIX A

RECOMMENDED PRODUCTS

The list below represents recommended products only. The list is not intended to be complete and, in all cases, products must be carefully tested before use on historic fabric.

ProSoCo Company
EK Restoration Cleaner
Cathedral Stone Company
D2 Biological Solution

CLEANING OF HISTORIC STONE

To begin with, it is imperative that, in the process of cleaning ornamental stone, we must recognize that attempts to restore the stone’s appearance to “new” can only result in surface damage to the historic fabric. The purpose of stone cleaning is generally one of improving the aesthetic appearance of the stone although such cleaning can often significantly increase the life of the material by the removal of deleterious surface deposits.

The removal of years of accumulated dirt and debris often reveals a wealth of ornamental detailing, colour and texture that had been concealed from view for generations. Arguments are made that the dirt “patina” represents a natural process of weathering which is itself of important historical significance and in character with aged stone when viewed in a contemporary setting.

What must be recognized is that the damage rendered to the stone by the accumulation of surface staining goes far beyond aesthetic deformation – heavy surface deposits contribute to the progressive decay of stone substrates.

The primary cause of stone decay is moisture -either reacting with the stone’s natural components or trapped within the stone’s pores. Heavy accumulations of surface "dirt" slow or stop the evaporation of moisture contained within the substrate. Moisture, when allowed prolonged access to the masonry pores, can migrate deep into the substrate and carry with it the threat of a multitude of moisture related decay processes (cyclical wetting/drying, freeze/thaw, and so on).

Dirty, wet surfaces react with atmospheric gases (carbon dioxide, sulphur dioxide, and nitrogen) and form corrosive liquids (carbonic acid, sulphuric acid, and nitric acid). Reaction of such liquids with various elements in the stone may result in both the formation of hardened surface crusts and dissolution of acid-soluble cementing binders that hold the stone together. The formation of dense surface crusts and the washing away of acid-soluble binders, if allowed to go unchecked, are progressive deterioration processes.

Moist, dirty services provide the necessary life-support systems for the growth of micro-vegetation. Such organic growth further enhances the stone's ability to retain moisture, is itself aesthetically undesirable, and feeds upon the calcareous components of the stone or mortar, creating corrosive secretions.

For our purposes, there are only two cleaning processes acceptable: water cleaning and chemical cleaning. However, no matter what the type of stone or the cleaning process suggested,
testing of the stone and cleaning materials must be carried out prior to the work being carried out.

**SANDSTONE**

When cleaning sandstone, the gentlest means possible, with very low water pressures, non-ionic detergents, and soft plastic bristle brushes is the only process acceptable. Because of the variability between sandstones from different sources and, in many cases, even between sandstone from within a given quarry, great care must be taken to ensure that the cleaning process does not cause the stone to deteriorate more rapidly. One must always keep in mind that sandstones can be affected by large quantities of water – always keep water to a minimum just wetting the surface of the stone and ensuring the full rinsing away of the detergents. This may require that the cleaning process take place over an extended period of time.

Under no circumstances should a power washer or a blasting process be used to clean sandstones. Abrasive cleaning can cause unacceptable damage to the stone surface and is likely to accelerate subsequent deterioration.

Water cleaning of sandstones should be undertaken only after the removal of heavy deposits of lichens and mosses. These are best removed through gentle brushing so as not to damage the underlying stone. In most cases, the lichens and algae have damaged the underlying sandstone and loose sandy particles must be gently brushed away. The stone should be then wetted but care should be taken not to saturate the stone as this can only lead to future damage. The stone or by can then be cleaned with water and a mild, non-ionic detergent (common veterinary soaps and some dish detergents meet this requirement. Avoid soaps containing chlorine, ammonia or phosphates).

During the cleaning process, the water and detergent may be worked into the surface of the stone using plastic, non-staining brushes in a circular action, care being taken not to mark the stone with the brush. A short period, called the dwell time, during which the water and detergent mixture is allowed to sit on the surface of the stone may enhance the cleaning process and effectiveness. Following the working of the water and detergent into the stone, the surface must be rinsed to remove all traces of detergent and allowed to dry. Upon drying, the surface may have spots which do not appear as clean as others and there will be a temptation to clean the stone again. Resist the temptation. Excessive and repeated cleaning action can be as damaging to the stone as was the original dirt and moss. We must remember we are not attempting to restore the appearance of the stone to when it was new: just to make it more pleasing and readable and to remove the elements that were damaging the stone.

When large quantities of lichens and their associated algae exist, we recommend the use of a proprietary biocide, Cathedral Stone’s D2 Biological Solution. While costly, this material is most effective and contains no damaging salts. When applied with reasonable care, many stones can have the biological growths removed at a relatively low cost and risk.

Chemical cleaning of sandstones should only be undertaken by personnel trained in the use of such materials. For the sandstones quarried in British Columbia, chemical cleaners based upon hydrofluoric acids have been found to be the most effective. The hydrofluoric acids will lightly “etch” the silica that forms the basis for the stone and cause a thin surface layer to dissolve, removing any soiling. In order to reduce any possible damage to the stone the surface must be thoroughly pre-wetted and carefully rinsed following the application. As the amount of acid in the cleaning solution and the length of time the solution is in contact with the surface can
drastically affect the results and the stone surface, these chemical should only be applied after
testing and should only be of a proprietary nature. For example, EK Restoration Cleaner, as
manufactured by the ProSoCo Company of Lawrence, Kansas, has been successfully used to
clean local sandstones. Prolonged contact or high concentrations of hydrofluoric acids can caused
local sandstones to appear “bleached: after cleaning.

**MARBLE**

In the local climate, marble has weathered rather well, with little acidic rain to damage it.
Marble is a calcareous metamorphic stone composed of fine carbonate crystals and, like all
naturally formed products, it’s properties can vary widely and are dependent upon source and
degree of metamorphism. It is best not to assume that a cleaning process that has worked on one
marble monument will automatically work on another, Careful discrete testing must take place
before the cleaning process is to begin.

Unlike sandstones, marbles do not readily absorb large quantities of water and can be
thoroughly pre-wetted to assist in the removal of soiling. This pre-wetting will help in the
softening and loosening of dirt. Do not use any proprietary cleaners which contain bleach,
chlorides, hydrochloric or muriatic acids. These can severely damage the surface of the marble. It
is best to use non-ionic soaps as was recommended in the cleaning of sandstones.

Where lichens have disfigured the surface of the marble, apply Cathedral Stone’s D2
Biological Solution in accordance with the manufacturer’s recommendations but only after testing
in a small area to ensure that no possible damage will occur.

**GRANITES**

Granites are the most durable of materials used for gravestones. They have low absorption
and most dirt simply rinses away after the application of soap and water. Should the surface be
discoloured by lichens, etc., the application of the Cathedral Stone D2 Biological Solution should
resolve the problem. Under no circumstances should an acidic cleaner be applied to a polished
granite surface as the acid may damage the polished effect.

**CONCRETE**

Within Pioneer Square a number of concrete monuments have been erected. These can be
cleaned using the processes and materials as recommended for marbles.
APPENDIX B
WATER REPELLENTS AND STONE CONSOLIDANTS

The use of water repellents and stone consolidants is a subject which can evoke heated discussion among conservationists interested in the preservation of stone. Many types of stone can realize little or no benefit from the use of these materials while, with others, such as the weaker and more friable sandstones, the question of use is often balanced by the risk of doing nothing.

Stone Consolidants
Alkoxy silanes are the most commonly used materials and, when carefully pretested and applied under restricted and controlled conditions, have provided somewhat limited success in reducing the amount of stone loss when applied to sandstones. These materials are not a panacea for all types of stone and their related problems but, when no other options can be considered and the stone is at great risk to loss due to deterioration, they can be applied and some beneficial results achieved. The question of reversibility is not open; once applied these materials cannot be removed. The application cannot be reversed and little long-term field information exists to support repeated applications.

They should only be applied when no other reasonable course of action exists any only by trained conservators and applicators.

The best stone consolidant currently (2011) available is Conservare OH100 from the
ProSoCo company of Lawrence, Kansas. This material was previously used on the Pritchard Monument in 1996 and has performed reasonably well.

**Water Repellents**

The use of water repellents on masonry has a questionable history due to the unadvisable application of silicone-based materials in the 1960s and 1970s. These materials left a vapour impermeable film and frequently discolored the masonry below. As they deteriorated under the effects of ultra violet, they experienced surface peeling and a stained and blotchy appearance. The development and improvement of siloxane-based water-repellents in the 1980s and beyond has given the conservator a valuable tool to keep water out of historic masonry but this tool must still be used with care and caution.

Siloxanes are an extremely small molecule based on silica which can penetrate deeply into the pores of the stone and coat the inner lining of microscopic pores with a hydrophobic film. As they do not block the pores of the masonry, the material can still “breath”. As the material is deposited below the surface of the masonry, the effects of ultra violet are decreased. The initial application of a siloxane water repellent to a stone or brick masonry should result in water repellency for a period of seven to ten years; a second application at the end of that time should result in an increase in water repellency for an additional period of up to fifteen years. Loss of effectiveness is linear – water repellency declines steadily over time.

An excellent water repellent siloxane that has been used locally is Siloxane WB Concentrate as manufactured by the ProSoCo Company of Lawrence, Kansas.

Another, more recent development is a water repellent material based upon fluorines. These materials are siloxanes modified with fluorine to provide a smaller sized molecular size and increased penetration into the stone. Again, they are highly breathable and can be re-applied at later dates if required.

Product is R-97 Water Repellent from the Cathedral Stone Company.

Either of these products can be used on sandstones, limestones and marbles. Their use should not be required on granites.
Tree Management Plan

Pioneer Square Park
City of Victoria

Talbot Mackenzie & Associates
Consulting Arborists
May 02, 2011

Parks Division
City of Victoria
1 Centennial Square
Victoria, BC V8W 1P6

Attention: Doug Demarzo

Introduction: Pioneer Square Park is a historic burial area located in the downtown core of the City of Victoria where approximately 1300 people were interred from 1855 to 1873. More recently the park has been used as one of the downtown’s green spaces where the area functions as a place for people to take a break from the surrounding concrete and asphalt, while still serving as a memorial site and a place for tourists to learn of some of the early settlers that are important to Victoria’s history. The park has been planted with a variety of tree species over the years and these trees have become an important part of the park’s character; as well as providing shade, they help clean the air of pollutants by producing oxygen and absorbing carbon dioxide. The trees are an important asset to the Pioneer Park and the City of Victoria, and in order to ensure that they continue to provide the many benefits they offer, we have been asked to develop a management plan for their care.

Goals of the management plan:

- Inventory the existing tree population and document their size, species, health and structure.
- Identify any immediate risks the trees pose to people using the park, based on a visual examination.
- Using the information gathered in the visual examination, identify any trees that may require a more thorough examination, or further testing.
- Evaluate the species composition in the park, along with their condition and any maintenance requirements that may be associated with individual species.
- Develop a strategy for removing any immediate risks, as well as high maintenance or undesirable species.
- Develop a plan for maintaining the health and structure of the suitable existing trees, and a plan for additional ongoing planting to ensure the park will be well treed for future generations while it continues to fulfill its other functions as a public park, memorial site, and historic site for tourists to visit.

…/2
Overview of existing tree resource:
The tree resource within the park is composed of a mixture of native and exotic tree species. Most of the native species appear to be relatively mature and may have been established or young trees at the time the cemetery was established. The exotic tree species are not of a consistent age and appear to have been planted intermittently from the time the cemetery was established until the present. The species composition is also not consistent, and the particular species selected for planting may have been popular at the time it was planted. Some of the trees that were selected will have characteristics related to their growth rate, susceptibility to insect and disease, invasive potential or maintenance requirements that make them less suitable for retention within a long range management strategy.

- The existing tree resource consists of 74 trees and two stumps, with 20% being native species and the remaining being ornamental or non-native plantings.

**Species Distribution**

- Based on a visual examination: 34% of the trees are in good health, 65% are in fair health, and 1% in poor health (see attached key for definition of terms).
Based on a visual examination: 11% of the trees have good structure, 86% have fair structure and 3% have poor structure (see attached key for definition of terms).

From measuring the diameter at breast height: 38% of the trees are considered to have a large trunk diameter (greater than 61 cm D.B.H.), 61% are considered to have a medium trunk diameter (between 16 and 60 cm D.B.H.), and 1% are considered to have a small trunk diameter (less than 15 cm D.B.H.)
- 23% of the trees within the park are evergreen and 77% are deciduous.

![Bar chart showing tree percentages]
Summary of findings:

During a site visit on April 12 2011, we visually examined the health and structural characteristics of all of the trees that are located within the boundaries of the Pioneer Square properties. The mature trees within this square were last examined by us on September 20, 2002 (on behalf of Mt. View Tree Service Ltd.), and we are not aware of the trees having been examined since that date. The following information was compiled during our most recent examination.

The tree resource consists of 74 trees and is a mixture of native and non-native species including the following:

Native: Big Leaf maple, Douglas-fir, Garry oak, and dogwood
Non-native: London plane, elm, maple, oak, linden, beech, Scots and other exotic pine species, Flowering cherry and other ornamental cherry trees, holly, English yew, Flowering plum, Deodar cedar, chaemacyparis, laburnum, Blue spruce, and juniper.

We identified thirteen (13) trees that we recommend receive further testing. The trees are numbered as follows and referenced in our Tree Resource Spreadsheet: 0659, 0661, 0666, 0669, 0671, 0672, 0673, 0675, 0676, 0678, 0679, 0680, and 0682.

- **Big Leaf maple #0659** – Large trunk cavity with decay, decay visible in old pruning wounds, included bark, suckering at root collar, epicormic growth, and heavily pruned historically. Resistograph testing recommended.
- **Douglas-fir #0661** – *Phaeolus Schweinitzii* fruiting body attached to root collar, and recent pruning wounds. Resistograph testing or increment sample recommended.
- **Garry oak #0666** – Mature tree, epicormic growth, and decay visible in old pruning wounds. Aerial examination recommended.
- **Garry oak #0669** – Large pruning wounds with decay, mature tree, and asymmetric form. Closer examination recommended to quantify amount of decay.
- **Garry oak #0671** – Basal cavities, and some decay visible in old pruning wounds. Closer examination recommended.
- **Big Leaf maple #0672** – *Ganoderma* fruiting body attached to lower trunk, large burls, suckering from root collar, decay visible in burl on lower trunk, and heavily pruned historically. Closer examination recommended.
- **Garry oak #0673** – Visible evidence of decay in structural roots at root collar. Resistograph testing recommended.
- **Garry oak #0675** – Suckering at root collar, wounds at root collar, decay visible in old wounds, asymmetric form, large pruning wounds, and health stress. Resistograph testing recommended.
Elm #0676 – Epicormic growth, slime flux, suckering at base, large pruning wounds, and topped. Closer examination recommended.

Elm #0678 – Old drainage tube embedded in lower trunk, end-weighted, epicormic growth, and suckering at base. Closer examination recommended.

Elm #0679 – Epicormic growth, old drainage tube embedded in trunk, and suckering at base. Closer examination recommended.

Elm #0680 – Epicormic growth, large recent pruning wound, small nesting hole, small basal cavity, and large dead stub. Closer examination recommended.

Elm #0682 – Large stem removed historically, decay in wound, suckering at base, and large recent pruning wounds. Resistograph testing recommended.

We also identified two (2) trees for future removal because of declining health and/or structural defects. The trees are numbered as follows and referenced in our Tree Resource Spreadsheet: 0697, and 0719.

Flowering cherry #0697 – Decay in old pruning wounds. Suppressed by adjacent tree.

Flowering cherry #0719 – Heavily pruned, mature tree, decay in old wounds, and crossing limbs.

A further eleven (11) trees were identified for future removal because of the high maintenance or other undesirable characteristics of the species. The trees are numbered as follows and referenced in our Tree Resource spreadsheet: 0683, 0684, 0688, 0690, 0692, 0693, 0695, 0705, 0720, 0721, and 0722.

Laburnum - #0683 and 0684 – Invasive species that spreads by seed and root suckering. Poisonous seeds.

Holly #0688, #0690, #0692, #0693 and #0695 – High maintenance species, prone to insect infestation and disease infection.

Deodar cedar #0705 – Young specimen of a large growing species that is likely to outgrow its present planting space.

Blue spruce #0720 – High maintenance species, prone to insect infestation and disease infection as they mature.

Juniper #0721 and #0722 – Topped and maintained as a sheared plant. Maintenance requirements may outweigh function and ornamental value in the landscape.

See attached Tree Resource Spreadsheet for specific information and recommendations for individual trees throughout the square.
Planting spaces: The present canopy coverage and spacing of the existing trees is suitable for the square footage of this park. There are few available spaces within the park where new trees could be planted without conflicting with adjacent trees. Planting spaces are available for two large growing tree species along the Rockland Avenue frontage, and two smaller growing tree species along the Quadra Street frontage where trees have been removed previously.

Additional planting spaces will be created in future years by the removal of hazardous and high maintenance tree species.

Questions for Park Manager

In order to tailor the management plan to this park in particular, we will require some input from City staff, to help in choosing potential species for replanting and to develop long term objectives for the park.

Species selection: Given the existing species in the park, what is the vision for the parks future i.e.?
  — Increase percentage of native plantings/decrease percentage of native plantings.
  — Increase percentage of deciduous plantings/increase percentage of evergreen plantings.
  — Do any of the trees have additional significance? Memorial planting? Heritage tree?
  — Do the existing stone monuments have an influence on the type of tree species that should be planted and are any of the existing trees negatively or positively impacting the monuments or other uses of the park?
  — Are there any species that have proven to be poor choices in the park?
  — Are there any proposed changes to the landscaping, hardscape, surrounding sidewalks or underground services that may impact the existing trees?
  — Is mulching near trees possible or is turf grass the desired groundcover within the park?
Consultation with Parks: After meeting with the Victoria Parks Department to discuss the questions raised in the draft of our initial tree management plan, we documented the following objectives that the city and the community would like to see for the tree resource in Pioneer Square Park:

- Gradually eliminate high maintenance species from the tree population and introduce more native species where possible.
- Remove the existing high maintenance plantings along the east side of the park and replace with a less formal, low maintenance, mixed evergreen planting.
- Consider removing the English yew tree along the east side of the property, which forms a hiding place for less desirable park uses.
- Maintain filtered light, while reducing leaf pickup requirements where possible.
- Discourage root conflicts with any of the stone monuments, through the use of root barriers, where possible, and discourage too much shade on the monuments through pruning and new species and planting space selection.

Pioneer Park Tree Management Plan Recommendations

We propose the following course of action:

- Complete the recommended examinations on any trees identified as needing a closer examination.
- Remove any trees identified for removal, starting with any trees that pose a significant risk, and removing additional trees as budget allows.
- Begin a 5-year cyclical pruning program to ensure that all of the trees are pruned and visually examined every 5 years.
- Establish a planting program that will address the goals developed from the questions raised in this report.
- Develop a suitable species list that is tailored to individual planting spaces, where new trees are desired.
- Implement a young tree structural pruning program for all of the young trees and new trees planted to reduce the amount of maintenance and risk associated with the trees in the future.

.../9
Please do not hesitate to call us at 250-479-8733 should you have any further questions. Thank You.

Yours truly,
Talbot Mackenzie & Associates

Graham Mackenzie & Tom Talbot
ISA Certified, & Consulting Arborists.

Enclosures: Key to headings in tree resource spreadsheet,
7-pages tree resource spreadsheet

Disclosure Statement

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve the health and structure of individual trees or group of trees, or to mitigate associated risks.

Trees are living organisms, whose health and structure change, and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. It is not possible for an Arborist to identify every flaw or condition that could result in failure nor can he/she guarantee that the tree will remain healthy and free of risk.

Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.
<table>
<thead>
<tr>
<th>Tree #</th>
<th>d.b.h. (cm)</th>
<th>CRZ</th>
<th>Species</th>
<th>Crown Spread</th>
<th>Condition Health</th>
<th>Condition Structure</th>
<th>Relative Tolerance</th>
<th>Remarks / Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>0652</td>
<td>62</td>
<td>6.2</td>
<td>London plane</td>
<td>16</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Large pruning wounds, no visible decay, large surface roots. Crown raise over street recommended for large vehicular clearance.</td>
</tr>
<tr>
<td>0653</td>
<td>58</td>
<td>5.8</td>
<td>London plane</td>
<td>18</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Pruning wounds, no visible decay, large surface roots. Crown raise over street recommended for large vehicular clearance.</td>
</tr>
<tr>
<td>0654</td>
<td>66</td>
<td>6.6</td>
<td>London plane</td>
<td>15</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Pruning wounds, no visible decay, small deadwood, large surface roots.</td>
</tr>
<tr>
<td>0655</td>
<td>58</td>
<td>5.8</td>
<td>London plane</td>
<td>19</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Pruning wounds, no visible decay, large surface root.</td>
</tr>
<tr>
<td>0656</td>
<td>61</td>
<td>6.1</td>
<td>London plane</td>
<td>17</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Pruning wounds, deadwood, leans toward road, large surface root. Deadwood prune, crown clean.</td>
</tr>
<tr>
<td>0657</td>
<td>49</td>
<td>4.9</td>
<td>London plane</td>
<td>13</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Injured surface root, deadwood, large hanger over sidewalk. Remove hanger, deadwood prune, crown clean.</td>
</tr>
<tr>
<td>0659</td>
<td>86</td>
<td>10.32</td>
<td>Big Leaf maple</td>
<td>13</td>
<td>Fair</td>
<td>Poor</td>
<td>Moderate</td>
<td>Large trunk cavity with decay, decay visible in old pruning wounds, included bark, suckering at root collar. Epicormic growth, heavily pruned. Cable bracing system appears to have stabilized main union. Closer examination recommended.</td>
</tr>
<tr>
<td>0660</td>
<td>107</td>
<td>10.7</td>
<td>Garry Oak</td>
<td>30</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Recent pruning wounds, small deadwood, end-weighted low scaffold over walkway. Crown raise recommended so branches are out of reach. End-weight reduction recommended.</td>
</tr>
<tr>
<td>0661</td>
<td>85</td>
<td>12.75</td>
<td>Douglas-fir</td>
<td>10</td>
<td>Good</td>
<td>Fair</td>
<td>Poor</td>
<td>Phaeolus Schweinitzii fruting body attached to root collar, recent pruning wounds. Resistograph testing or increment sample recommended.</td>
</tr>
</tbody>
</table>

Prepared by:
Talbot Mackenzie & Associates
ISA Certified, and Consulting Arborists
Phone: (250) 479-8733
Fax: (250) 479-7050
email: Treehelp@telus.net
### TREE RESOURCE for Pioneer Park

#### Tree # | d.b.h. (cm) | CRZ | Species | Crown Spread | Condition Health | Condition Structure | Relative Tolerance | Remarks / Recommendations
--- | --- | --- | --- | --- | --- | --- | --- | ---
0662 | 45 | 5.4 | pine species | 8 | Fair | Fair | Moderate | Heavily pruned recently.
0663 | 83 | 8.3 | London plane | 24 | Good | Good | Good | Surface rooted, some end-weight.
0664 | 52 | 6.24 | Scots pine | 8 | Fair | Fair | Moderate | Lifting sidewalk, sapsucker injury, several wounds on trunk approximately 2/3 of the way up and higher. **Spotting scope recommended to examine wound.**
0665 | 50 | 6 | Scots pine | 9 | Fair | Fair | Moderate | Sapsucker injury, co-dominant stem removed historically. **Monitor for future decay.**
0666 | 117 | 11.7 | Garry Oak | 20 | Fair | Good | Good | Mature tree, epicormic growth, decay visible in old pruning wounds. **Aerial examination recommended.**
0667 | 81 | 12.15 | Copper beech | 18 | Good | Fair | poor | Root system surrounded in asphalt, cracking asphalt, some included bark, large leader removed historically(smaller of the 2).
0668 | 72 | 10.8 | Copper beech | 16 | Good | Fair | poor | Root system surrounded in asphalt, cracking asphalt
0669 | 113 | 11.3 | Garry Oak | 14 | Fair | Fair | Good | Large pruning wounds with decay, mature tree, asymmetric form. **Closer examination recommended to quantify decay.**
0670 | 85 | 8.5 | Garry Oak | 17 | Good | Good | Good | Recently pruned, end-weighted scaffold limbs.
0671 | 78 | 7.8 | Garry Oak | 16 | Good | Good | Good | Basal cavities, some decay visible in old pruning wounds. **Closer examination recommended.**
0672 | 92 | 11.04 | Big Leaf maple | 29 | Fair | Fair | Moderate | Ganoderma fruiting body attached to lower trunk, large burls, suckering from root collar, decay visible in burl on lower trunk, heavily pruned historically. **Closer examination recommended.**

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<th>Relative Tolerance</th>
<th>Remarks / Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>0674</td>
<td>81</td>
<td>9.72</td>
<td>Big Leaf maple</td>
<td>18</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Epicormic growth, suckering at root collar.</td>
</tr>
<tr>
<td>0675</td>
<td>99</td>
<td>9.9</td>
<td>Garry Oak</td>
<td>13</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Suckering at root collar, wounds at root collar, decay visible in old wounds, asymmetric form, large pruning wounds, health stress. Resistograph testing recommended.</td>
</tr>
<tr>
<td>0676</td>
<td>115</td>
<td>11.5</td>
<td>Elm</td>
<td>15</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Epicormic growth, slime flux, suckering at base, large pruning wounds, toppled. Closer examination recommended.</td>
</tr>
<tr>
<td>0677</td>
<td>92</td>
<td>9.2</td>
<td>Elm</td>
<td>13</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Epicormic growth, large stem recently removed.</td>
</tr>
<tr>
<td>0678</td>
<td>80</td>
<td>8</td>
<td>Elm</td>
<td>16</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Old drainage tube embedded in lower trunk, end-weighted, epicormic growth, suckering at base. Closer examination recommended.</td>
</tr>
<tr>
<td>0679</td>
<td>76</td>
<td>7.6</td>
<td>Elm</td>
<td>15</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Epicormic growth, old drainage tube embedded in trunk, suckering at base. Closer examination recommended.</td>
</tr>
<tr>
<td>0680</td>
<td>89</td>
<td>8.9</td>
<td>Elm</td>
<td>12</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Epicormic growth, large recent pruning wound, small nesting hole, small basal cavity, large dead stub. Remove stub. Closer examination recommended.</td>
</tr>
<tr>
<td>0681</td>
<td>90</td>
<td>9</td>
<td>Elm</td>
<td>13</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Epicormic growth, large co-dominant stem failed historically. Monitor progression of decay in wound.</td>
</tr>
<tr>
<td>0682</td>
<td>86</td>
<td>8.6</td>
<td>Elm</td>
<td>16</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Large stem removed historically, decay in wound, suckering at base, large recent pruning wounds. Resistograph testing recommended.</td>
</tr>
</tbody>
</table>

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<th>Tree #</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0684</td>
<td>36</td>
<td>4.32</td>
<td>Laburnum</td>
<td>8</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Invasive species that spreads by seed and root suckering. Poisonous seeds. Some decay associated with old pruning wounds. <strong>Plan to replace. Killing tree by girdling recommended prior to removal.</strong></td>
</tr>
<tr>
<td>0685</td>
<td>31</td>
<td>3.72</td>
<td>Flowering Cherry</td>
<td>7</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Heavily pruned.</td>
</tr>
<tr>
<td>0686</td>
<td>31</td>
<td>3.1</td>
<td>Dogwood</td>
<td>9</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>0687</td>
<td>39</td>
<td>3.9</td>
<td>Dogwood</td>
<td>10</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Trunk wounds, pruning wounds. <strong>Prune to subordinate smaller of 2 tops.</strong></td>
</tr>
<tr>
<td>0688</td>
<td>25</td>
<td>3</td>
<td>Holly</td>
<td>4</td>
<td>Good</td>
<td>Fair</td>
<td>Moderate</td>
<td>Competing with Dogwood. High maintenance species, prone to insect infestation and disease infection. <strong>Plan to remove.</strong></td>
</tr>
<tr>
<td>0689</td>
<td>27</td>
<td>3.24</td>
<td>Weeping flowering Cherry</td>
<td>5</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Bulge at graft union, at root collar, included bark.</td>
</tr>
<tr>
<td>0690</td>
<td>31</td>
<td>3.72</td>
<td>Holly</td>
<td>6</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>High maintenance species, prone to insect infestation and disease infection. <strong>Plan to remove.</strong></td>
</tr>
<tr>
<td>0691</td>
<td>17</td>
<td>2.04</td>
<td>Holly</td>
<td>6</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Included bark. <strong>Monitor unions. Structural prune.</strong></td>
</tr>
<tr>
<td>0692</td>
<td>16, 17</td>
<td>3</td>
<td>Holly</td>
<td>3</td>
<td>Poor</td>
<td>Fair</td>
<td>Moderate</td>
<td>High maintenance species, prone to insect infestation and disease infection. Included bark, health stress/dieback. <strong>Plan to remove.</strong></td>
</tr>
<tr>
<td>0693</td>
<td>10, 10, 17</td>
<td>3.48</td>
<td>Holly</td>
<td>3</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>High maintenance species, prone to insect infestation and disease infection. <strong>Plan to remove.</strong></td>
</tr>
<tr>
<td>0694</td>
<td>36</td>
<td>3.6</td>
<td>Dogwood</td>
<td>8</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Surface rooted, crossing limbs, injured surface roots.</td>
</tr>
</tbody>
</table>

Prepared by:
Talbot Mackenzie & Associates
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Fax: (250) 479-7060
e-mail: Treehelp@telus.net
## TREE RESOURCE
### for
#### Pioneer Park

<table>
<thead>
<tr>
<th>Tree #</th>
<th>d.b.h. (cm)</th>
<th>CRZ</th>
<th>Species</th>
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<th>Relative Tolerance</th>
<th>Remarks / Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>0695</td>
<td>18, 25</td>
<td>4.3</td>
<td>Holly</td>
<td>3</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>High maintenance species, prone to insect infestation and disease infection. <strong>Plan to remove.</strong></td>
</tr>
<tr>
<td>0696</td>
<td>52</td>
<td>6.24</td>
<td>English yew</td>
<td>7</td>
<td>Good</td>
<td>Fair</td>
<td>Moderate</td>
<td>Large pruning wounds.</td>
</tr>
<tr>
<td>0697</td>
<td>40</td>
<td>4.8</td>
<td>Flowering Cherry</td>
<td>5</td>
<td>Good</td>
<td>Fair</td>
<td>Moderate</td>
<td>Decay in old pruning wounds. Suppressed by adjacent tree. <strong>Monitor progression of decay. Future removal.</strong></td>
</tr>
<tr>
<td>0698</td>
<td>24, 30</td>
<td>4.44</td>
<td>Dogwood</td>
<td>5</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Epicormic growth, crossing limbs, co-dominant. <strong>Structural prune.</strong></td>
</tr>
<tr>
<td>0699</td>
<td>41</td>
<td>4.92</td>
<td>Flowering plum</td>
<td>11</td>
<td>Fair</td>
<td>Good</td>
<td>Moderate</td>
<td>Large pruning wounds, no visible decay, some epicormic growth.</td>
</tr>
<tr>
<td>0700</td>
<td>37</td>
<td>3.7</td>
<td>Oak species</td>
<td>12</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Old pruning wounds, no visible decay.</td>
</tr>
<tr>
<td>0701</td>
<td>55</td>
<td>6.6</td>
<td>Flowering Cherry</td>
<td>13</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Some decay visible, injured surface roots, narrow stem unions.</td>
</tr>
<tr>
<td>0702</td>
<td>37</td>
<td>4.44</td>
<td>Flowering Cherry</td>
<td>10</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Large tearout injury, surface rooted.</td>
</tr>
<tr>
<td>0703</td>
<td>19, 26</td>
<td>4.5</td>
<td>Flowering Cherry</td>
<td>13</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Surface rooted, large pruning wounds.</td>
</tr>
<tr>
<td>0704</td>
<td>32</td>
<td>3.2</td>
<td>Oak species</td>
<td>15</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Epicormic growth, health stress.</td>
</tr>
<tr>
<td>0705</td>
<td>12</td>
<td>1.2</td>
<td>Deodar cedar</td>
<td>4</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Top failed historically, new deflected top. Young specimen of a large growing species that is likely to outgrow its present planting space. <strong>Remove or transplant to a larger planting space.</strong></td>
</tr>
<tr>
<td>0706</td>
<td>18</td>
<td>2.16</td>
<td>Flowering cherry</td>
<td>5</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Small species.</td>
</tr>
</tbody>
</table>

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Email: Treehelp@telus.net
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<th>Relative Tolerance</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0707</td>
<td>32, 56</td>
<td>7.5</td>
<td>Chamaecyparis</td>
<td>7</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Recent top failure in central leader. <strong>Monitor progression of decay in wound.</strong></td>
</tr>
<tr>
<td>0708</td>
<td>37</td>
<td>4.44</td>
<td>Yoshino flowering cherry</td>
<td>10</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Small deadwood. <strong>Raise crown over path.</strong></td>
</tr>
<tr>
<td>0709</td>
<td>51</td>
<td>5.1</td>
<td>Chamaecyparis</td>
<td>6</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Some health stress.</td>
</tr>
<tr>
<td>0710</td>
<td>12, 12, 15, 17, 20, 20, 27, 30</td>
<td>10.38</td>
<td>Chamaecyparis</td>
<td>8</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Multiple stems, topped historically, some included bark, one-sided due to shading by adjacent tree, recently stripped bark. Old brace has failed. Not necessary to replace brace.</td>
</tr>
<tr>
<td>0711</td>
<td>43</td>
<td>5.16</td>
<td>Yoshino cherry</td>
<td>7</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Large pruning wounds, some decay, asymmetric form.</td>
</tr>
<tr>
<td>0712</td>
<td>21, 36, 47</td>
<td>8.12</td>
<td>Chamaecyparis</td>
<td>5</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>One-sided form due to shading by adjacent tree.</td>
</tr>
<tr>
<td>0713</td>
<td>46</td>
<td>4.6</td>
<td>Oak species</td>
<td>13</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Epicormic growth, small deadwood over trail, pruning wounds. <strong>Deadwood prune, crown clean.</strong></td>
</tr>
<tr>
<td>0714</td>
<td>30</td>
<td>3.6</td>
<td>Red maple</td>
<td>9</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Basal wound, included bark - unions not weak. <strong>Monitor unions. Structural prune.</strong></td>
</tr>
<tr>
<td>0715</td>
<td>37</td>
<td>4.44</td>
<td>Flowering Cherry</td>
<td>7</td>
<td>Good</td>
<td>Fair</td>
<td>Moderate</td>
<td>Pruning wounds. Small growing species.</td>
</tr>
<tr>
<td>0716</td>
<td>40</td>
<td>4</td>
<td>Chamaecyparis</td>
<td>7</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Some dieback.</td>
</tr>
<tr>
<td>0717</td>
<td>48</td>
<td>4.8</td>
<td>Cedrus deadora</td>
<td>8</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Recent pruning wounds, heavily thinned, pale foliage, health stress.</td>
</tr>
</tbody>
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<tr>
<td>0718</td>
<td>40</td>
<td>4</td>
<td>Cedrus deadora</td>
<td>8</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Epicormic growth.</td>
</tr>
<tr>
<td>0720</td>
<td>37</td>
<td>4.44</td>
<td>Blue spruce</td>
<td>8</td>
<td>Good</td>
<td>Fair</td>
<td>Moderate</td>
<td>Topped historically, deflected new top, some dieback, heavy cone crop, poor species. High maintenance species, prone to insect infestation and disease infection as they mature. Plan for future removal.</td>
</tr>
<tr>
<td>0721</td>
<td>25</td>
<td>2.5</td>
<td>Juniper</td>
<td>4</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Topped and maintained as a sheared plant. Maintenance requirements may outweigh function and ornamental value in the landscape.</td>
</tr>
<tr>
<td>0722</td>
<td>25</td>
<td>2.5</td>
<td>Juniper</td>
<td>4</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Topped and maintained as a sheared plant. Maintenance requirements may outweigh function and ornamental value in the landscape.</td>
</tr>
<tr>
<td>0723</td>
<td>31</td>
<td>3.72</td>
<td>Yoshino flowering cherry</td>
<td>6</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Cracked limb over sidewalk. Remove cracked limb.</td>
</tr>
<tr>
<td>0724</td>
<td>45</td>
<td>5.4</td>
<td>Yoshino flowering cherry</td>
<td>11</td>
<td>Fair</td>
<td>Fair</td>
<td>Moderate</td>
<td>Crossing limbs, large pruning wounds.</td>
</tr>
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Pioneer Square Park Tree Management Plan

Key to Headings in Resource Table

d.b.h. – *diameter at breast height* - diameter of trunk, measured in centimetres at 1.5 metres above ground level

CRZ – *critical root zone* - estimated optimal size of tree protection zone based on tree species, condition and age of specimen and the species tolerance to root disturbance. Indicates the radial distance from the trunk, measured in metres.

Crown spread – indicates the diameter of the crown spread measured in metres to the dripline of the longest limbs.

Condition health/structure –
- Good – no visible or minor health or structural flaw
- Fair – health or structural flaw present that can be corrected through normal arboricultural or horticultural care.
- Poor – significant health or structural defects that compromise the long-term survival or retention of the specimen.

Relative Tolerance – relative tolerance of the selected species to development impacts.