



# BOW VALLEY CENTRE CONCEPT PLAN

## PART 2, SECTION 9 OF THE BRIDGELAND-RIVERSIDE AREA REDEVELOPMENT PLAN



*Part 1 and Part 2, Sections 1 to 8 under separate cover*



The Blue Pages of this document contain supporting information and do not form part of the bylaw.  
For the purposes of electronic publications the Blue Pages are identified by the footer "Bridgeland-Riverside Area Redevelopment Plan 2000 - Supporting Information".

# **BOW VALLEY CENTRE CONCEPT PLAN /**

---

## **PART 2, SECTION 9 OF THE BRIDGELAND-RIVERSIDE AREA REDEVELOPMENT PLAN**

*Part 1 and 2, Sections 1 to 8 under separate cover*



The Bow Valley Centre Concept Plan (25P2000) is an amendment to the Bridgeland-Riverside Area Redevelopment Plan (11P80) which is under separate cover.

---

#### **PUBLISHING INFORMATION**

**TITLE:** Bow Valley Centre Concept Plan  
Bridgeland-Riverside Area Redevelopment Plan

**AUTHOR:** Land Use Planning Division

**STATUS:** Approved by City Council - 2002 June 21 - 25P2000

**PRINTING DATE:** 2003 March

**ADDITIONAL COPIES:** The City of Calgary  
Planning & Transportation Information Centre #8115  
P.O. Box 2100, Stn. M  
Calgary, Alberta T2P 2M5  
Phone: (403) 268-5333  
Fax: (403) 268-1319  
Web: [www.calgary.ca/planning](http://www.calgary.ca/planning)  
go to: Land Use Planning  
go to: Publications

This office consolidation includes the following amending Bylaws:

<b>Bylaw</b>	<b>Date</b>	
85P2018	2018 December 10	(a) Delete and replace title on front cover page. (b) Delete and replace the footer at bottom left corner of the front cover page. (c) Delete and replace title on inside cover page. (d) Delete and replace footer at the bottom left corner of the inside cover page. (e) Delete and replace the subtitle below the table of contents page. (f) Delete the "Preface" entry in the table of contents. (g) Delete the "Preface" section in its entirety. (h) Section 9.0, third paragraph, delete and replace first sentence. (i) Section 9.1, insert tenth bullet point. (j) Section 9.2.3, under bullet point " Transit-Supportive Development (LRT Station Area)" first paragraph, delete and replace second and third sentences. (k) Delete and replace Figure 19. (l) Section 9.2.3, under bullet point "Residential" delete and replace second sentence. (m) Section 9.2.4, under bullet point "Relationship between Built Form and Open Space" delete and replace third sentence. (n) Section 9.3., delete Table 1 in its entirety. (o) Delete and replace Figure 20 Transit Service. (p) Delete and replace Figure 21 Residential. (q) Section 9.3.1, insert new policy 8. (r) Section 9.3.1, insert new policy 9. (s) Section 9.3.2, delete and replace policy 5. (t) Section 9.4.1, first and second paragraph, delete and replace with "Parking requirements are determined as per the current Land Use Bylaw." (u) Section 9.4.1, delete policy 3 and 5 and renumber. (v) Section 9.6, delete and replace text with "The Bow Valley Centre Plan". (w) Section 9.6.1, first sentence of first paragraph, delete and replace text with "The Bow Valley Centre". (x) Section 9.6.1, third sentence of second paragraph, delete and replace text with "the Land Use Bylaw". (y) Section 9.6.1, fourth sentence of second paragraph, delete and replace text with "supplements".



# BOW VALLEY CENTRE CONCEPT PLAN BRIDGELAND-RIVERSIDE AREA REDEVELOPMENT PLAN

*Part 1 and Part 2, Sections 1 to 8 under separate cover*

## TABLE OF CONTENTS

	Page		Page
<b>Part 2</b>		<b>Part 2</b>	
9.0 Introduction.....	3	9.4.1 Residential .....	39
Background.....	3	9.4.2 Retail/Commercial.....	41
Study Area Description.....	3	9.4.3 Community Hall.....	41
Site Context .....	5	9.4.4 Office/Institutional Uses .....	42
Plan Preparation Process.....	6	9.5 Transportation/Public Systems.....	42
9.1 Redevelopment Objectives .....	7	9.6 Implementation .....	46
9.2 Concept Plan .....	8	9.6.1 Outline Plan/Land Use Redesignation ..	47
9.2.1 Objectives .....	8	9.6.2 Road Closures .....	47
9.2.2 Organizing Principles.....	9	9.6.3 Phasing.....	48
9.2.3 Major Land Use Components .....	9		
9.2.4 Urban Design Approach.....	13	<b>LIST OF FIGURES</b>	
9.2.5 Sustainability, Urban Safety and .....	15	18. Study Area Boundaries .....	4
Winter City Design		19. Conceptual Land Use Plan.....	10
9.3 Land Use Policies .....	16	20. Transit Service .....	20
9.3.1 Transit-Supportive Design and.....	18	21. Residential.....	23
Development		22. Parks and Open Space.....	29
9.3.2 Residential .....	21	23. Proposed Street Network .....	45
9.3.3 Public Parks and Open Space .....	27	24. Block Plan .....	49
9.3.4 Commercial/Retail Development.....	35		
9.3.4.1 1st Avenue .....	35	<b>LIST OF TABLES</b>	
9.3.4.2 LRT Station Area.....	38	<i>deleted</i> <b>Bylaw 85P2018</b> .....	17
9.4 Parking .....	39		



*deleted*

**Bylaw 85P2018**

**9.0 Introduction**

**Background**

The Bow Valley Centre lands (former Calgary General Hospital) became available for redevelopment as a result of the 1997 closure and subsequent demolition of the Bow Valley Centre (BVC). The redevelopment of the subject lands presents a unique opportunity to achieve objectives that will benefit both the community of Bridgeland-Riverside and Calgary as a whole.

The planning process was launched in 1998 and was unique in two respects. It included a nation-wide design competition to generate ideas for the redevelopment of the site and an extensive public participation process, ensuring community input at every stage of the planning process. Finally, the more traditional market, engineering, and traffic studies were undertaken to identify feasible and marketable redevelopment opportunities.

*This section of the Area Redevelopment Plan establishes the policies and guidelines that will guide the redevelopment of the BVC. These policies and guidelines apply only to those lands included within the boundaries of the study area (Figure 18). However, due to the centrality of the study area within the Bridgeland-Riverside community and the subsequent impacts of the redevelopment, it is anticipated that other amendments to the ARP will eventually be triggered. In particular, it is anticipated that the 1st Avenue business area should be re-examined to ensure that the potential benefits of this major redevelopment opportunity are realized to the greatest extent possible.*

**Bylaw 85P2018**

**Study Area Description**

The boundaries of the study area (Figure 18) are as follows:

- 8th Street NE and 7A Street NE on the west
- 1st Avenue NE on the north
- 9A St to Murdock Road (Centre Avenue), 10th Street (Cross Bow Auxiliary Hospital) to McDougall Road, 11th Street and the Calgary Metropolitan Foundation lands on the east
- Memorial Drive on the south.

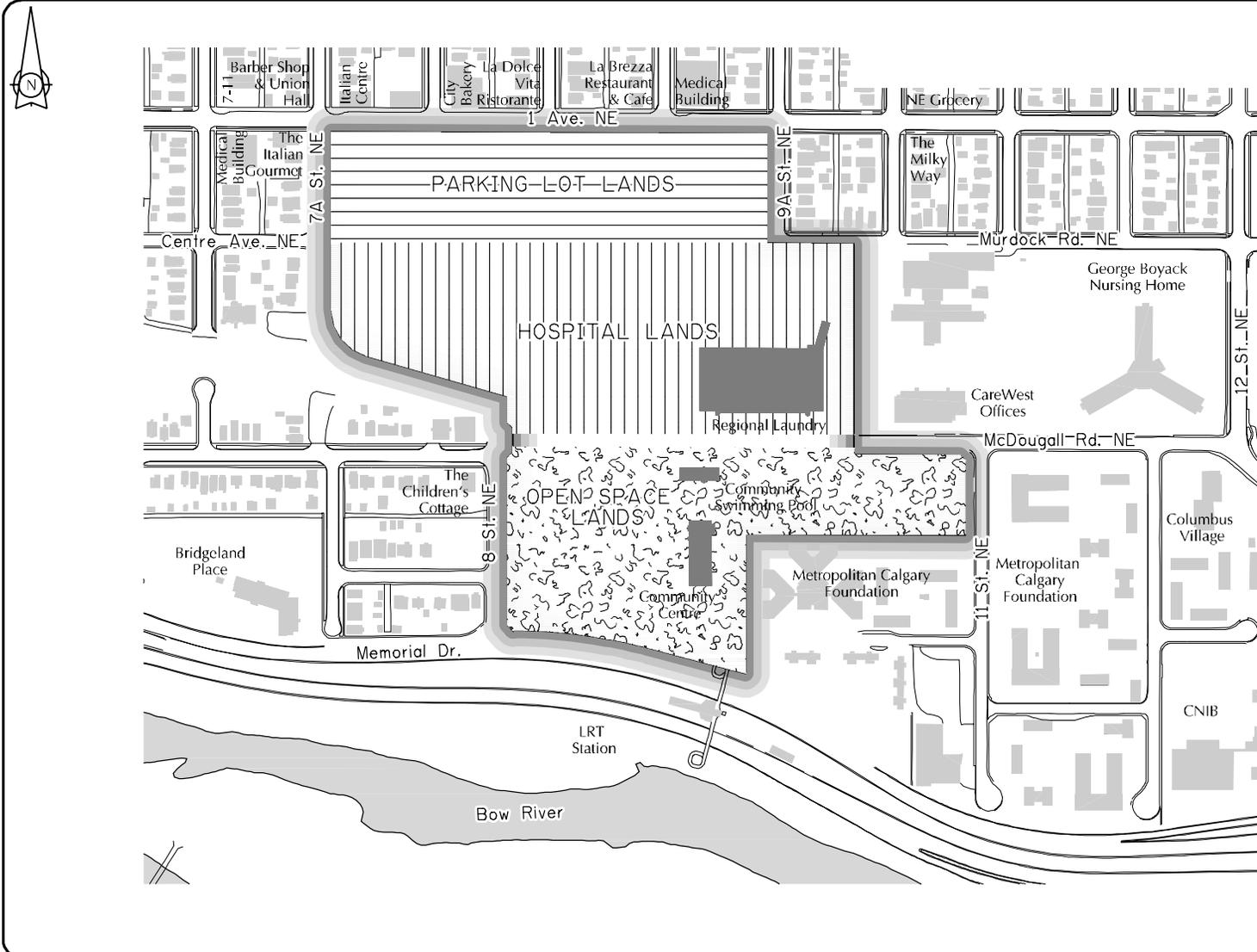


Figure 18

Bridgeland - Riverside

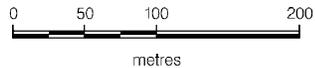
Study Area Boundaries and Sub Areas

May 2002



\\work\work\plan\plans\arp\bridgeland\sa\_boundary.dgn

DATE PLOTTED: 02-MAY-2002



The study area comprises three sub-areas, all of which are under title to The City of Calgary. The Parking Lot Lands extend from 1st Avenue to Murdock Road, the Hospital Lands lie between Murdock Road and McDougall Road, and the Open Space Lands extend south from McDougall Road to Memorial Drive and the Calgary Metropolitan Foundation lands. In total, the study area encompasses approximately 13.61 hectares (33.63 acres) of land.

### Site Context

The BVC study area is located centrally within the community of Bridgeland-Riverside and straddles the upper (Bridgeland) and lower (Riverside) portions of the community. 1st Avenue, on the north side of the study area, is the community's 'main street' characterized by the European flavour of some of the local businesses. The former hospital was the most predominant feature of both 1st Avenue and the community. The hospital was also a significant physical barrier, effectively dividing the community in two. For example, the hospital buildings stretched across the site and were a barrier for pedestrian access to the LRT Station, the community hall and Riverside Park. Also, the parking lot extended for four blocks along 1st Avenue - creating a significant break in the continuity of street-front development.



*Bow Valley Centre (Calgary General Hospital)*



*Redevelopment Site - after demolition of the hospital*

Bridgeland-Riverside has 5 areas that are distinct from one another. Briefly, these are:

- 1st Avenue commercial street
- Edmonton Trail commercial area
- Low density residential area north of 1st Avenue
- Medium density area west of 6th St north of 1st and west of 8th Street and south of 1st Avenue
- Seniors' housing and institutional uses area south of Murdock Road.

Although the community has two focuses for activity - 1st Avenue and the community hall, there is no identifiable 'centre' where people can run into one another casually, meet for coffee, etc. The development on 1st Avenue is too dispersed and a number of the businesses do not cater to the local community but are regional destinations. The existing community hall is at the edge of the community and supports a range of activities for both local residents and groups and organizations from outside Bridgeland-Riverside.

The very mixed nature of development in Bridgeland-Riverside and the central location of the study area, present a significant opportunity for the redevelopment of the site to 'knit' the entire community into a cohesive whole. It will also create a new 'heart' for Bridgeland-Riverside by setting the stage for a more vibrant, active 1st Avenue and by locating the community hall and the major community park space closer to the center of the community, bringing it within walking distance of many more households.

Another significant opportunity presented by the redevelopment process is to take full advantage of the Bridgeland LRT Station located on the south-east corner of the site. The station was originally constructed to provide LRT access to the hospital and has not been used to its full potential due in part to the lack of transit-supportive development in the immediate vicinity of the station.

### **Plan Preparation Process**

On 1997 December 15, City Council approved the Terms of Reference which outlined a five phase public planning process. The planning process was co-managed by The City of Calgary's Planning and Transportation Policy Business Unit and Corporate Properties Group, reflecting The City's dual roles in the project as planning approval authority and sole landowner.

The planning process began early in 1998 with the formation of the Planning Advisory Committee (PAC). The PAC comprised a cross-section of local community residents and citizens at large from the broader Calgary community. The PAC played a significant advisory role throughout the duration of the process in several key areas - design of the public consultation process, selection of a preferred concept plan, the review of the final land use concept plan, and ensuring an appropriate balance between city-wide and local community objectives.

One of the most unique aspects of the planning process was the inclusion of a planning design competition as a means to generate alternative ideas for the redevelopment of the site. A call for expressions of interest was advertised nationally and three design teams were selected to prepare preliminary concept plans. Each concept plan was assessed with respect to how well it addressed the project objectives. In addition, open houses were held to solicit public comment on the concepts. At the conclusion of the evaluation process, one of the concept plans was selected as the basis upon which the redevelopment plan was prepared.

An extensive public consultation process was also undertaken. One of the highlights of this process was a Co-Design Fair held early in the process to develop visions of the kinds of activities people wanted to be able to engage in and the kinds of environments needed to support those activities. Other highlights included an opportunity to meet the design teams who developed the preliminary concept plans, reviewing and commenting on the five concept plans produced through the design competition, and reviewing and commenting on the draft concept plan and Area Redevelopment Plan Amendment. Details of the public consultation process are included in the Background and Supporting Information Section and in Appendices IV-XI.

## 9.1 Redevelopment Objectives

Objectives for the redevelopment process were approved by City Council as part of the Terms of Reference for the planning process. The complete list of objectives is found in Appendices I-III. Redevelopment objectives focused on the following:

- Sensitive housing intensification
- Wider range of housing choices for different age and income levels
- Transit-supportive development, including mixed-use development
- Pedestrian and cycling supportive public systems that connect well with adjacent lands
- An improved physical environment
- Enhanced viability of 1st Avenue businesses
- Exploration of opportunities for innovation in residential and mixed-use development, including special needs and affordable housing
- Optimizing the distribution of open space and community facilities in relation to the needs of Bridgeland-Riverside residents and ensuring that the quality of facilities and amount of open space is equal to or better than that in place prior to redevelopment
- Providing a commemorative area that recognizes the contributions of the Calgary General Hospital and its role within the city.
- *Promote street-oriented building design for residential developments and active uses for commercial developments along a continuous block face on 9 Street NE.*

**Bylaw 85P2018**

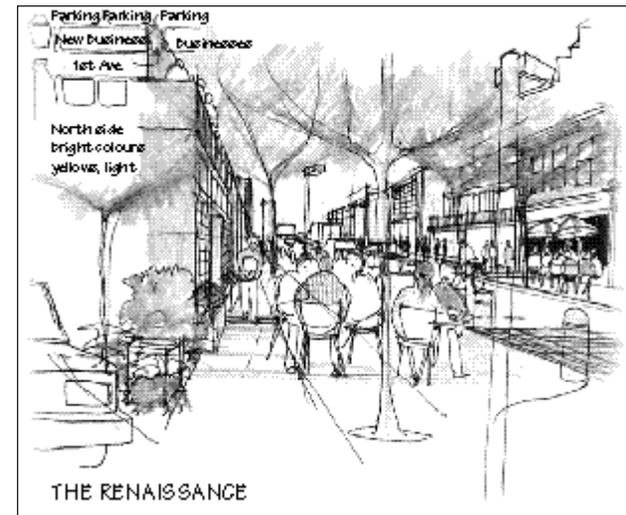
In addition, the redevelopment process is intended to incorporate implementation and marketing strategies that will ensure the site can be developed in a feasible and economic manner.

## 9.2 Concept Plan

### 9.2.1 Objectives

- “Achieve the objectives of the Calgary Transportation Plan in a manner appropriate to the local context.” (Terms of Reference)
- “Ensure development contributes to a sense of community, consistent with the goals of the Bridgeland-Riverside Area Redevelopment Plan.” (Terms of Reference)

The concept plan envisions a revitalized community that is infused with a renewed sense of purpose and energy as some 2,000-2,500 new residents make Bridgeland-Riverside their home. It envisions streets that are tree-lined, lively, safe, and interesting, convenient, and pleasant for everyone - the young, the elderly, the disabled. It is a community in which you can walk, cycle or take transit to work and for many other daily trips. 1st Avenue is a successful, busy retail street that provides goods and services needed by local residents but also draws customers from nearby communities and Calgary as a whole.



Co-Design Fair Drawing #10 - 1st Avenue



Co-Design Fair Drawing #43 - A large park

A new 'heart' for the community is also envisioned - the relocation of the large park and the new community hall closer to the centre of the community brings them within walking distance of many more households. And the new community hall can be designed and built to serve the needs of the community more effectively than the existing hall is able to. In short, the concept plan envisions a new urban neighbourhood that is distinctive yet plays a strong role in helping to unite the entire community. Finally, it envisions the creation of a place that by virtue of the quality of its design and development and in the attention paid to detail, will set a new standard for urban redevelopment in Calgary.

## 9.2.2 Organizing Principles

The site is organized around a large central park which overlooks the Bow River Valley and has views of Downtown. A new community hall will be constructed here, providing a basis for an invigorated community association located at the heart of the community. Key organizing principles guiding the pattern of development are:

- Recognizing the site as a prime inner city neighbourhood with a broad range of community amenities and facilities
- Responding to the transit-supportive, intensification and sustainability objectives of the Calgary Plan
- Achieving a built form that responds to the large central park and the LRT station area and is respectful of existing development

- Ensuring that public systems are accessible, particularly to the park and the LRT station
- Consideration for the principles of urban safety and winter city design
- Creating a local street system that serves the site but discourages through traffic
- Defining and animating residential streets
- Providing housing consistent with livability, sustainability and environmental objectives
- Enhancing the commercial nature and pedestrian experience along 1st Avenue
- Establishing a public systems plan which integrates with the existing community.

## 9.2.3 Major Land Use Components

The Concept Plan casts an eye not only to the past but is grounded in the present and anticipates the future. It responds to the site's inner city location, proximity to Downtown and diversity of existing development. It is a plan that is fundamentally urban in character. The major land use components are shown in Figure 19 and described in the following sections.

- **Transit-Supportive Development (LRT Station Area)**

Transit-supportive development refers to patterns of land use and the design of pedestrian routes, sidewalks and pathways that make transit a more convenient, accessible and efficient transportation choice for people. *Transit supportive developments*

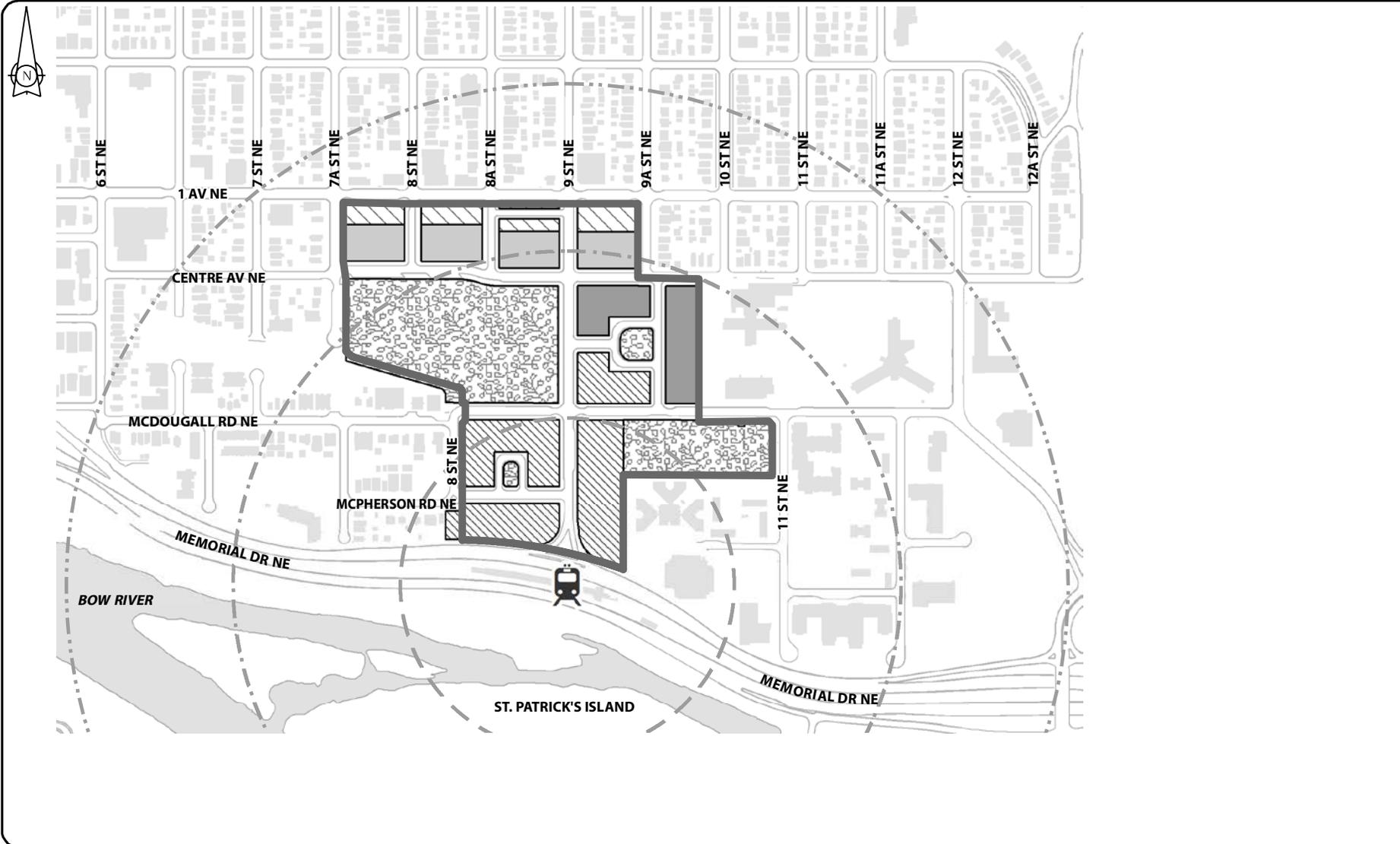


Figure 19

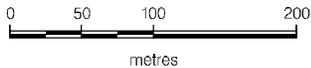
Bridgeland – Riverside

Conceptual Land Use Plan

May 2002

	Study Area		Local Commercial And Mixed Use		4-6 Storey		LRT Station
	Transit Supportive Mixed Use		Park		4-7 Storey		200m Buffer
							400m Buffer
							600m Buffer

APPROVED: 25P2000  
 AMENDED: 85P2018



*including a mix of high density residential, commercial, and live-work uses that are oriented to the public street, have direct pedestrian access, and encourage frequent walk-up pedestrian activities should be located along 9 Street NE and within 400 metre radius of the Bridgeland-Memorial LRT station.*

**Bylaw 85P2018**

- **Local Commercial - 1st Avenue**

1st Avenue is the prime public focus of the Concept Plan. It will be reinforced as the commercial centre of the community. Ultimately, 1st Avenue will become the hub of Bridgeland-Riverside but it will also remain as an area of transition. For example, just as the avenue subtly changes in density and streetscape from the neighbourhood to the north, it will also effect a transition in scale to a higher density to the south.

A mix of land uses is proposed for 1st Avenue with the emphasis on retail development at grade with two storeys of residential development above. This represents an extension of the local commercial zoning on the north side of the avenue and allows for retail development to occur on both sides of the street. The strategy is to concentrate retail development on the two blocks west of 8A Street in order to reinforce existing retail development on the north side of 1st Avenue and immediately to the west of 7A Street on the south side. A public plaza proposed for the block between 8A and 9 Streets



*Retail with housing above*



*The public life of the street*

will accentuate this area as a strong public gathering place and focal point for retail activity on the avenue.

Beyond these two blocks, it is unclear how much additional retail development can be supported. It is important, therefore, to allow for land uses and to encourage a built form on the two easterly blocks that are viable in the short-term but could convert to retail development over time. For example, street-oriented townhousing and live/work units would be suitable forms of development that allow continuous development along 1st Avenue to occur within a relatively short period of time.

In addition, there may be potential for a limited amount of local commercial development in the immediate vicinity of the LRT station. Such retail development would be focused on providing convenience goods and services to transit riders or office workers (if a major office development were to occur here). The scale and orientation of such retail development would be such that it would not compete with businesses on 1st Avenue.

- **Public Parks and Open Space**

The cornerstone to the Concept Plan is the development of a large, central park south of Murdock Road which together with the new community hall will become the heart of the community. The escarpment lying to the west of the site would be extended into the park, grade



*Large park 'framed' by housing*

typical section



community park (with ghosted elevation of the former hospital shown in background)      murdock road      first avenue      existing retail/commercial building

changes would be incorporated in a variety of forms (tobogganing hill, soccer field, tot lot, etc.), and the park is strategically placed in proximity to the activity of 1st Avenue. This park will play an important role in meeting the recreation and leisure needs of community residents.

The park will be framed by residential development on the north, east and south, ensuring that there will be “eyes on the park”. To the west, views open up to the Downtown and the Bow River Valley.

The existing neighbourhood park (McDougall Park) will continue to be provided east of the development site on 9th Street and south of McDougall Road. It encompasses a seniors’ park, playground and a picnic area.

Finally, a small ornamental park located east of 9th Street and south of Murdock Road will be developed in conjunction with the housing developments that will frame it. A second ornamental park is also planned to be developed within Block 9 (Figure 24). These parks will provide a visual amenity for surrounding residents and pedestrians and opportunities for passive recreation in a public setting.

In addition, these small parks will help integrate the redevelopment site into the larger community by enhancing the pedestrian environment, enriching the variety of public spaces and by creating block

sizes that are more compatible with the existing development pattern than would otherwise be the case.

- **Residential**

A variety of multi-family development is encouraged throughout the site, including street townhouses, stacked townhouses, apartments, and ‘live/work’ units. *Development will be characterized by an orientation to the street (i.e. ground floor units will have direct access to the street).* **Bylaw 85P2018**

#### 9.2.4 Urban Design Approach

The Concept Plan relies upon a solid approach to land use and development but also develops an approach to urban design that is intimately related to the intensity of development proposed. The approach taken relies upon the establishment of protocols or principles that are intended to ensure the creation of livable, pleasant urban spaces and to also ensure a good ‘fit’ with existing development on surrounding lands. To this end, the Plan introduces new building forms to the community.

- **Built Form**

As discussed earlier in this document, there are several distinct character areas within Bridgeland-Riverside. This diversity poses one of the most significant challenges for redevelopment - how to

develop a response to the existing land use and built form pattern that can help 'knit' the entire community together and yet anticipate the future. In part, the answer lies in the introduction of a new building type to the community. This building type is distinguished by its orientation to the street, its mix of housing unit types and land uses, and its height.

1st Avenue is the logical place for the new building form to be introduced. It is the transition from the existing patterns of low scale pedestrian development to a denser street that remains rich and complex at the pedestrian scale, and yet is an extension of the existing. Three urban design elements should become components in all new development within the BVC site. These elements will assist in establishing a new and more dense variety of housing that will both 'fit' with the existing patterns and revitalize the existing community.

The first element is the establishment of a consistent building base that will directly relate each building to the street. A variety of elements such as the use of different materials, numerous front doors, stoops, bay windows, other means of articulation, detailing, individual distinction, etc. will be used to establish a pattern of street front units and scale that respond to existing building patterns in Bridgeland-Riverside. This pattern will help focus activity onto the streets and increase the level of security and safety in the neighbourhood.



*Massing of a 5-6 storey building*



The second urban design element is to make a distinction between the 'base' of the building and the body and the top of the building. This will be accomplished by setting the upper storeys (above the 2 - 3 storey) back from the base of the building. This will reduce the visibility of the top of the building and its overall mass.

The third urban design element is the provision of street trees and the creation of a 'street wall' which clearly defines the public, semi-public and semi-private realms. This environment will be created by minimal setbacks so that buildings are close to the sidewalk (about 3 metres) and by ensuring that trees are planted in the boulevards.

- **Relationship between Built Form and Open Space**

One of the key organizing principles for the BVC site is the relationship that will be established between the open spaces and the built form. The Concept Plan arranges the building forms so that the public spaces will be defined and framed by the building edge and walls. *For example, the large park will be enclosed on three sides by buildings with a consistent street wall of 2-3 storeys.*

**Bylaw 85P2018**

Development sites are defined by an open space system organized into an integrated network of paths and places including:

- large central park, including the Murdock Road Esplanade and 7A Street lookout
- 1st Avenue Plaza
- Meredith Square
- McPherson Square
- Seniors' Park.

### 9.2.5 Sustainability, Urban Safety and Winter City Design

Two major opportunities for sustainable development offered through redevelopment of the BVC site, are to use land efficiently and wisely by optimizing development densities and to reduce dependence on the car. There are, however, other opportunities to create a more sustainable community. These include providing opportunities for passive solar gain, durable construction



"Eyes on the street"

(concrete), stormwater management, building and energy technologies, fiber-optic communications, and increased energy efficiency.

Sustainable communities are livable communities and essential aspects of livability are public safety and security. The design of public spaces, parks, buildings, parking lots and other developments should incorporate the principles of Crime Prevention Through Environmental Design (CPTED). In this respect, the design and siting of new buildings should provide opportunities to oversee activity on the street, provide easy access to adjacent streets and allow clear views to parks and open space from the street.

Building a more sustainable community also means considering the impacts of climate on public environments, especially during winter months. The two most important factors to consider are sunlight access and wind protection. Building orientation, massing and height strongly affect access to sunlight. Landscaping and building form also affect wind patterns. These factors should be taken into account to ensure that public spaces are sunny and sheltered wherever possible. Opportunities for winter activities such as skating and tobogganing should be provided so that advantage can be taken of the positive aspects of the winter season.

Finally, a sustainable community is one that remains livable over a long period of time. The overall quality of development and the relationships between different activities (residential, working, recreational) are fundamental considerations in this regard.

### 9.3 Land Use Policies

The previous section outlined the overall logic and philosophy of the Concept Plan and described each of the major land use components. This section of the ARP amendment further elaborates on each land use component and provides the associated policies which will form the basis for subsequent development of the Outline Plan and Land Use Redesignation applications.

#### General

The following policies apply to all areas of the Concept Plan:

1. All development should exhibit a high quality of design, foster and support an attractive, interesting pedestrian environment, and respect and enhance the site's inner-city context. To this end, buildings should, wherever possible:
  - Front onto adjacent public streets
  - Be compatible with adjacent development in terms of massing and scale
  - Provide direct access to grade from first floor dwelling units
  - Be oriented to promote the security of public spaces and 'eyes on the street'
  - Incorporate a high degree of articulation and visual interest.
  - Set upper storeys back from the base of the building in a consistent manner to be established in the Direct Control guidelines.

---

*deleted*

**Bylaw 85P2018**

2. Wherever possible, buildings should be sited to optimize the benefits of solar exposure and reduce overshadowing effects on surrounding buildings and public spaces.
3. Encourage builders to take full advantage of opportunities for passive solar gain in their building design and to install water-saving fixtures and high energy-efficient heating and cooling systems in their developments.
4. Encourage and support alternative approaches to stormwater management for the site development that improve the quality of water discharged into the Bow River.
5. Each development should establish a hierarchy of spaces with clear distinctions made between public, semi-public, semi-private and private spaces.
6. Public, semi-public and semi-private spaces should have some degree of overlook from residents' homes.
7. The landscaping and design of yards adjacent to public streets and pathways should enhance the experience of walking down the street and provide definition of the boundaries between the public and semi-public realms.
8. Parking and vehicular access should be designed to respect the pedestrian environment and to minimize disruptions to the continuity of pedestrian systems.
9. Rooftop mechanical equipment should be screened in a manner satisfactory to the Development Authority.

### 9.3.1 Transit-Supportive Design and Development

#### Objectives

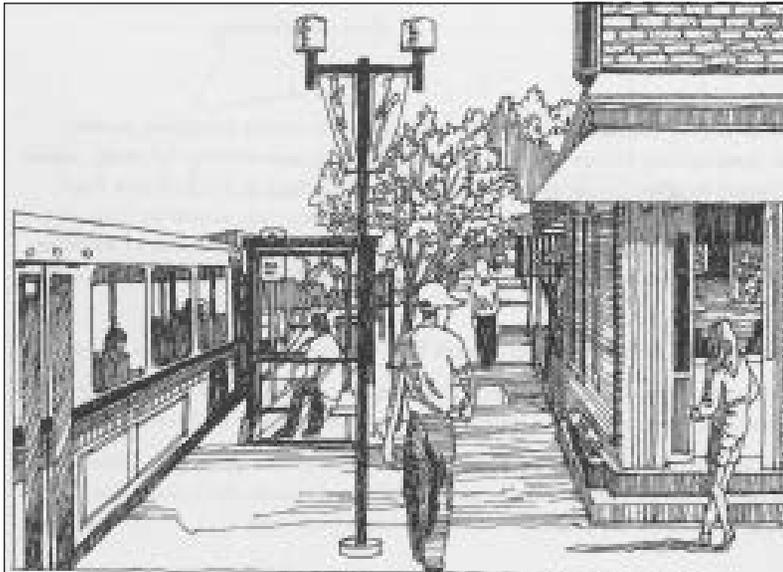
- “Encourage sensitive types of housing intensification” (Calgary Transportation Plan)
- “Encourage new housing close to transportation facilities and within mixed-use centres to support transit and pedestrian mobility choices.” (Calgary Transportation Plan)
- “The transit system will offer Calgarians a reasonable alternative to auto travel by:
  - facilitating access to transit for seniors and people with disabilities
  - integrating transit with other modes of travel.” (Calgary Transportation Plan)



*Transit-Supportive Development*

- “To provide for the development of a land use pattern that will be better able to be served by public transit.” (Bridgeland-Riverside Area Redevelopment Plan)

Two of the key aims of the Calgary Transportation Plan and the Calgary Plan are to increase land use efficiency and to support and enhance the use of transit. The design and development of the urban environment - especially in areas close to transit facilities - is a critical factor in being able to realize these aims. The BVC site is well situated to contribute to the achievement of these aims due to its proximity to the Downtown and its adjacency to the Bridgeland LRT Station (Figure 20). The community is also well served by the Route 9 bus which goes Downtown, to the University of Calgary, the 10th St Safeway and other locations of interest to Bridgeland residents.



*Sheltered transit stop*

Land use planning and urban design must work hand-in-glove with transit planning in order to ensure the effective operation of the transit system. Transit works best when there are a substantial number of people living and/or working within a 5 minute walk of the transit stop/station. Appropriate land use patterns must in turn be supported by a street, sidewalk and pathway system that is safe and convenient for pedestrians. Direct pedestrian routes are also necessary. Generally, there should be ‘eyes on the street’, sidewalks and pathways should be accessible and well-lit, and changes in grade should be gentle where possible.

One of the opportunities presented by redevelopment is to improve and enhance the physical environment in the immediate vicinity of the Bridgeland LRT Station. In particular, it is important to take the opportunity to remove the existing spiral ramp access to the pedestrian overpass connecting to the LRT station and build a more convenient, more visible and less isolated accessible connection. Development of Block 10b (Figure 24) will provide the opportunity to integrate a new universally accessible connection, as well as the potential for a direct link into the building that will be constructed there. The new access to the pedestrian overpass should encourage pedestrians to use 9th St in order to increase pedestrian activity on the street and to help support any retail/commercial development in the vicinity. The cost to replace the existing spiral ramp will be the responsibility of the landowner/developer.

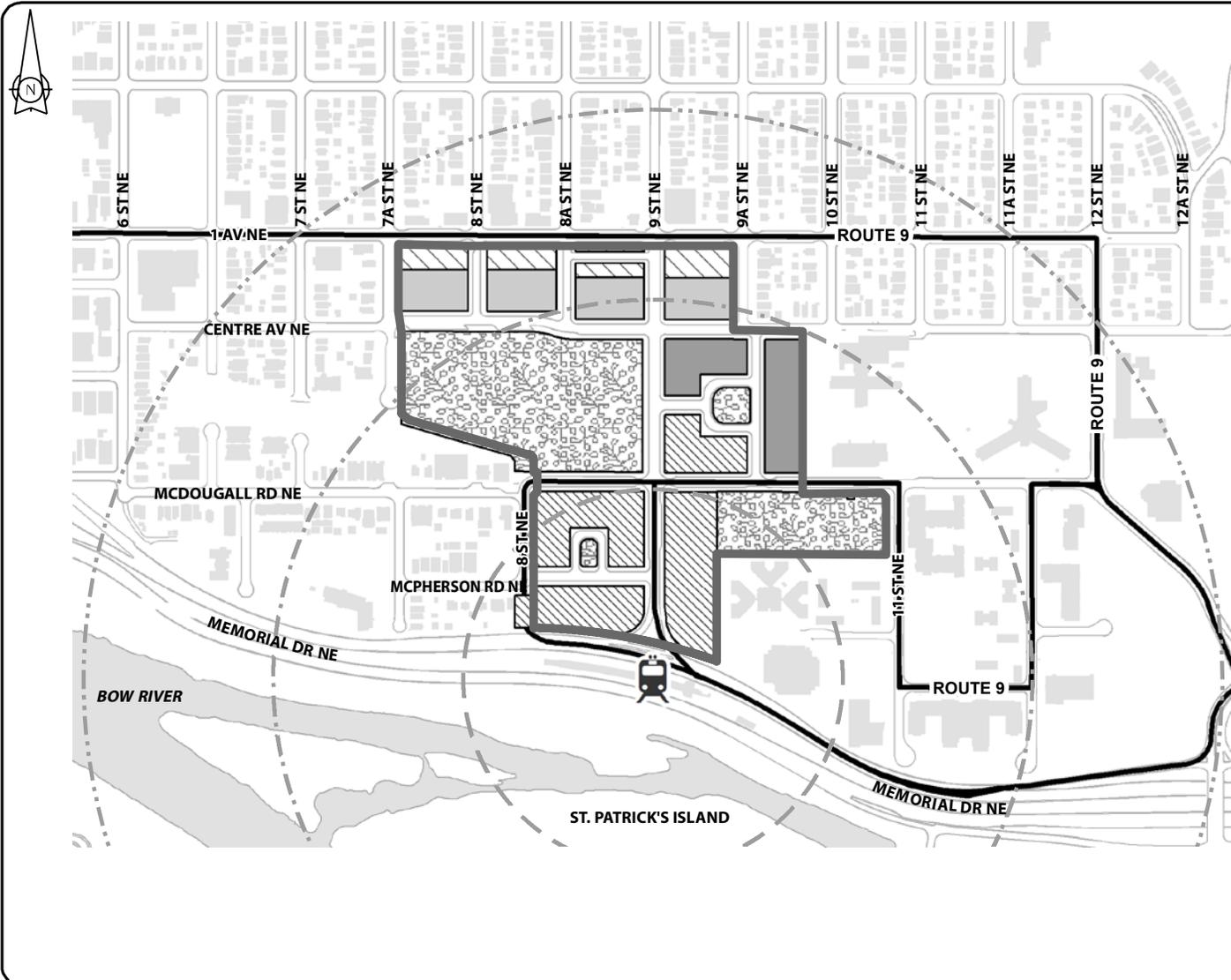
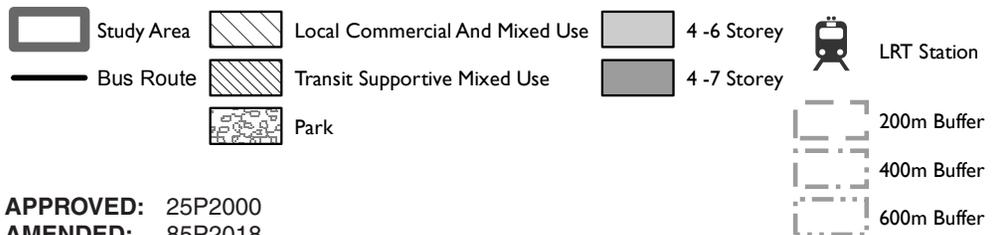


Figure 20

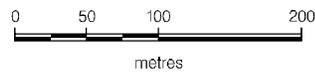
Bridgeland – Riverside

Transit Service

May 2002



APPROVED: 25P2000  
 AMENDED: 85P2018



## Policies

1. Development will be distributed to take advantage of both the mainline bus route and the LRT service.
2. Develop a range of compatible land uses (e.g., residential/commercial) within close walking distance of the Bridgeland LRT Station and mainline bus service on 1st Avenue.
3. Improve the connection between the feeder bus and the LRT station by removing the bus stop on Memorial Drive and relocating it onto 9th St.
4. Enhance safety of the LRT station area by providing active uses immediately adjacent to the station access and through physical improvements to the surrounding environment.
5. Dedicate a public access easement along the east side of Block 10b between the LRT station access and the west end of the Metropolitan Calgary Foundation developments. This easement should connect with the public access easement dedicated on the Metropolitan Calgary Foundation lands to provide a continuous pathway to the LRT station.
6. Improve physical access to Bridgeland Station. The developer of Block 10b will be required to submit a building design that incorporates a universally accessible connection to the new proposed building with the LRT bridge. The design of the improved access to the pedestrian bridge will be explored by the developer and The City of Calgary.
7. Provide direct pedestrian connections to bus stops and equip transit shelters with amenities designed to provide a comfortable waiting environment (e.g. heating and lighting and related amenities such as benches, route maps, bicycle storage facilities and passenger drop-off areas).
8. *Street-oriented building design for residential developments and active uses for commercial developments are required for developments along 9 Street NE from the Bridgeland-Memorial LRT Station to Centre Avenue NE, as indicated in Figure 21.*  
**Bylaw 85P2018**
9. *Tall buildings with thoughtful building and site designs may be appropriate along 9 Street NE within 400 metres of the Bridgeland-Memorial LRT Station. The ground floor of tall buildings should demonstrate a strong relationship to the human scale and contribute positively to the public realm and street. Tall buildings are generally defined in the Municipal Development Plan as a building whose height is greater than the width of the right-of-way of the street that it fronts.*  
**Bylaw 85P2018**

## 9.3.2 Residential

### Objectives

- “Encourage sensitive types of housing intensification” (Calgary Transportation Plan)
- “Encourage new housing close to transportation facilities ...” (Calgary Transportation Plan)

- “...increase residential densities in appropriate locations.” (Bridgeland-Riverside ARP)
- “...provide opportunities for a wider range of residential alternatives for different age and income levels.” (Bridgeland-Riverside ARP)
- “Explore opportunities for innovation in residential and mixed used development, including consideration of special needs and affordable housing.” (Terms of Reference)

In short, these objectives relate to four key aspects of housing - location, housing type, physical form, and affordability. (Figure 21)

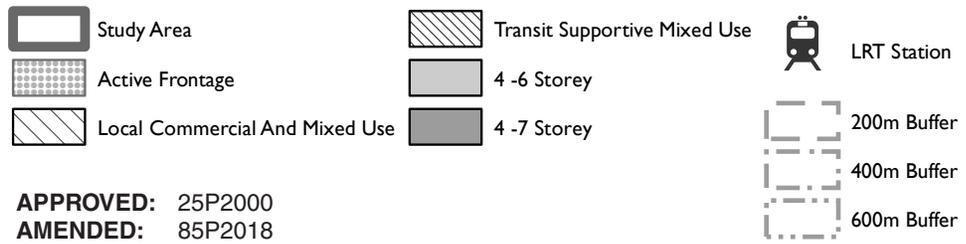
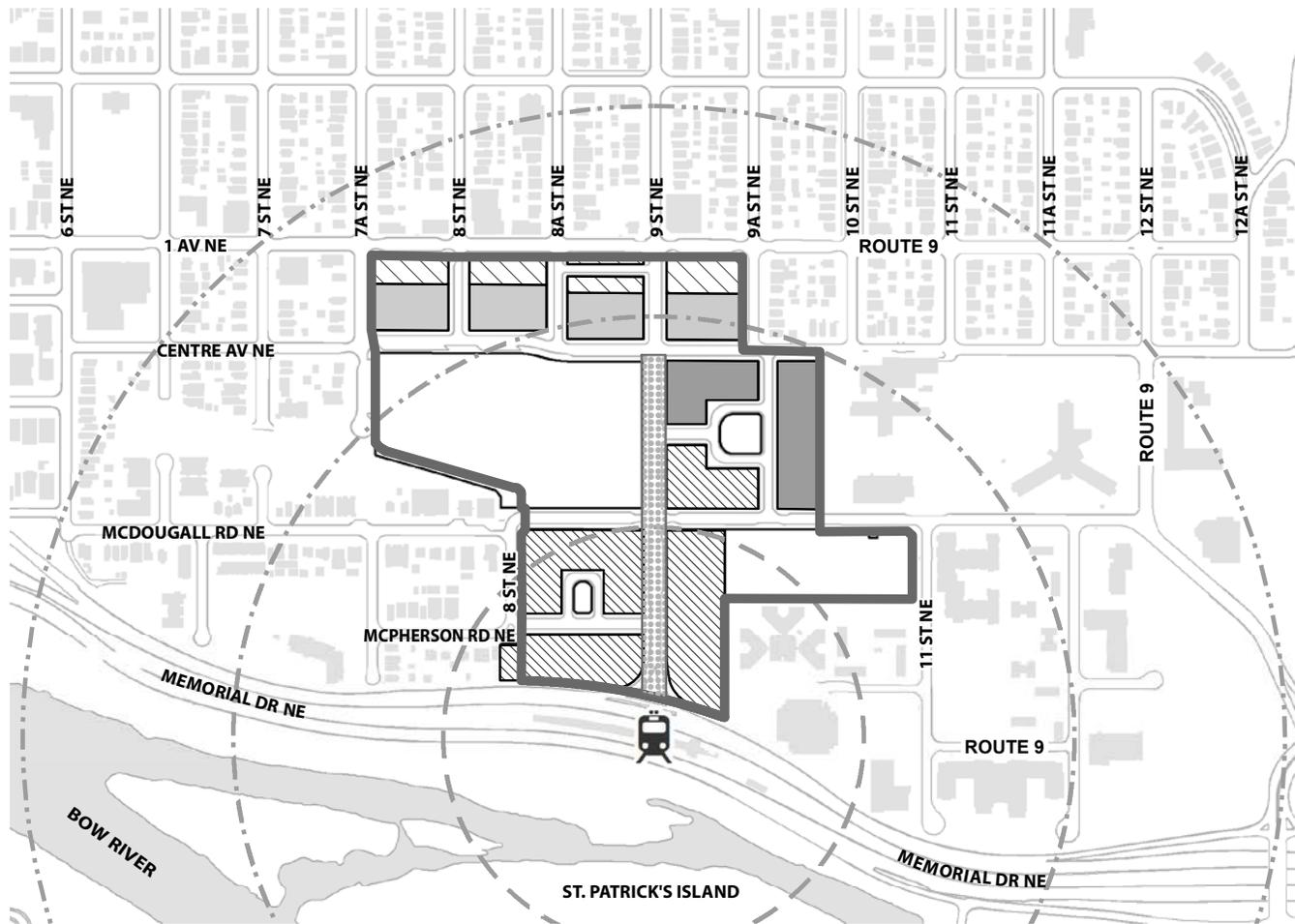
**Location** - The relocation of Riverside Park accomplishes two complementary objectives - it optimizes the distribution of open space within the study area and community and it allows housing and other types of transit-supportive development to be built in the immediate vicinity of the LRT station. In addition, a significant amount of new housing will also be built in close proximity to or on 1st Avenue so that bus service and 1st Avenue businesses will also be better supported.

**Housing Type** - New building forms are being proposed that incorporate street related housing at the base of buildings with apartments above. Townhouses are suitable for a wide range of households including, singles, young couples, empty nesters and families with children. In addition, in some locations, opportunities may be created for the owner of a townhouse to develop a ‘secondary suite’ or to develop a ‘live/work’ unit. The opportunity to pursue either



*Street townhouses with apartments buildings above*

of these options helps to extend the range of affordability for individual households. (See discussion under ‘Affordability’). Over longer periods of time, these options also increase the flexibility with which households can respond to changing economic or family circumstances without having to leave their home or community. As such, the long-term stability of the community is also facilitated.



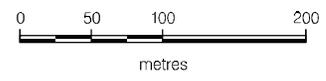
**APPROVED:** 25P2000  
**AMENDED:** 85P2018

Bridgeland – Riverside

Figure 21

Residential

May 2002



THE CITY OF CALGARY  
 PLANNING & TRANSPORTATION POLICY  
\\work\work\plan\plans\arp\bridgeland\residential.dgn  
 DATE PLOTTED: 02-MAY-2002

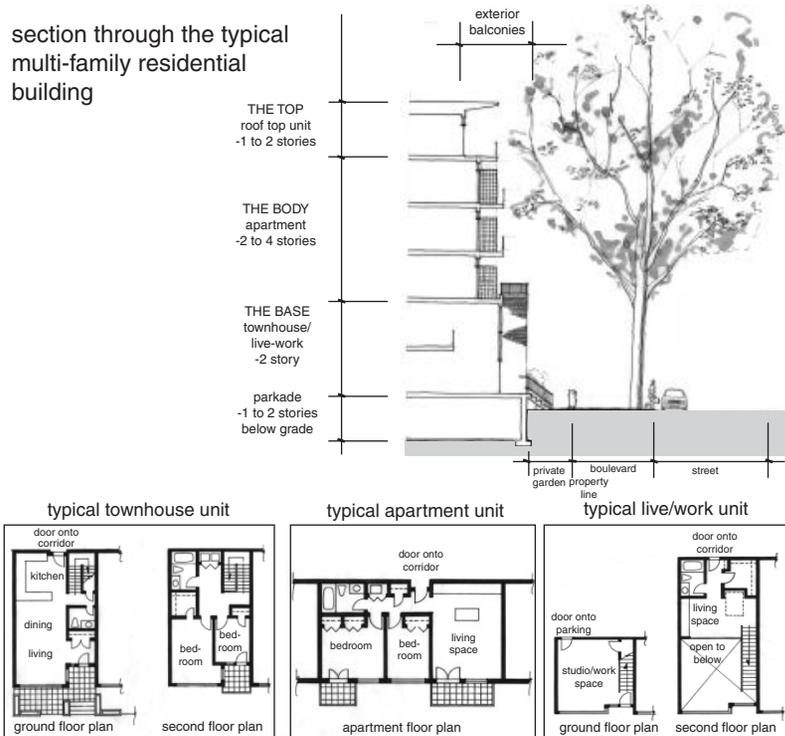
**Physical Form** - The Concept Plan proposes to introduce a new building type into the community as described above. The residential component of this building type comprises a base of housing units with direct access to the street. The upper storeys of buildings would be set back from the building base of two or three storeys. Above the townhouses, apartments would be built with building heights ranging from four to eight storeys. The Direct Control guidelines of the Land Use Bylaw should establish a consistent set back for the upper storeys of buildings. In some locations, live/work units would be encouraged.

The emphasis on landscaping the boulevards with street trees and the establishment of minimal building setbacks has implications for the landscaping of front yards. In many cases, it may not be possible to plant trees in front yards. This implies the need for the Development Authority to consider deferring some of the on-site tree requirements to the surrounding boulevards. Nonetheless, on-site landscaping must be to a high standard that contributes to the overall quality of the project.

**Affordability** - In Calgary, the demand for affordable housing, both market and non-market, is high. For purposes of the following discussion, 'affordable housing' refers to housing that is available to households with low to moderate incomes which does not require them to pay more than 30 percent of their gross income for housing. In this context, affordable housing could be provided through the private, non-profit and/or public sectors. In addition to meeting basic human needs, affordable housing supports social diversity and offers opportunities to adapt to changing lifestyles.

'Non-market housing' refers to any social or special needs housing which receives some government funding in order to support individuals or families who cannot afford to pay market rent.

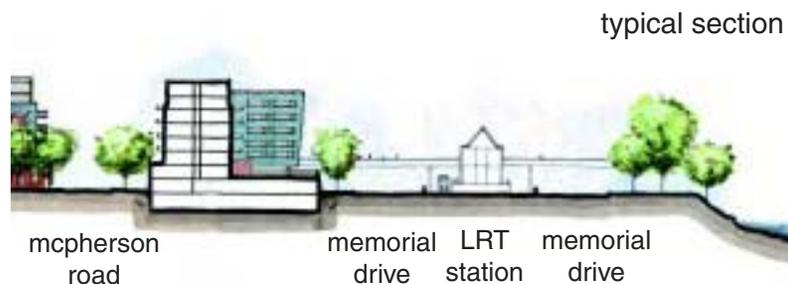
The City of Calgary is prepared to considered partnerships/ joint venture proposals with non-profit organizations, other levels of government and the private sector to deliver affordable housing within the study area. Well-



designed affordable housing projects that contain a mix of market and non-market units, integrate well with the surrounding area, and cater to different target groups, will be encouraged. Such projects may include co-operatives, co-housing, and other housing initiatives from the public, private, and non-profit sectors.

A notable amount of non-market housing already exists in the community adjacent to the study area. In order to ensure an appropriate balance between market and non-market housing within the community as a whole, greater emphasis will be given to the provision of affordable market housing that is targeted to households with incomes that fall below the median household income for the city.

A potential synergy exists between the desire to promote use of the LRT and the provision of affordable housing. The LRT station area south of McDougall Road is a logical place to promote and encourage the provision of affordable market housing geared for singles and couples.



## Policies

1. A variety of townhouse and apartment developments will be encouraged and facilitated in order to expand the range of housing choices within the community.
2. Each development and dwelling unit should be designed with consideration of privacy, territoriality, individuality and identity, and access to sunlight for habitable rooms and private amenity spaces.
3. Residential buildings will be oriented to the street in order to enhance the experience of the pedestrian, to enhance the safety of the community and the housing project, and to facilitate opportunities for social exchange.



*Attention to detail, individual unit identity, front gardens*

4. Building setbacks from the street will be minimized in order to establish an urban development character and to bring buildings closer to the sidewalk and pedestrians.
5. *Multi-residential, commercial, or mixed-use developments should provide setbacks, after the second or third storey, to reduce the massing of a taller building from the streets. The ground and lower levels of developments should demonstrate a strong relationship to the human scale and contribute positively to the public realm and street.*  
**Bylaw 85P2018.**

6. Appropriate levels of detailing, building articulation, and doors on the street will be strongly encouraged.
7. For new housing developments that would be located immediately adjacent to existing R-2 low density residential development, the maximum building height shall not exceed 4 storeys in order to ensure an appropriate transition.
8. Particular attention will be paid to the design and landscaping of front yards to ensure an appropriate edge is created to the street and that there is a clear distinction between the public, semi-public and private realms. In this respect, the use of low fences and hedges or other suitable means of marking the boundary between the public and private realm will be encouraged.
9. The Development Authority may consider deferring some of the Land Use Bylaw requirements for on-site trees to adjacent boulevards. To maintain the emphasis of providing



*An emphasis on street trees*

street trees in this area, the developer will, in general, be required to provide boulevard trees. Notwithstanding any on-site relaxations, site landscaping is to reflect a high quality throughout, with the developer providing as many trees as a site can reasonably accommodate.

10. When site landscaping is located on the roofs of parkade structures, a depth of soil shall be provided that is sufficient to support the growth of healthy vegetation. Alternative design solutions, such as corner cuts to the parkade base should also be explored, where appropriate. A qualified landscape architect should be hired by the site developer to ensure proper landscape design is achieved.

11. Parking and vehicular access should be designed to minimize impacts on the pedestrian environment in accordance with the following:

- access to underground parking garages should be from the side street, wherever possible;
- driveways should be as narrow as possible, in keeping with the *Standard Specifications for Street Design*. To facilitate narrowing of driveways and a reduction in the number of driveways, consideration should be given to shared access points;
- consideration should be given to textured and/or patterned paving treatments for driveways;
- landscaping should be a component of the design of the driveway area and should not create a visibility or safety problem;
- any surface parking that is provided should only be provided at the rear of buildings so as to provide continuous street development.

12. Encourage the development of affordable housing that is available on an ownership or rental basis and that is affordable to low, middle and moderate income groups.

13. The City, in its role as landowner, is prepared to participate in partnership/joint venture proposals to deliver affordable rental housing, subject to budget considerations and partnership arrangements. A minimum of 100 affordable

and/or non-profit units oriented to families with children will be pursued, with an impact report through the Calgary Planning Commission and the Affordable Housing team.

14. Affordable housing proposals should meet the following criteria:

- the development should be well designed and integrate well with development in the surrounding area;
- housing units should be designed to meet the long-term needs of the target groups (e.g. disabled, families, seniors);
- the development should represent a mixed model approach, offering both market and non-market housing units;
- rents should be retained at affordable levels on a long-term basis.

15. The provision of affordable market housing will also be encouraged and facilitated by:

- considering the option to allow townhousing units the opportunity to divide into two suites (one larger unit and a 'secondary' unit), provided sufficient parking is available on site for the additional potential units.



*Playing field*

### 9.3.3 Public Parks and Open Space

#### Objectives

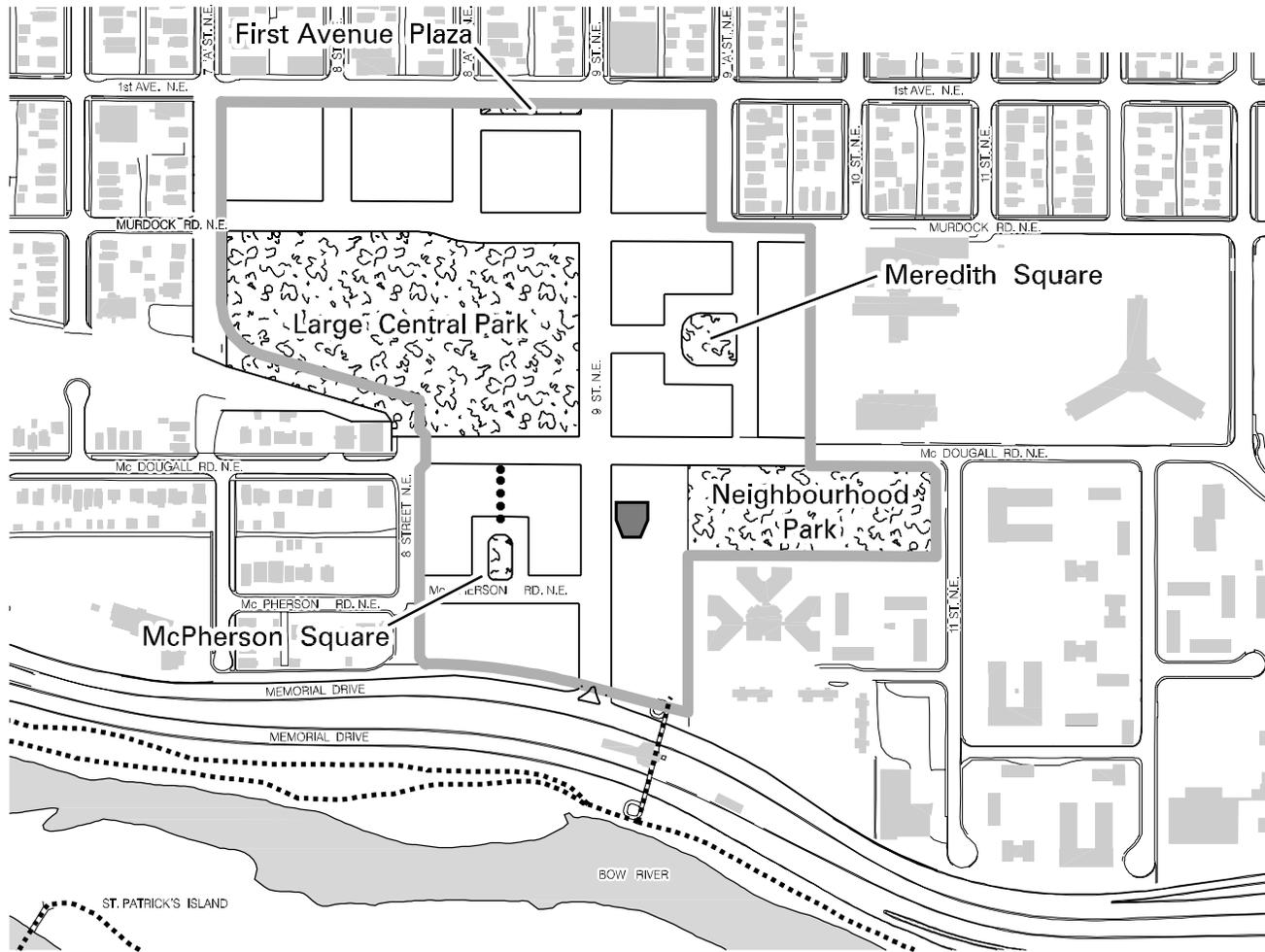
- “...optimize the distribution of open space in relation to the surrounding community, while ensuring that the quality of facilities and amount of open space is equal to, or better than, that currently in place.” (Terms of Reference)
- “Investigate the feasibility of providing a commemorative area which recognizes the contributions of the Calgary General Hospital and its role within the city.” (Terms of Reference)

One of the most significant changes to be implemented during the redevelopment process is the relocation of Riverside Park to a more central location within the community (See Figure 22). As previously mentioned, the relocation of the major park accomplishes two complementary objectives - it optimizes the distribution of open space within the community and it frees up land adjacent to the LRT Station for transit-supportive development.

The benefits of the park relocation to the community are numerous. First, the new park will be within walking distance of many more households. Second, it ensures that the new views to the river valley and Downtown can be enjoyed by all community residents and Calgarians.



*A public garden/square*



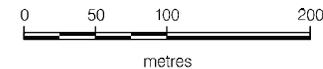
-  Site Boundary
-  Park
-  Regional Pathway
-  Potential Public Access /Pathway

Bridgeland – Riverside

Figure 22

## Parks And Open Space

May 2002



THE CITY OF  
**CALGARY**  
PLANNING & TRANSPORTATION POLICY

\\work\work\plan\plans\arp\bridgeland\parks\_openspace.dgn  
DATE PLOTTED: 02-MAY-2002

Third, it has created the opportunity for the community to reconsider the programming of its park space so that it can better meet the needs of local residents and other users of community facilities. Fourth, in conjunction with the relocation of the major park, a new community hall and outdoor pool/water feature will be built on the south side of Murdock Road. Fifth, the park will no longer be impacted by noise due to the high traffic volumes on Memorial Drive.

Park space will also continue to be provided at the east end of the study area (including McDougall Park), and in several smaller parks. Finally, a plaza will be created on 1st Avenue on the block between 8A and 9th Streets. The purpose of this plaza is to provide a small scale public gathering place that reinforces retail/commercial development, supports and enhances pedestrian activity on the street, and adds visual interest, a central focus and a distinct character to the street.

It is noted that the Concept Plan proposes that some of the parking requirement for the community hall and park facilities be accommodated on the street. This approach, in essence, increases the amount of park space available to the community for recreational purposes. It is also noted that not all of the open space lands may be dedicated as municipal reserve because of the restrictions on use stipulated under the provisions of the Municipal Government Act, 1995. In conclusion, the amount of park and open space that will be provided through redevelopment of the BVC exceeds the amount in the study area prior to redevelopment (4.17 ha). The

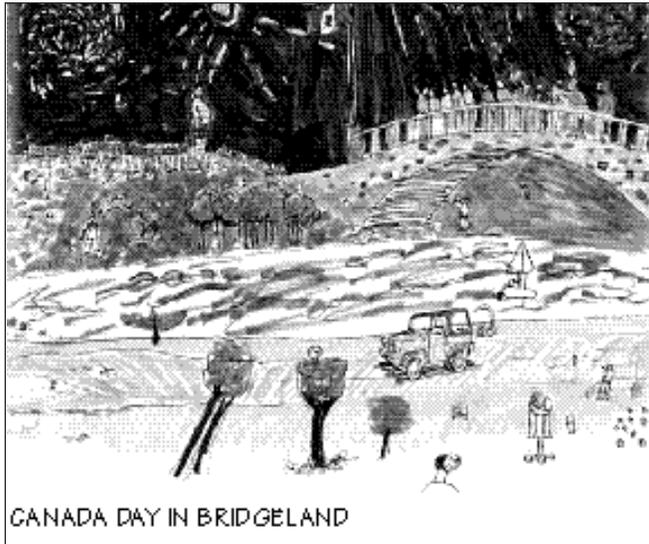
quality of the space provided and the range of recreational activities provided will also better meet the needs of the existing community as well as the new residents than retention of the existing facilities would be able to.

- **Community Hall**

The Concept Plan proposes that the existing community hall site and outdoor pool be redeveloped for housing and other transit-supportive uses and that a new community hall and outdoor pool/water feature be constructed on the new major park site. A memorandum of agreement will be



*Mature grove of trees, east of the existing community hall*



*Co-Design Fair Drawing #29 -  
Watching fireworks from the large park*

signed between The City of Calgary and the Bridgeland-Riverside Community Association (BRCA) detailing the arrangements for the hall relocation and construction of a new facility. The BRCA will continue to operate from its existing building until the new facility is available for occupation.

- **Park Space Programming**

The relocation of the large park to a more central location and adjacent to future housing developments implies that the new park will have a more local focus than Riverside Park had. The location, configuration and topography of the new park will support a greater range of activities

and park environments. The park will be developed as a series of terraces in response to the significant changes in grade that occur between Murdock Road and McDougall Road. For example, a large playing field (soccer) will form the central 'platform' of the park. Another terraced area will be created at the west end of the site and may accommodate a variety of uses such as tobogganing in winter and informal picnic, play field and amphitheatre in the summer. The east side of the park can also accommodate a variety of uses and may be programmed for more structured recreation uses (e.g., outdoor pool/water feature, playground, basketball hoop, etc.).

The boundaries of the park will also establish a variety of environments facilitating a range of activities. For example, 7A St will be closed about one-half block south of Murdock Road so that the roadbed can be renaturalized and integrated into the park, thereby connecting the escarpment and existing pathway into the new park. The esplanade bordering the park on Murdock Road will offer opportunities for walking, sitting, overlooking and spectating in a more formal environment with views of the Downtown as a backdrop. The east side of the park borders 9th St and will offer pedestrians an interesting, varied, pleasant, tree-lined walk to the LRT station in one direction and to 1st Avenue in the other direction.

The existing neighbourhood park (McDougall Park) of approximately 1.16 ha (2.87 ac) will continue to exist east of the development site on 9th Street and south of McDougall Road. This park encompasses the existing seniors' park, a playground and picnic area.

The small ornamental parks, including the 1st Avenue plaza, form integral components of the open space system. For example, they add interest and variety to walking and cycling routes and create places to meet friends and neighbours and enjoy the public life of the street, etc. Although, these spaces serve important public functions, their success depends to a high degree on how well they relate to the immediately adjacent uses in terms of both function and design.

A new section of the regional path will be constructed on a public easement located on the east side of blocks 10A and 10B and along 9A Street, connecting the regional path between Memorial Drive and 10th Street.



*Another park 'framed' by buildings*

Linkages to the regional pathway system will be improved with the provision of pathways through the central park and the development of the street system, providing direct pedestrian and cycling links to the existing street network. In addition, consideration should be given to identifying the provision of a new pedestrian bridge to St. Patrick's Island in The City's capital budget for park facilities. The main benefit such a facility would have, is the reduced commuting time for pedestrians and cyclists bound for Downtown. It will also enhance the recreational use of the pathway system. As the population in this area continues to grow, the demand for such a facility is also anticipated to grow.

- **Calgary General Hospital Commemoration**

The new large park is located where the hospital buildings formerly stood on the site. Thus, the Concept Plan offers the potential to commemorate the location of the Calgary General Hospital in a variety of ways. Public input regarding an appropriate way to commemorate the hospital was sought during open houses held during the planning process. The results indicate that the public favors approaches that are modest in nature and located adjacent to or within the large central park.

### **Policies**

1. The parks and open space should be designed to provide a diversity of recreational and landscape treatment, from urban/refined to natural areas and less planned/structured areas.

2. Public parks and open space should be appropriately located within the study area. The major components include the following as shown in Figure 22:

- A central park of approximately 3.28 ha (8.10 ac) will be provided and should be configured to accommodate active and passive recreational use.
- A neighbourhood park of approximately 1.16 ha (2.87 ac) will be provided at the east end of the study area.
- One small ornamental park will be provided (approximately 0.14 ha in area) east of 9th Street and south of Murdock Road.
- A small ornamental park (approximately 0.04 ha) will be built as a central feature of 1st Avenue that serves as a public gathering place and enhances the vitality of the avenue. This park will be subject to a maintenance agreement with the adjacent landowners and/or the local business community.
- A third small ornamental park (approximately 0.05 ha) will be provided in conjunction with the development of McPherson Square. It should connect visually to the large central park, be designed to expose housing units to sunlight, and encourage optimal street frontage for townhouse units.



*Parks can provide a variety of recreational opportunities*

3. Parks should be designed to be durable, particularly with regard to the size of plant materials, types of landscapes and building materials and construction details. Park design and construction should be consistent with the *Design Development Guidelines and Standard Specifications Landscape Construction (Guidelines)*.
4. Public parks and open space components of the study area should be located, sized and configured to create spaces that are functional, safe and flexible. Detailed design and development plans for each of the parks will be prepared by the Developer in consultation with City of Calgary Park Development and Operations, other City business units as appropriate, and the Bridgeland-Riverside Community

Association. Such plans should address project design, landscaping, performance standards and maintenance. Issues related to visibility, access, use, lighting, safety and security, seating, solar exposure and so forth should also be examined. Third party contributions are required for the maintenance of all park lighting and other unique design elements (e.g. fountains, gazebos, etc.).

5. The design of parks and the detailing of pathways, benches, etc. should take into account their use during all seasons of the year.
6. All parks and open space should be designated as PE as part of the land use amendment process to reflect their future use as open space.
7. The configuration and design of parks and open space should respect and reinforce views and linkages to streets and other public spaces. Public spaces should be visible, safe, and designed to be sensitive to surrounding areas.
8. The street, sidewalk and pathway system should be designed as a barrier-free, integrated system, providing links to the nearby regional pathway and enabling residents to walk, jog and cycle safely throughout their community.
9. Where appropriate, parks and open space should be designed for both active and passive uses and should reflect the needs and preferences of local residents (existing and new). The spaces should also reflect and

reinforce the character of the surrounding area and accommodate the anticipated activity and intensity of use.

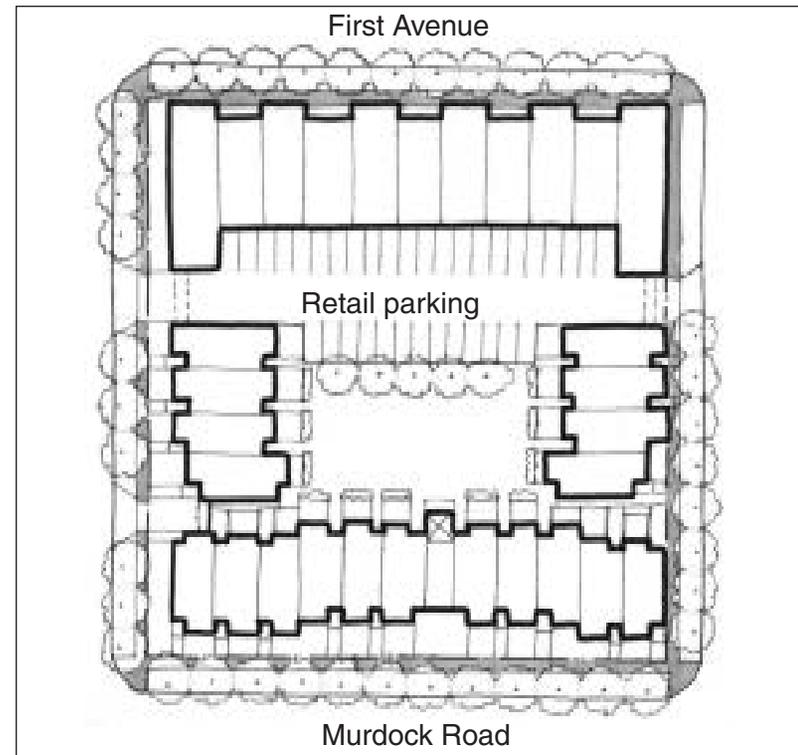
10. A community stewardship role for the protection and shared management of parks and open space within the community should be promoted and supported through programs such as Adopt-a-Park, Adopt-a-Tree, the Planting Incentive Program, and the Greening of Calgary. It is noted that in some cases special maintenance funds and/or operating agreements may be extended or required (e.g., outdoor pool).
11. In addition to the provision of new planting, existing trees within the study area should be retained and/or relocated onto the new public open spaces, wherever possible. Where relocated trees are provided on public lands, maintenance must be addressed to the satisfaction of City of Calgary Park Development and Operations and their location shall be co-ordinated with Engineering Services.
12. Special consideration should be given to the protection of trees during the construction phases of redevelopment. Developers, builders and trades people will be encouraged to undertake effective tree and root protection practices. Public trees are subject to the provisions of the Parks Bylaw.
13. Consideration should be given to including the provision of a new pedestrian bridge to St. Patrick's Island in The City's capital budget for park facilities.

### 9.3.4 Commercial/Retail Development

#### Objectives

- “Explore opportunities to enhance the viability of 1st Avenue businesses.”
- “Explore opportunities for innovation in residential and mixed-use development ...”

The concept plan proposes two locations for additional retail, commercial and office development - an extension to retail/commercial development on 1st Avenue and in the LRT station area. Small-scale retail/commercial development that would complement existing development and serve the needs of local residents such as bookstores, coffee shops, small restaurants, speciality stores, arts and crafts stores, etc. should be encouraged on 1st Avenue. Retail/commercial development in the vicinity of the LRT Station should focus on the convenience needs of transit users and nearby residents, including seniors and office employees, should significant office development occur in this area.



*Potential building footprints - retail on First Avenue, housing on Murdock Road*

### 9.3.4.1 1st Avenue

Redevelopment and the new population it will bring to Bridgeland-Riverside represents a first step towards a revitalized 1st Avenue. Currently, commercial development on 1st Avenue is discontinuous. The strategy to revitalize the avenue as a commercial street is to encourage further commercial/retail development consistent with existing and potential commercial development on the north side of 1st Avenue and to concentrate new development in the two blocks to the west of 8A St. A wide variety of uses including live/work units, small scale institutional, offices, shopping, restaurants, arts and cultural activities, and entertainment will be encouraged. Commercial and retail goods and services that are focused on serving the needs of local residents will be encouraged.

The building form that will characterize development on the south side of 1st Avenue will complement existing development. Heights of 3 storeys will be encouraged with retail/commercial development provided at grade and office or residential above. Development at the street level will be similar in form to elsewhere in the study area - it will be street-oriented, well detailed, and building facades will be broken into small units or 'bays'.

A focal point for 1st Avenue will be developed on the block between 8A and 9th Streets in the form of a public plaza. The purpose of this plaza is multi-fold - to provide an interesting, attractive, comfortable public gathering



*Retail street with housing above*



*Pedestrian-oriented shopping street*

place, to establish and reinforce a unique character and identity for the avenue, and to enhance the vitality of 1st Avenue. (Refer to Section 9.3.3, Parks and Open Space).

The retail area may extend along 1st Avenue to 9th St once confidence has been established in the viability of further retail development without jeopardizing existing development. The two easterly blocks may develop with a mix of residential and live/work units at grade with additional housing on the two storeys above grade. At a later date, these units could convert to retail/commercial space.

### **Policies**

1. Encourage and reinforce commercial/retail development on 1st Avenue that is oriented to the needs of local residents, and is small scale, diverse and varied.
2. Enhance the pedestrian environment along 1st Avenue between 7A and 9A Streets.
3. Integrate new developments with existing businesses in a manner that complements existing businesses and is consistent with Policy 4.1 (1995 ARP).
4. Permit maximum heights of 3 storeys on 1st Avenue in accordance with Direct Control (DC) guidelines to be developed for the south side of the avenue within the study area. The DC guidelines should establish a setback for the upper portions of the buildings.

5. Create a public focal point for the community and 1st Avenue, such as a public plaza, on the block between 8A and 9th Streets.
6. Approve land use districts which permit the conversion of at-grade residential units to retail units, and vice versa, on 1st Avenue.
7. Loading zones for commercial/retail development should be located on site at the rear of the buildings.

#### 9.3.4.2 LRT Station Area

One of the key objectives of redevelopment for the site is to take full advantage of the presence of Bridgeland LRT Station and encourage more ridership of the C-Train. Providing development in close proximity to the LRT station is one of the most significant changes proposed in the redevelopment plan that will have major benefits on LRT ridership. There may be the potential for office/institutional development in the order of 23,225 - 27,870 m<sup>2</sup> (250,000 - 300,000 sq. ft.) adjacent to the LRT station on Blocks 9 and 10b (Figure 24).

If office/institutional development of this magnitude were to be attracted to this site, the employees could support some retail/commercial development at grade. They would also support 1st Avenue restaurants and may take advantage of community programs and park space. This mix of uses - office/institutional with supporting retail and commercial development and with housing development on the north side of McPherson Road represents an ideal



*Bridgeland LRT station and pedestrian ramp*

mix of uses adjacent to the LRT. Further, office/institutional development adjacent to Memorial Drive would buffer residential development from traffic noise generated on the expressway.

#### Policies

1. Continue to explore the feasibility of office/institutional development in the vicinity of the LRT. In the event that significant office/institutional development is determined to be feasible and appropriate, architectural design guidelines should be prepared to ensure that the design of the building(s) responds sensitively to the residential development in the immediate vicinity. The guidelines should address matters such as compatible building

materials, architectural detailing, extent and types of glazing acceptable, street presence, and building character.

## 9.4 Parking

The Concept Plan proposes that parking requirements will be handled primarily through on-site parking structures supplemented, in some instances, by surface and street parking.

Given the uncertainty around the potential for parking issues to emerge in the 1st Avenue-Murdock Road area, it would be appropriate to monitor the parking situation in the early stages of development. If problems arise that cannot be readily resolved, a parking study should be conducted so that a thorough analysis can be undertaken. The study should investigate the feasibility of on-street parking, need for metered parking, desirability of a public parking lot, and potential for a cash-in-lieu policy. The study would need to examine parking issues for both sides of 1st Avenue and include restaurants, retail businesses and the community hall and large park and the demand for parking generated by each of these developments.

### General

The following policies apply to all areas of the Concept Plan:

1. With the exception of parking for retail/commercial development, parking is encouraged to be provided underground.
2. Underground parking should be well-lit and ventilated.
3. Parking entrances should be integrated into the building or landscape, and exposed walls should be architecturally treated. Good visibility should be provided for vehicles at access points to enhance the safety of pedestrians and the security of the building.
4. In the event that surface parking is provided, it must be located at the rear of the building in order to ensure a continuous built edge along the street.
5. A parking and traffic operations management strategy should be prepared for the commercial/retail development on the south side of 1st Avenue and submitted to the Calgary Roads Business Unit in conjunction with the development permit for the first commercial/retail building. The strategy should address issues related to parking requirements for commercial, retail and restaurant development within the study area, such as the feasibility/desirability of shared on-site parking arrangements, potential demand for on-street parking, traffic flows between sites, and other issues identified by the Calgary Roads Business Unit.



*Underground parking*

### **9.4.1 Residential**

*Parking requirements are determined as per the current  
Land Use Bylaw.*

**Bylaw 85P2018**

### **Policies**

1. Parking for residential projects should be secure, accessible and adequate for the needs of residents and visitors.
2. Parking for residential projects will be encouraged to be provided underground.
3. In the event that surface parking is provided, it must be located at the rear of the building in order to ensure a continuous built edge along the street. **Bylaw 85P2018**

### 9.4.2 Retail/Commercial

Retail/commercial development in this area creates a dilemma when it comes to parking. Small-scale retail development relies upon conveniently located surface parking (provided either on-site or on the street) in order to be economically viable. As well, retail development on 1st Avenue needs to be concentrated and provide a continuous street frontage in order to provide an appropriate environment for pedestrians and potential customers. This reduces the amount of space available for on-site surface parking. Traditionally, inner city retail development has relied on street parking to augment the on-site supply. Even so, finding sufficient parking for restaurants is a challenge under such circumstances.

#### Policies

1. Parking for retail/commercial development should be provided on-site at the rear of the buildings or may be provided underground. On site parking may be supplemented by on-street parking to the satisfaction of the Approving Authority.

### 9.4.3 Community Hall

Another issue is the most appropriate way to provide sufficient parking for the new community hall and central park. Traditionally such parking is provided on-site and the existing community hall meets its parking requirement in this way. However, the context for the new park will be different. It will be within walking distance of many households and it will be surrounded on four sides by streets. In addition, the interior of the park will be highly visible from surrounding residential development and pedestrians walking on adjacent streets. As such, the aesthetics of the park development are an important consideration. Given these circumstances, it is appropriate to consider the use of on-street parking to augment the supply of parking that can be provided on-site in an appropriate and aesthetically pleasant manner. Also, given the emphasis the Concept Plan places on creating a pedestrian-friendly street environment and the desirability of calming traffic, allowing and even encouraging on-street parking would be appropriate in this setting.

Accepting the use of on-street parking in partial fulfillment of parking requirements is consistent with the inner city context and with sustainability objectives. In this respect, the amount of space dedicated to car use is reduced, redundancy is decreased and the amount of impervious surface area is decreased. The potential for 8th and 8A Streets to be developed as one-way streets with angle parking on them should be explored, as an additional source of parking. These stalls could be metered. In addition, angle parking is proposed on Murdock Road in order to support community hall and park facility functions.

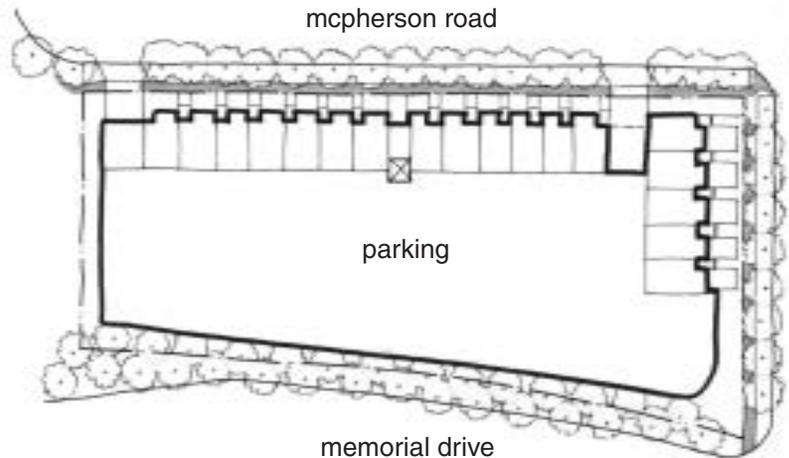
## Policies

1. The Development Authority shall require a portion of the parking stalls to be provided on-site and is encouraged to relax the remaining stalls required for the community hall and large park after taking into account the availability of on-street parking on the four sides of the park.

### 9.4.4 Office/Institutional Uses

Parking for potential office or institutional development in the vicinity of the LRT station poses another set of challenges. Due to the high water table in this area, it may only be possible to build parking structures half a level

typical site plan



below grade. This would have a negative impact on the pedestrian quality of adjacent streets unless the parking structures are screened from the street by constructing retail/commercial or live/work space in front of them. This approach addresses not only aesthetic concerns but also enhances the safety of the urban environment by placing active uses overlooking the street.

## Policies

1. Parking for potential office/institutional development in the vicinity of the LRT station should be provided on-site in structured parking lots. Parking shall be screened from the street by placing retail/commercial or live/work development at-grade in front of the parking structure.

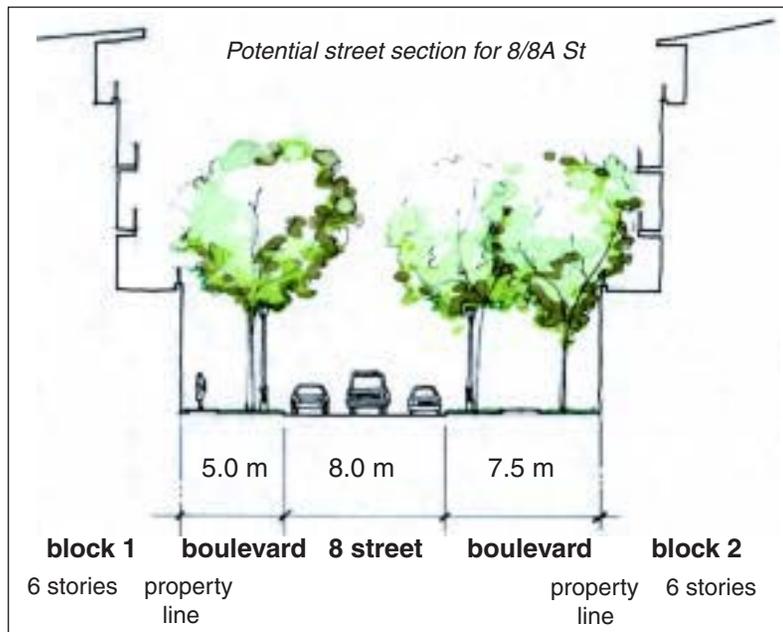
### 9.5 Transportation/Public Systems

Public systems include streets, sidewalks, transit, parks and pathways and together represent a prime determinant of neighbourhood character and livability. An underlying premise of the Concept Plan is to create a neighbourhood of streets that are oriented to the pedestrian. Such streets are pleasant and safe and allow people to reach destinations within and outside the community on foot, on bike, on the bus, or in the car. In this respect, tree planting is an integral part of the street environment and shall be part of the area design.

Within the Concept Plan area, the street system is the primary pedestrian pathway system although it is supplemented by pathways through the large park. A

number of measures will be undertaken to encourage and support walking, cycling and transit. These include the planting of street trees in the boulevards, wherever possible, direct pedestrian connections, conveniently located bus stops, and overlooking of sidewalks and streets from adjacent shops, houses and offices.

The proposed road network is an extension of the existing grid pattern of streets in the community (Figure 23). Murdock Road will be rebuilt, 8th and 8A Streets will reconnect to 1st Avenue and Murdock Road, and 9th Street will extend from 1st Avenue to form a new connection with Memorial Drive. 7A St will be closed south of Murdock



Road so that it can be integrated into the central park. The 8th St access to Memorial Drive will also be closed in favour of the 9th St access. Shifting the road access on Memorial Drive east to 9th St allows a better bus connection to be made to the LRT and provides a direct connection to 1st Avenue. This will benefit businesses on 1st Avenue. The 9th St access also provides a better condition than the current access at 8th St for traffic merging onto Memorial Drive before the 4th Avenue overpass. However, it will be important to incorporate appropriate traffic calming measures along 9th St in order to deter shortcutting north of 1st Avenue.

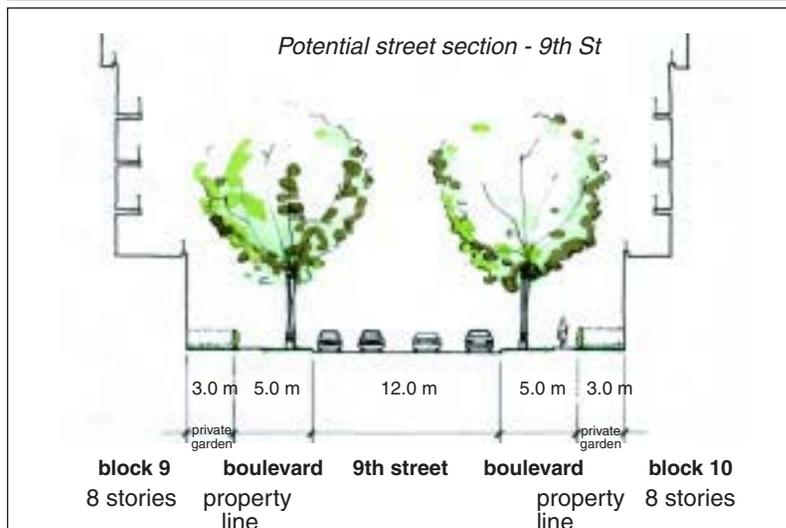
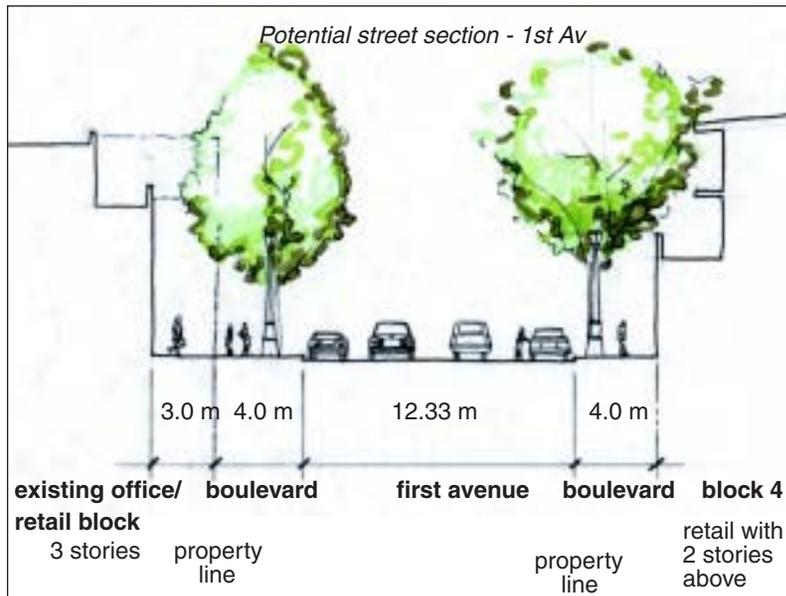
**Bylaw 85P2018**

- **Traffic Calming**

Traffic calming is an important component of the transportation plan. Traffic calming reduces the negative impacts of higher traffic volumes and also reduces incentives for shortcutting through the community. Locations for proposed traffic calming measures are identified in Figure 23. Options for traffic calming will be reviewed and implemented as detailed roadway and engineering is completed.

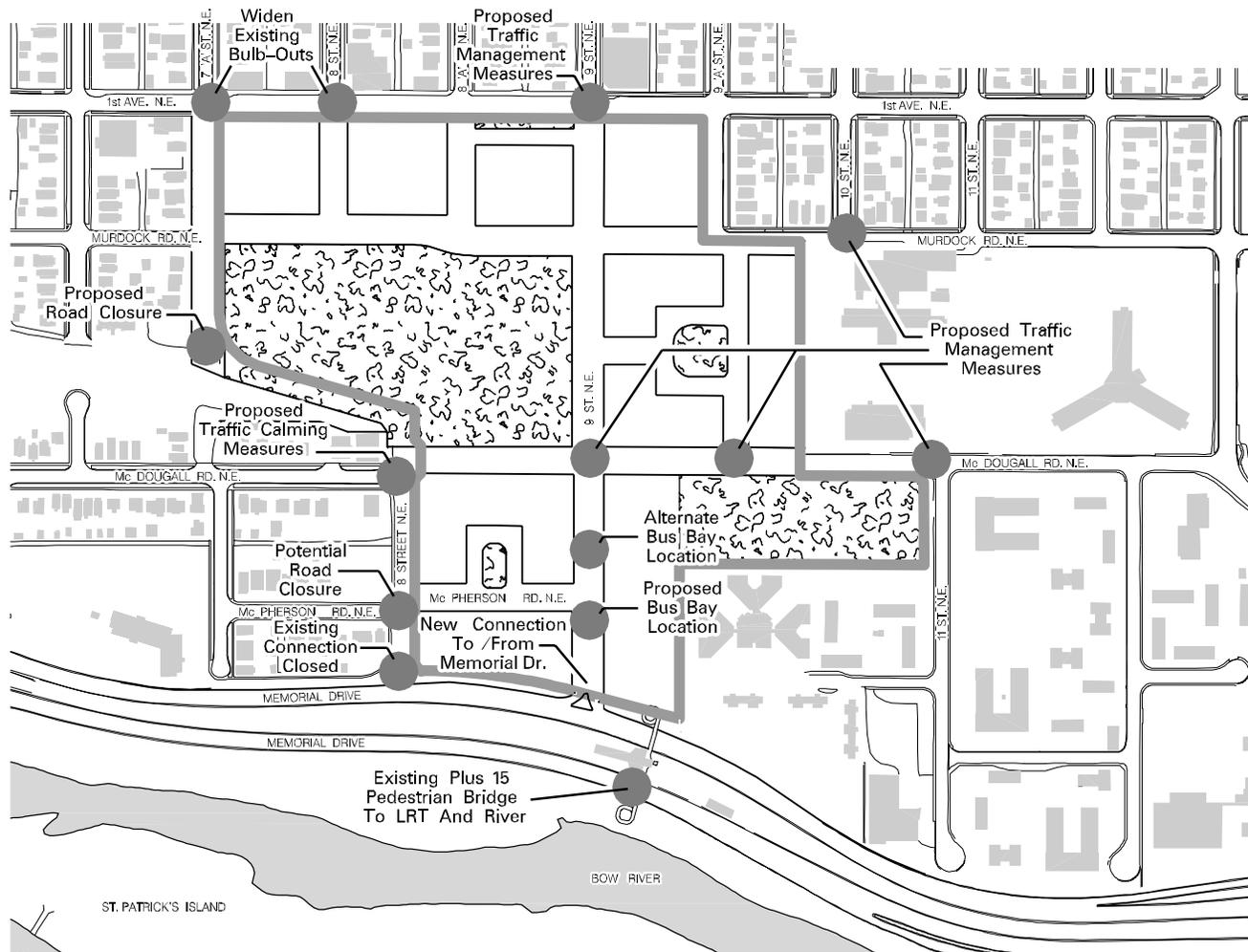
### Policies

1. The design and alignment of the street system should discourage short-cutting, reduce vehicle speed and promote a safe pedestrian and cyclist-friendly environment. In general, the area streets should be designed in a manner consistent with the overall character of the Bridgeland-Riverside community instead of adopting



standards appropriate to new suburban development. Typical cross-sections for Connector, Avenue and High Street as set out in the Alternative Street Design Standards (1999) are preferred to Collector or Primary Collector cross-sections.

2. Streets should be designed so that street widths, design speed and the number of travel lanes are kept to a minimum, are acceptable to The City, are consistent with the existing community roads, accommodate the anticipated mixed-use traffic and transit, and do not compromise car safety, on-street parking or bicycle access.
3. Traffic calming measures will be installed with the initial construction of new roads (e.g. 9th Street) and/or developments (e.g. sites on 1st Avenue).
4. As shown in Figure 23, the internal road network includes the following features:
  - 9th Street - a north/south road that provides a direct route linking Memorial Drive to 1st Avenue. It is designed to carry traffic in a way that is compatible with pedestrian and cyclist traffic. Measures should be taken to deter the use of 9th Street as a convenient through route for traffic with destinations outside the community.
  - Murdock Road will be rebuilt to provide an east/west connection between 7A Street and 9A Street.



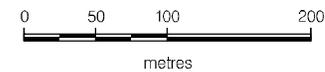
— Site Boundary

Bridgeland – Riverside

Figure 23

Proposed Street Network

May 2002



THE CITY OF  
**CALGARY**  
PLANNING & TRANSPORTATION POLICY

\\work\work\plan\plans\arp\bridgeland\proposed\_streets.dgn  
DATE PLOTTED: 02-MAY-2002

- 8th and 8A Streets will be rebuilt between 1st Avenue and Murdock Road providing access to adjacent development and to the community hall.
- 7A Street will be closed between the top of the escarpment and McDougall Road. The right-of-way will be incorporated into the central park.
- 8th Street will be closed between McPherson Road and Memorial Drive NW. Further study will be required to determine whether or not it is advantageous to close the access from McPherson Road west of 8th Street. This should be reviewed in more detail at the land use designation stage.



*Traffic calming, pedestrian environment*

5. The pedestrian system, public open spaces, private walkways and principal entrance of all buildings should be accessible to the disabled.
6. Internal and external circulation routes should be designed to enhance security. Blind corners and heavy landscaping that obstructs sight lines along pedestrian routes should be avoided.
7. Boulevards will be landscaped with street trees, grass, textured paving surfaces, benches, etc. in order to beautify the public realm and support pedestrian use. In order to optimize the number of street trees, shallow utilities (e.g. gas and electric and communication cables) may not locate under the boulevards but should locate under the sidewalk or in the road right-of-way under the paved driving surface.
8. Wherever possible, utility servicing should coincide with driveway locations so that tree planting will not be reduced in the boulevards. Pre-servicing of lots should only be allowed once driveway locations are accurately known.
9. Curb cuts will be provided at sidewalk crossings to ensure accessibility for the disabled.

## 9.6 Implementation

*The Bow Valley Centre Concept Plan* provides the policy framework that will guide redevelopment within the study area in accordance with the Concept Plan. Implementation of the Concept Plan requires further planning approvals including Outline Plans, Land Use Redesignations, plans of subdivision, development permits and building permit applications. Other implementation actions will include disposition of land, preparation of architectural design guidelines and road closures. A detailed overview of the planning and implementation processes and their legal and administrative framework is found in 'A Community Guide to the Planning Process and Public Participation in the Planning Process'. The following sections briefly outline the major implementation processes for the Concept Plan area.

**Bylaw 85P2018**

### 9.6.1 Outline Plan/Land Use Redesignations

*The Bow Valley Centre Concept Plan* provide the policy basis for subsequent Outline Plans of Subdivision and Land Use Redesignations. Outline plans are prepared as an initial stage in major subdivision applications, to ensure a sound distribution of land uses, open space, road network, etc. Outline plans are approved by the Calgary Planning Commission and form the basis for subdivision of the area into private and public parcels and public rights-of-way. An outline plan for the Concept Plan area will conform with the development concept stated in the ARP amendment and will deal generally with the locations of roads, municipal reserves and utilities.

**Bylaw 85P2018**

Land use designations establish the land use and development rules for individual land use components of the Concept Plan and are processed in conjunction with the outline plan application. Land use designations (zoning) are the primary legal control on the potential use of a parcel of land. The rules and regulations of each district are set out in *the Land Use Bylaw*. The Bridgeland-Riverside ARP *supplements* the Land Use Bylaw by providing a local policy context and specific land use and development guidelines to assist the Development Authority in deciding on land use and development proposals. Land use designations are approved by City Council at a public hearing.

**Bylaw 85P2018**

A range of residential, commercial, institutional and other land use designations, including Direct Control (DC) with appropriate development and design guidelines will be established to implement the Plan objectives.



Utility  
infrastructure

### 9.6.2 Road Closures

The Concept Plan requires the closure of portions of 7A Street and 8th Street and potentially, McPherson Road. The closure of these road rights-of-way are subject to a Public Hearing of Council. Road closure applications will be submitted by the landowner/developer concurrently with the outline plan and land use designation applications.

### 9.6.3 Phasing

Following approval of the ARP amendments, road closures, Outline Plan and Land Use Redesignations, development and servicing of the site will proceed.



*Road construction*

Development will be influenced, in part, by the availability of roadways and services, which will be better known following approval of the Outline Plan. In general, it is anticipated that grading and development of the new central park will occur during the first phase to be developed, in conjunction with residential development between the park and 1st Avenue. Once the park has been developed, the new community hall could be built, freeing up portions of the existing Riverside Park for redevelopment. The last phases to be developed will be those parcels impacted by the laundry building, which could remain on site until 2008.

### Policies

1. Depending upon the phasing pattern of development in this area, it may be necessary for the Developer to relocate utilities outside their immediate development area. Cost sharing and recovery arrangements will be to the satisfaction of the City Engineer.





# **PART 6**

## **SUPPORTING INFORMATION 2000 AMENDMENT**



# BOW VALLEY CENTRE CONCEPT PLAN

## Supporting Information to 2002 Update

### BRIDGELAND-RIVERSIDE AREA REDEVELOPMENT PLAN

#### TABLE OF CONTENTS

#### Part 6

	Page		Page
1.0 Preface .....	3	4.0 Bow Valley Centre Study Area Profile .....	23
1.1 Purpose .....	3	4.1 Study Area Topography and Natural Features .....	23
2.0 Bow Valley Centre Study Area .....	3	4.2 Ownership of BVC Lands .....	23
2.1 Study Area Boundaries .....	3	4.3 Laundry Building .....	23
3.0 Bridgeland-Riverside Community Profile .....	5	4.4 Environmental .....	23
3.1 History of Development .....	5	4.5 Existing Transportation System .....	23
3.2 Existing Land Use and Land Use Designations .....	8	4.5.1 Roadway Network .....	23
3.3 Community and City-Wide Growth .....	8	4.5.2 Public Transportation .....	25
3.3.1 Population .....	9	4.5.3 Roadway Characteristics .....	27
3.4 Age Distribution, Household Structure & Socio-Economic Profile .....	9	4.5.4 Parking .....	27
3.4.1 Age Distribution .....	9	4.5.5 Pedestrian Circulation .....	27
3.4.2 Household Structure .....	11	4.6 Existing Services and Utilities .....	27
3.4.3 Socio-Economic Profile .....	12	4.6.1 Surface Topography and Drainage .....	27
3.5 Distribution of Housing Types .....	12	4.6.2 Servicing and Utilities .....	29
3.6 1 Avenue NE Businesses .....	15	4.7 Development Constraints .....	29
3.7 Public Parks, Open Space and Community Facilities .....	16	4.7.1 Bow River Floodway and Floodplain .....	29
3.8 Schools .....	18	4.7.2 Calgary International Airport Vicinity Protection Area .....	29
		4.7.3 Surface Transportation, Noise Attenuation Requirements .....	31
		4.8 Hospital Commemoration .....	31

*Continued...*

# BOW VALLEY CENTRE CONCEPT PLAN

## Supporting Information to 2002 Update

### BRIDGELAND-RIVERSIDE AREA REDEVELOPMENT PLAN

#### TABLE OF CONTENTS

#### Part 6

	Page		Page
5.0 Policies Affecting the Amendment .....	31	10. Proposed Site Grading Following Demolition and ....	26
5.1 The Calgary Plan (Municipal Development Plan)	31	Existing Site Topography	
5.2 Bridgeland-Riverside Area Redevelopment Plan	32	11. Servicing and Utilities .....	28
5.3 Transit Friendly Design Guide .....	33	12. Development Constraints .....	30
5.4 Inner City Transportation Study .....	33	13. Bow Valley Centre Redevelopment Project Process	34
6.0 Planning and Public Consultation Processes .....	33		
6.1 Planning and Public Participation Processes ....	33		
6.2 Planning Advisory Committee .....	35		
6.3 Key Stakeholders .....	36		
7.0 Context for the Concept Plan .....	36		
7.1 General .....	36		

#### LIST OF FIGURES

1. Study Area Boundaries and Sub Areas .....	4
2. Bridgeland-Riverside Historical and Forecasted .....	9
Population Growth 1969 - 2018	
3. Age Distribution 1989 Comparison .....	10
4. Age Distribution 1999 Comparison .....	10
5. Period of Construction of Existing Housing Stock .....	13
6. Occupied Dwellings by Structure Type .....	14
7. Open Space and Community Facilities .....	18
8. Natural Features .....	22
9. Roadway, Network and Transportation Services .....	24

#### LIST OF TABLES

1. Single and Two-Family Residential Building .....	6
Permits January 01, 1989 to November 01, 1999	
2. Multi-Residential Building Permits .....	7
January 01, 1989 to November 01, 1999	
3. Commercial Building Permits .....	7
January 01, 1989 to November 01, 1999	
4. Household Structure, 1996 .....	11
5. Socio-Economic Profile .....	12
6. Open Space Inventory .....	17
7. Open Space .....	20

<b>APPENDICES</b> .....	<b>39</b>
-------------------------	-----------

# BACKGROUND AND SUPPORTING INFORMATION

## 1.0 Preface

### 1.1 Purpose

This section of the Bridgeland-Riverside Area Redevelopment Plan (ARP) provides the background and supporting information to the amendment that addresses redevelopment for the former Bow Valley Centre (BVC). The purpose of this information is to describe the context within which the planning objectives and policies of the amendment were developed.

This section is not part of the approved ARP amendment and therefore has no legal status.

## 2.0 Bow Valley Centre Study Area

### 2.1 Study Area Boundaries

The BVC study area (former Bow Valley Centre) is part of the Bridgeland-Riverside community, an older inner-city community located in the northeast sector and in very close proximity to Downtown Calgary. It is located centrally within the community of Bridgeland-Riverside and straddles the upper (Bridgeland) and lower (Riverside) portions of the community. The study area, as illustrated

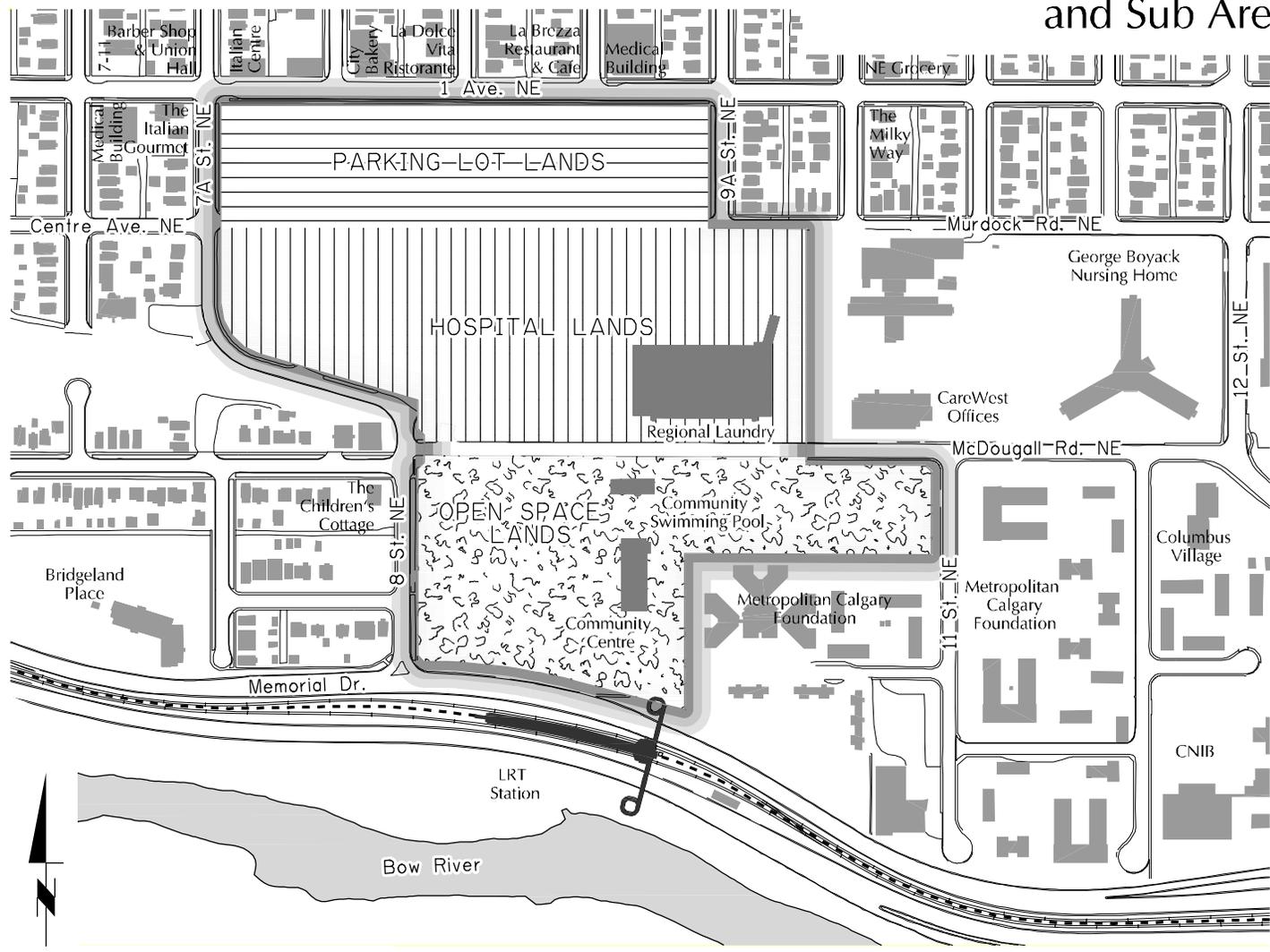
in Figure 1, is bounded by 1 Avenue NE to the north, Memorial Drive to the south, 7A Street NE and 8 Street NE to the west and 9A Street NE to Centre Avenue (Murdock Road), 10 Street NE (Cross Bow Auxiliary Hospital) to McDougall Road NE, 11 Street NE and the Metropolitan Calgary Foundation lands to the east.

The study area comprises three distinct sites or sub-areas. The northern site, extending from Murdock Road north to 1 Avenue NE, contains the former hospital's *Parking Lot Lands*. The central site, extending from McDougall Road on the south to Murdock Road on the north, encompasses the *Hospital Lands*. All of the former BVC hospital buildings were located within this area. The third site, extending south from McDougall Road to Memorial Drive and the Metropolitan Calgary Foundation lands, encompasses the *Open Space Lands*. These lands were included in the study area because of their proximity to the Bridgeland Light Rail Transit (LRT) Station and the potential for heightened transit supportive redevelopment.

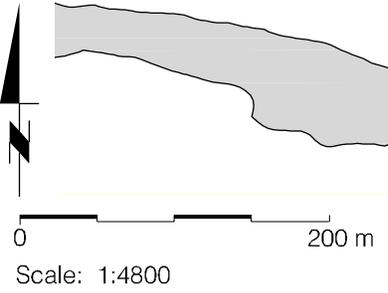
The approximate areas of each of the three sub-areas and the total study area are as follows:

Sub-Area	Hectares	Acres
Parking Lot Lands	3.21	7.94
Hospital Lands	5.64	13.94
Open Space Lands	4.18	10.32
McDougall Rd	0.30	0.75
<b>TOTAL STUDY AREA</b>	<b>13.33</b>	<b>32.95</b>

# Figure 1 Study Area Boundaries and Sub Areas



- Legend:**
-  Parking Lot Lands
  -  Hospital Lands
  -  Open Space



### **3.0 Bridgeland-Riverside Community Profile**

#### **3.1 History of Development**

Development of the Bridgeland-Riverside area dates from around the turn of the century, when the Langevin Bridge was built across the Bow River. The fledgling Bridgeland community was annexed to The City in 1907, with Riverside joining in 1910. Another major event of that year was the opening of the Calgary General Hospital on the Bow Valley Centre site.

From its earliest days, this community became home to a large number of immigrant working class families. Riverside was predominantly German, while the Bridgeland community had a distinctive Italian heritage, which can be seen to this day in the restaurants and shops along 1 Avenue NE.

Bridgeland-Riverside grew steadily, more or less, throughout the first half of this century, but growth has declined noticeably since about 1960. With young families moving out to the newer suburbs, the population of the area has aged considerably. Organizations such as the Knights of Columbus, CareWest (now a wholly-owned subsidiary of the CRHA), and the Metropolitan Calgary Foundation have developed extensive housing and special care facilities for seniors in close proximity to the former Calgary General Hospital (Bow Valley Centre) and its neighboring Cross Bow Auxiliary Hospital.

Currently, the Metropolitan Calgary Foundation has indicated that it is in the process of intensifying the development of its lands immediately east of the BVC site. Over the next 30 years, the Foundation has announced plans to construct new seniors' facilities with over 1100 units. The overall site is located along the north side of Memorial Drive NE between 11A Street NE and the Bridgeland-Riverside Community Association's buildings and covers approximately 8.03 hectares (19.85 acres). The first phase of redevelopment, 133 units, has been completed and a development permit for 0.97 hectares (2.39 acres) has been approved for an additional 267 units.

The Cross Bow Auxiliary Hospital is being phased out of operation, but future plans for the site are currently uncertain.

The Children's Cottage, a multi-residential care facility, the Calgary Women's Emergency Shelter and the Calgary Catholic Immigration Society (a hostel for sponsored refugees) are also located in the Bridgeland-Riverside community.

During the period of January 01, 1989 to November 01, 1999 there were 32 new single-family and two-family residential building permits (Table 1) and 9 new multi-family (3 units or more) building permits issued (Table 2). The total value of residential building permits, including both new construction and renovations, was estimated to be \$13,445,584. Table 3 indicates the number of commercial building permit applications.

**Table 1 - Single and Two-Family Residential Building Permits January 01, 1989 - November 01, 1999**

Year	SINGLE RESIDENTIAL						
	New				Addition/Improvement/ Repairs		Demo
	# of Residential Permits	# of Garage Permits	# of Units	Estimated Value	# of Permits	Estimated Value	#
1989	-	9	-	\$82,811	18	\$113,043	-
1990	-	8	-	\$63,141	10	\$190,500	5
1991	-	4	-	\$37,836	12	\$137,716	-
1992	1	6	1	\$156,807	11	\$287,243	3
1993	8	2	8	\$790,426	12	\$231,802	7
1994	5	4	5	\$562,854	11	\$182,815	5
1995	2	5	2	\$255,791	9	\$230,106	9
1996	1*	2	2	\$118,316	7	\$143,188	2
1997	7(2*)	6	9	\$1,109,540	4	\$102,848	4
1998	6(2*)	5	8	\$1,025,282	13	\$175,260	5
1999	2	7	2	\$390,358	9	\$106,760	3
<b>Total</b>	<b>32</b>	<b>58</b>	<b>37</b>	<b>\$4,593,162</b>	<b>116</b>	<b>\$1,901,281</b>	<b>43</b>

\* number of permits issued for two-family dwellings

Source: City of Calgary, Planning & Building Department

**Table 2 - Multi-Residential Building Permits  
January 01, 1989 - November 01, 1999**

Year	MULTI-RESIDENTIAL TOWNHOUSE/APARTMENT					
	New			Addition/ Improvement/ Repairs		Demo
	# of Permits	# of Units	Estimated Value	# of Permits	Estimated Value	#
1989	-	-	-	-	-	-
1990	-	-	-	-	-	-
1991	2	17	\$573,000	-	-	1
1992	-	-	-	1	\$6,500	1
1993	1	3	\$150,000	-	-	-
1994	1	6	\$290,000	1	\$57,779	-
1995	1	16	\$870,000	-	-	-
1996	1	4	\$300,000	-	-	-
1997	1	24	\$965,000	3	\$970,000	-
1998	1	33	\$2,300,000	-	-	-
1999	1	5	\$468,862	-	-	-
<b>Total</b>	<b>9</b>	<b>108</b>	<b>\$5,916,862</b>	<b>5</b>	<b>\$1,034,279</b>	<b>2</b>

Source: City of Calgary, Planning & Building Department

**Table 3 - Commercial Building Permits  
January 01, 1989 - November 01, 1999**

Year	COMMERCIAL				
	New		Addition/ Improvement/ Repairs		Demo
	# of Permits	Estimated Value	# of Permits	Estimated Value	#
1989	-	-	2	\$96,000	-
1990	1	\$725,000	1	\$8,000	-
1991	6	\$404,000	-	-	1
1992	-	-	6	\$288,500	-
1993	-	-	-	-	-
1994	2	\$361,860	6*	\$371,160	2
1995	1	\$3,573,330	-	-	1
1996	-	-	1	\$10,000	1
1997	1	\$1,259,000	5	\$213,300	-
1998	-	-	3	\$91,000	-
1999	-	-	2	\$15,900	-
<b>Total</b>	<b>11</b>	<b>\$6,323,190</b>	<b>26</b>	<b>\$1,093,860</b>	<b>5</b>

\* includes City Bakery

Source: City of Calgary, Planning & Building Department

### 3.2 Existing Land Use and Land Use Designations

The current general land use plan for Bridgeland-Riverside is depicted in Part 2 on page 11. Please refer to Part 3, pages 54 to 74 for a more comprehensive description of the existing land uses. Residential areas are identified under three categories: low, medium and high density. The *low-density* area (R-2), located generally north of 1 Avenue NE and east of 6 Street NE, is predominantly single and two-family housing. The *medium density* area to the southeast of the BVC site (RM-5) is characterized by institutional seniors' housing as described above, while the areas to the southwest and west (RM-3 and RM-4) are predominately three-storey walk-up apartment buildings. The *high-density* residential site adjacent to Memorial Drive (DC) is the Bridgeland Place high-rise apartment building (Photo 1). Owned and managed by



Photo 1 - Bridgeland Place - looking south

CalHome Properties, this facility provides subsidized housing for low-income singles and families.

There are two commercial areas in the community. Along 1 Avenue NE from 7 Street NE to 9A Street NE is a *local commercial* (C-1) strip of restaurants, shops, and medical office buildings which is discussed in detail under Section 3.6. A general commercial area (C-3), mainly automobile-oriented, is located toward the west side of the community within the Edmonton Trail/4 Avenue NE one-way couplet.

The remainder of the community is characterized by institutional (PS) uses including the former BVC site, CareWest and CNIB facilities; open space (PE) including the community playgrounds and facilities to the south of the BVC site, a number of school sites, and the Calgary Zoo and expansion area (A and UR).

### 3.3 Community and City-Wide Growth

Beginning in the 1950s, Calgary entered into a long-term pattern of growth that has seen its population rise from less than 200,000 to 842,388 in 1999. With a 1999 population increase of 23,054 and net migration of over 15,629 Calgary has entered into a new era of accelerated growth. The amount and rate of growth creates a context in which development must be accommodated. Increased population can ensure the viability of new and existing businesses, schools and recreation facilities. Rejuvenation brought about by growth enables revitalization of existing housing stock. This development brings potential benefits but also challenges for inner city communities.

Redevelopment or community intensification needs to be sensitive to the community's physical environment so as to enhance or retain the character of the community.

### 3.3.1 Population

The historical population trend and future forecast for Bridgeland-Riverside is shown graphically in Figure 2.

The current population of Bridgeland-Riverside is 4,660 (1999 Civic Census). Between 1969 - 1999, the population has declined by 17% or 937 people. This decline in population is characteristic of inner city communities and relates to an overall decline in household size as well as the effects of the lifecycle - children grow up and leave the community to establish their own households, families

have fewer children, seniors live alone in their homes longer, and more singles live alone today than in the past.

Redevelopment of the BVC and Metropolitan Calgary Foundation sites represents an opportunity to reinvigorate the Bridgeland-Riverside community. As well, redevelopment activity throughout the rest of the community will add to the overall population. In total, the population is projected to increase by 3,250 people over the next 18 years. This is a significant increase in population; however, to some extent it is merely a replacement for the activity generated by the hospital which employed 3,000 people and contained 1,000 beds.

### 3.4 Age Distribution, Household Structure & Socio-Economic Profile

#### 3.4.1 Age Distribution

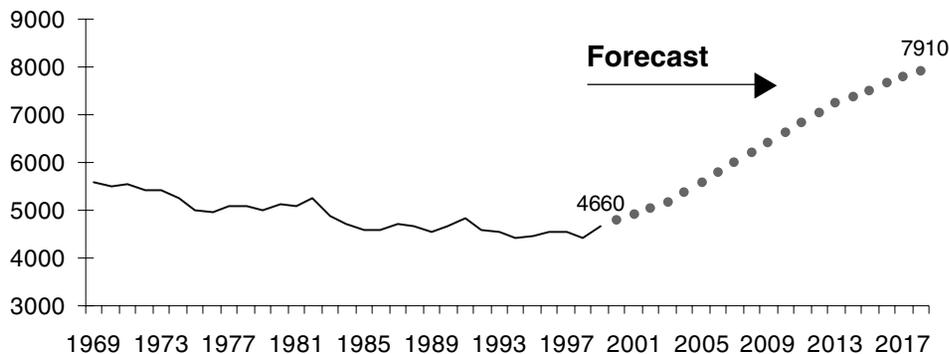
The age profiles presented in Figures 3 and 4 compare Bridgeland-Riverside with the overall city and indicate the changes that have occurred between 1989 and 1999. There is very little difference in the age distribution between 1989 and 1999 for the community and the overall city. The most significant differences in the 1999 data are:

	<b>Bridgeland-Average</b>	<b>City-Wide</b>	<b>Riverside</b>
<b>Children 5-19</b>		8.3%	20.2%
<b>Seniors 75+</b>		15.7%	3.5%

(Source: City of Calgary Civic Census 1999)

Figure 2

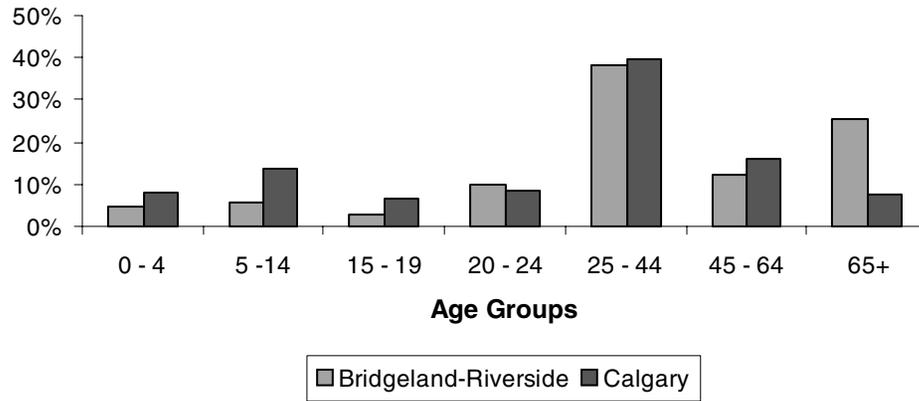
**Bridgeland-Riverside Historical & Forecasted Population Growth 1969 - 2018**



(Source: City of Calgary Civic Census (1987, 1997, and 1999))

**Figure 3**

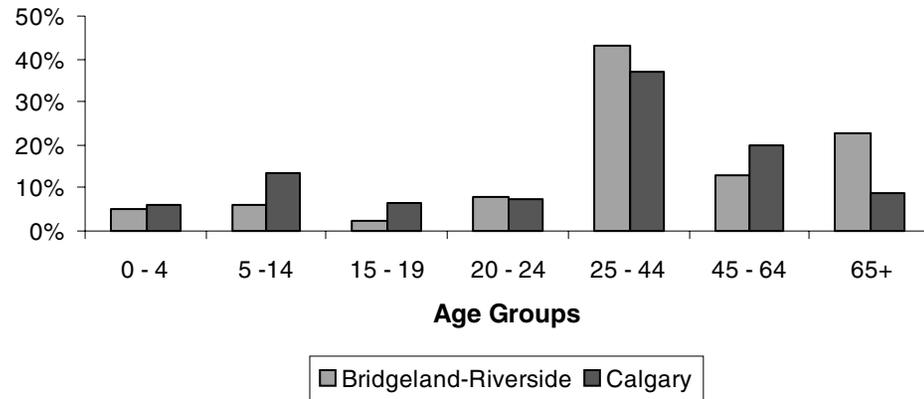
**Age Distribution  
1989 Comparison**



Source: City of Calgary Civic Census (1989)

**Figure 4**

**Age Distribution  
1999 Comparison**



Source: City of Calgary Civic Census (1999)

### 3.4.2 Household Structure

Statistics Canada 1996 census information indicates that 44 percent of the Bridgeland-Riverside households are comprised of families<sup>1</sup> as compared to 71 percent for the overall city. The high percentage of individuals living alone (47%) is characteristic of older inner city communities and the concentration of seniors' housing in this community is a significant factor.

**Table 4 Household Structure, 1996**

	Bridgeland-Riverside		City-Wide	
	Number	%	Number	%
<b>Living Alone</b>	1020	47.0	68605	23.8
<b>Families:</b>				
Spouses/ Common-law partners				
With Children	245	11.3	104455	36.2
Without Children	485	22.4	71825	24.9
Lone Parent	220	10.1	27950	9.7
<b>Other</b>	200	9.2	15490	5.4
<b>Total Households</b>	<b>2170</b>	<b>100</b>	<b>288325</b>	<b>100</b>

Source: Statistics Canada 1996 Census

<sup>1</sup>Statistics Canada defines the term 'family persons' as:

"household members who belong to a census family. They in turn, are further classified as follows:

Spouses refer to persons of opposite sex who are legally married to each other and living in the same dwelling.

Common-law partners are two persons of opposite sex who are not legally married to each other but live together as husband and wife in the same dwelling.

Lone Parent refers to a mother or father, with no spouse or common-law partner present, living in a dwelling with one or more never-married sons and/or daughters.

Never-married sons and/or daughters refers to blood, step or adopted sons and daughters who have never married (regardless of age) and are living in the same dwelling as their parent(s)."

(Statistics Canada 1996 Census Dictionary, pg 121)

### 3.4.3 Socio-Economic Profile

In addition to having a high proportion of seniors relative to the average Calgary community, Bridgeland-Riverside also has relatively higher proportions of what are considered to be “population at risk”. This assessment is based on the indices shown in Table 5.

**Table 5 Socio-Economic Profile**

	Bridgeland-Riverside	City-wide Average
Recipients of Assured Income for Persons with Severe Handicaps <sup>1</sup>	3.5%	1.1%
Recipients of Support for Independence <sup>1</sup>	3.5%	1.7%
Seniors receiving Guaranteed Income Supplement <sup>2</sup>	55.2%	30.9%
Persons lacking secondary school certification <sup>2</sup>	33.0%	27.0%
Persons with a university degree <sup>3</sup>	17.0%	19.0%
Unemployment rate <sup>3</sup>	8.9%	6.7%
Median household income <sup>3</sup>	\$24,689	\$45,777
Users of Special Needs Taxi transportation <sup>4</sup>	3.6%	1.0%

<sup>1</sup>Province of Alberta, Family Social Services, 1999 (As of December 31, 1998)

<sup>2</sup>Government of Canada, Human Resources Development Canada, March 1999.

<sup>3</sup>Government of Canada, Federal Census, 1996

<sup>4</sup>City of Calgary, Special Needs Taxi Unit, 1997.

Bridgeland-Riverside has traditionally been the home of lower income working families. The median household income in Bridgeland was \$24,689.00 in 1996 compared to \$45,777.00 for Calgary. Fifty-seven percent of the households in Bridgeland-Riverside had a household income of less than \$30,000.00 while in Calgary only 31% had a similar income. The lower median household income is in part a reflection of the relatively high concentration of low income senior citizens in the community.

### 3.5 Distribution of Housing Types

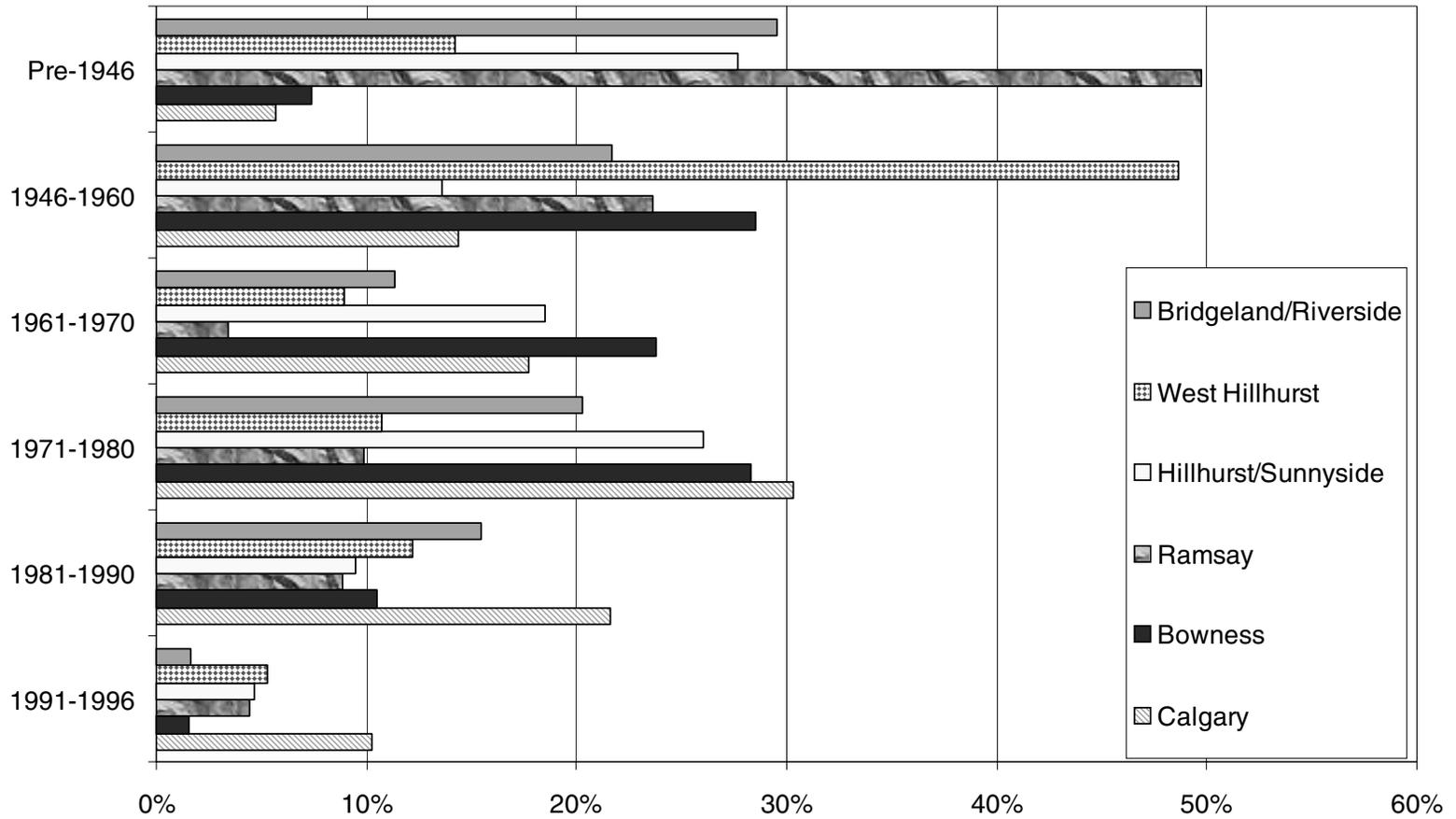
As indicated in Figure 5, the majority of housing units presently standing in Bridgeland-Riverside were built prior to 1960 (51%), with approximately 30 percent having been constructed before 1946. (Photo 2) Most of the newer residential development has been in the senior



Photo 2 - Existing housing, west of BVC parking lot lands.

Figure 5

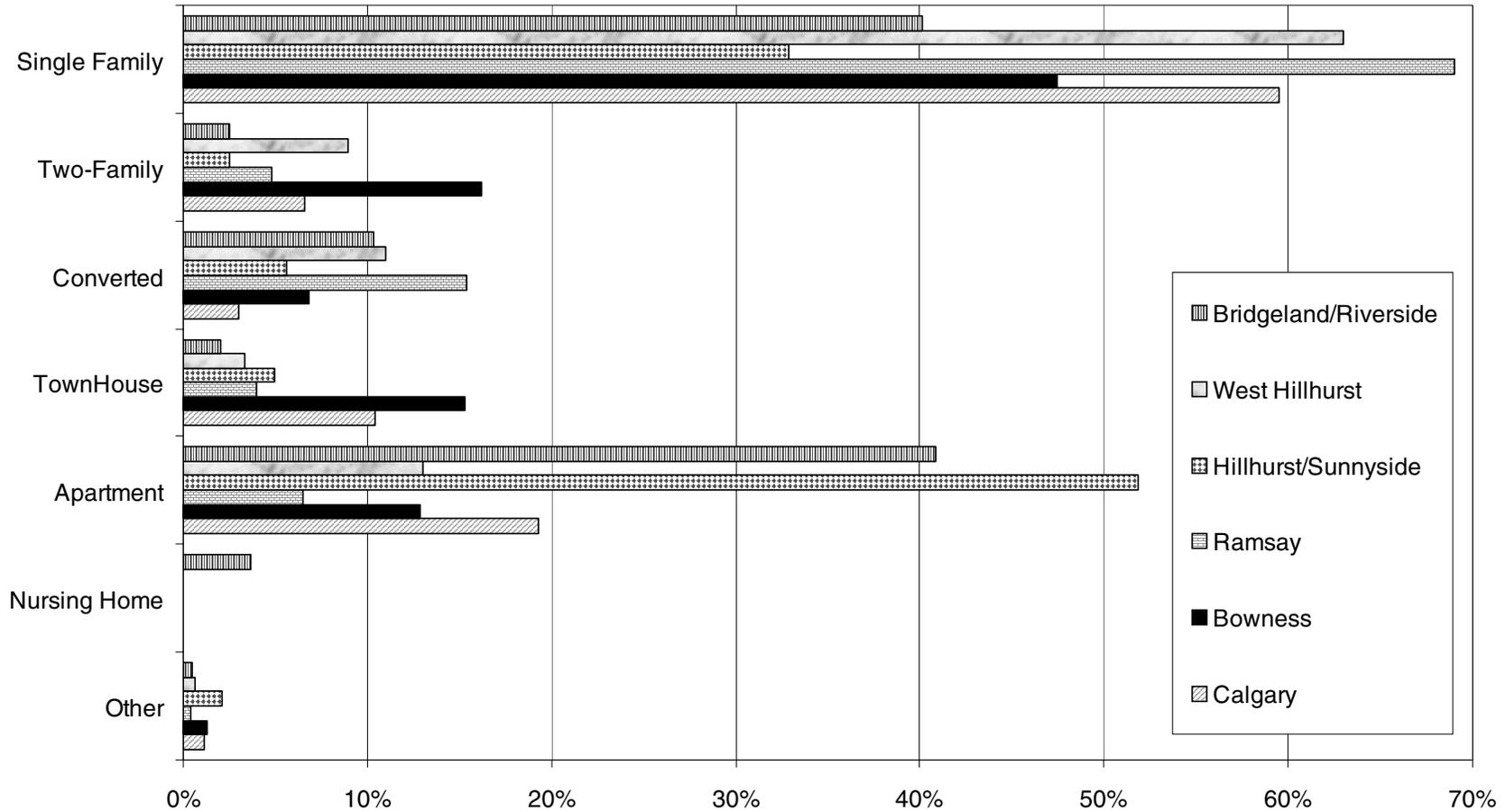
### Period of Construction of Existing Housing Stock



Source: Statistics Canada (1996)

**Figure 6**

**Occupied Dwellings by Structure Type**



Source: City of Calgary Civic Census (1999)

citizens' housing complexes in the southeastern corner of the community or in apartment buildings and infill redevelopment elsewhere. The vacancy rate in April 1999 stood at 3.92 percent, which is slightly higher than the city average (2.34%).

Figure 6 provides the mix of occupied dwelling units by type for Bridgeland-Riverside and several other inner city communities. In Bridgeland-Riverside more than 40% of the occupied dwellings are apartments, which is roughly double the city average (19.3%). In comparison, Bridgeland-Riverside's proportion of apartments exceeds that of Bowness, but is lower than Hillhurst/Sunnyside. Similarly, less than 41% of all occupied dwellings in both Bridgeland-Riverside and Hillhurst/Sunnyside are single-family homes, which is significantly lower than the city average (59.5%). This housing mix would appear to reflect the population profile of Bridgeland-Riverside and its inner city location. As shown by the high proportion of both seniors (22.5%) and recipients of assured income for persons with severe handicaps (3.5%), a significant amount of the housing stock in Bridgeland-Riverside is occupied by those with special needs.

Two other housing statistics are of interest. The average occupancy rate in this community (2.04 persons per unit), which is typical of inner city communities, is substantially lower than the city average (2.65 persons per unit). The difference is especially pronounced with respect to single-family dwellings. Furthermore, only about one-third (35.8%) of Bridgeland-Riverside dwellings are owned by their residents, as compared with almost two-thirds (67.2%) city-wide.

### **3.6 1 Avenue NE Businesses**

In 1992, the 1 Avenue NE Business Association in conjunction with The City of Calgary Planning & Building Department retained the firm of Walker Brown Urban Consultants Ltd. to undertake a Retail Market Study for the 1 Avenue NE business district.

The 1 Avenue business district is located primarily along 1 Avenue between 7 Street NE and 9A Street NE. According to the 1992 survey, the district contained 14 retail stores and services occupying an estimated 17,900 square feet of retail floor space. A pair of three-storey medical buildings provided the majority of the district's 46,000 square feet of office floor space. The 1 Avenue NE business district is quite distinct in character and trade area from the Edmonton Trail/4 Street NE commercial area, which mainly provides automobile service and furniture businesses.

Existing retail floor space along 1 Avenue NE was highly concentrated in the area of specialty food/groceries (40%) and Italian restaurants (25%). Drugstores (16%), convenience stores (9%) and personal services (6%) accounted for most of the remaining floor space. A florist shop was the only existing store in the durable and semi-durable goods category (3%).

At the time of the survey (1992) the trade area consisted of three distinct segments:

- 1) Bridgeland-Riverside community residents (20-25%);
- 2) Staff, patients and visitors of the Bow Valley Centre and local medical offices (30-35%); and,
- 3) Residents of the remaining city-wide trade area (40-45%).

The trade area varies widely for different types of businesses. Specialty food stores, for example, were drawing only 26 percent of their customers from Bridgeland-Riverside or adjacent neighbourhoods and 64 percent from throughout the city and beyond. Approximately 10 percent of these specialty food customers were linking their shopping with a visit to the hospital. Most drugstore customers were patients visiting the medical offices on 1 Avenue, with 15 percent coming directly from the hospital. The customers of grocery/convenience stores and personal services tended to be more locally based (35%), with 20-30 percent linked to the hospital and 35-45 percent from outside the area.

The foregoing market statistics are unlikely to have changed significantly up to the time of the BVC closure (April 01, 1997). However, because the development and marketing strategies recommended in the Walker Brown report assumed the continued existence and future expansion for the Bow Valley Centre, they are no longer valid. It must be assumed that the BVC closure has had

a significant impact on many, if not all, of the 1 Avenue NE businesses. Current vacant office space at the two medical office buildings is one obvious area of impact.

The 1 Avenue NE business district is central to the Bridgeland-Riverside community, both geographically and with respect to community identity and cohesion. Its continued and enhanced viability is thus a matter of paramount importance to the community. Prior to 1982, commercial, retail, office, and residential development had existed on the south side of 1 Avenue (*Parking Lot Lands*). These lands were expropriated in 1982 to accommodate hospital expansion. The feasibility of expanding the commercial district through redevelopment on the south side of 1 Avenue is a key objective of redevelopment.

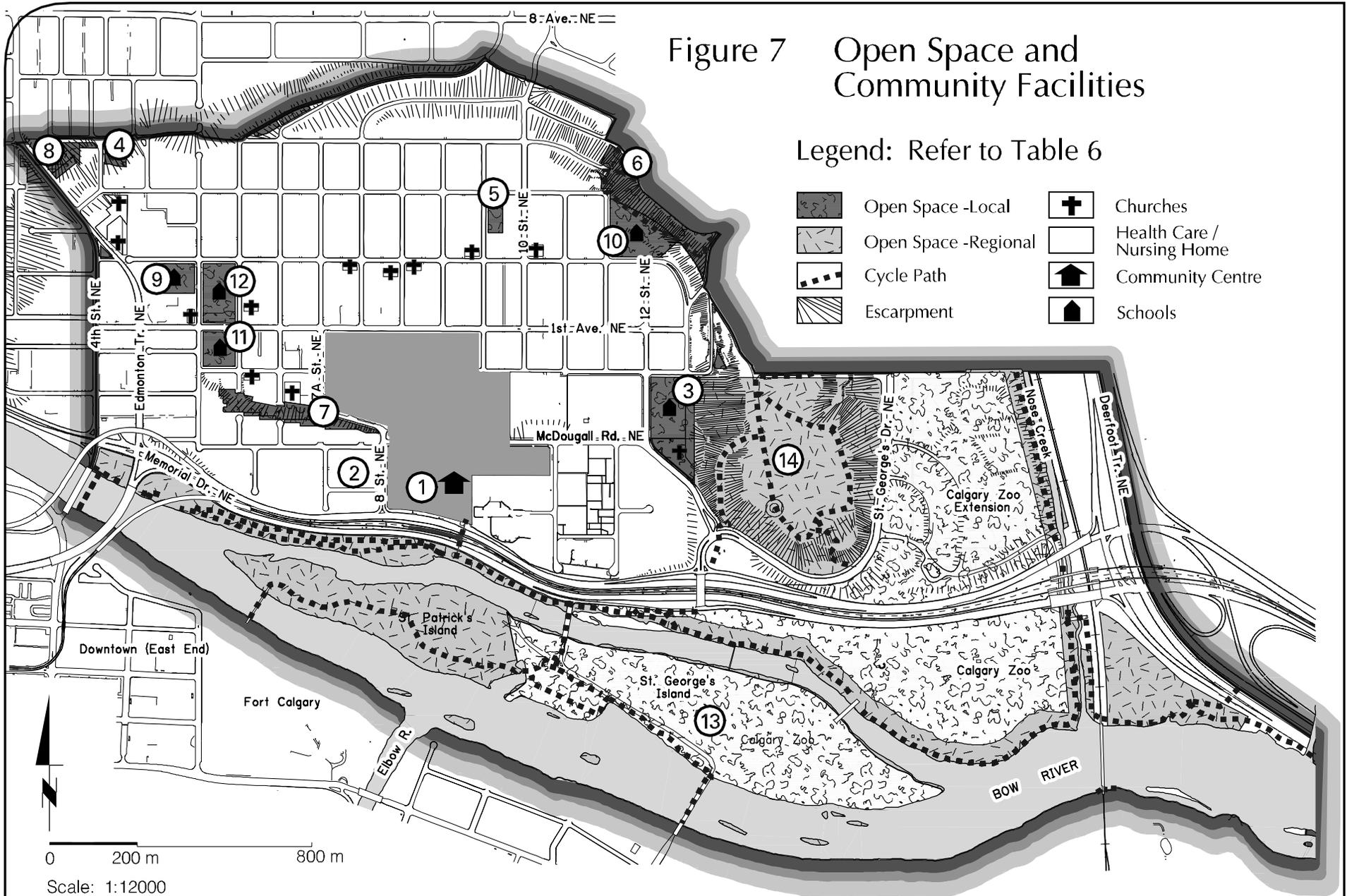
### **3.7 Public Parks, Open Space and Community Facilities**

Urban parks offer an expression of community and civic pride and enhance community design through landscaping and beautification. They also enhance the quality of life for residents by providing a variety of recreational opportunities within the community. The inclusion of the existing park space and community hall site adjacent to the LRT Station into the BVC redevelopment plan provided an opportunity to re-examine the distribution of park space within the community. The open space and community facilities within Bridgeland-Riverside prior to the redevelopment of the BVC are depicted in Table 6 and Figure 7.

Table 6

Open Space Inventory					
<b>Community Recreation Facilities and Parks</b>					
Figure 7	Site #	Name	Address	Total Open Space (ha.)	Recreational Open Space (ha.)
	1	Community Association bldg. and grounds - including outdoor pool, major soccer field (1), baseball diamonds (3), skating rink, Riverside Park	919 McDougall Rd. NE	4.18	4.18
	2	Neighbourhood Park	848 McPherson Rd. NE	.14	.14
	3	Community Park	64 - 12 Street NE	.28	.28
	4	Neighbourhood Park	520 - 4A Street NE	.25	.25
	5	Neighbourhood Park	424 - 9A Street NE	.27	.27
	6	Undeveloped open space	1212 Jamieson Avenue	1.73	.00
	7	Undeveloped open space	49 - 7 Street NE	1.18	.00
	8	Undeveloped open space	536 Edmonton Trail NE	.49	.00
	Subtotal			<b>8.62</b>	<b>5.12</b>
<b>Separate Schools</b>					
Figure 7	Site #	Name	Address	Total Open Space (ha.)	Recreational Open Space (ha.)
	9	St. Angela's Elementary	231 - 6 Street NE	0.63	0.50
	Subtotal			<b>0.63</b>	<b>0.50</b>
<b>Public Schools</b>					
Figure 7	Site #	Name	Address	Total Open Space (ha.)	Recreational Open Space (ha.)
	10	Bridgeland Elementary	414 - 11A Street NE	1.38	1.09
	11	Langevin Elementary and Jr. High	711 - 1 Avenue NE	0.58	.07
	12	The "Riverside Bungalow"	711 - 2 Avenue NE	1.00	.83
	Subtotal			<b>2.96</b>	<b>1.99</b>
<b>Total Hectares Open Space</b>				<b>12.61</b>	
<b>Total Hectares Recreational Open space</b>					<b>7.61</b>
<b>Population:</b> Bridgeland-Riverside Community District (1999 Civic Census)			<b>4660</b>		
<b>Recreational Open Space Ratio:</b>			<b>1.63 ha/1000 people</b>		
The standard for a Prototype "A" community is 0.9 - 1.3 ha. recreational open space/1000 people ( <i>Inner City Open Space Study</i> ): currently Bridgeland-Riverside meets that standard.					
<b>Regional Recreational Facilities and Parks</b> (Regional amenities which are not included as community open space)					
Figure 7	Site #	Name	Address	Total Open Space (ha.)	Recreational Open Space (ha.)
	13	Calgary Zoo		53.60	53.60
	14	Tom Campbell's Hill		16.73	16.73
	Total			<b>70.33</b>	<b>70.33</b>

# Figure 7 Open Space and Community Facilities



In assessing how the park space within the study area could best benefit the community, a number of factors were taken into account:

- Local and city-wide outdoor recreational and educational needs
- Protection of environmentally significant areas
- Representation of a diversity of natural and man-made features
- Provision of linkages to create a continuous park and pathway system
- Availability of public financial resources.

The primary local open space feature is the community centre site and adjacent parks and playgrounds to the south of the BVC site (4.18 hectares / 10.32 acres). This area contains the Bridgeland-Riverside community building, an outdoor swimming pool, a small seniors' park, several playing fields, and a number of pathways providing access between the BVC site and the Bridgeland LRT Station. (Photo 3). The pool, playfields, and outdoor rink also serve regional users.

Other local open space features within Bridgeland-Riverside include two tot lots, two decorative parks, and several school sites. Within the study area there are no environmentally significant areas; however, the site is adjacent to a secondary escarpment identified as environmentally significant and dedicated as environmental reserve.

Currently, Riverside Park caters primarily to city-wide users (softball leagues) whereas the seniors' park on McDougall Road has a local focus. The community hall accommodates both local and city-wide users. A major source of revenue for the community association has been hall rentals to city-wide groups and revenues from the pub.

Relocating the community hall and the development of a large park at the centre of the community is a corner stone of the BVC redevelopment. Redevelopment will involve relocation of the Riverside Park and freeing up land adjacent to the LRT Station for transit-supportive development. A plaza will be added on 1 Avenue NE between 8 and 8A Streets NE to provide a public gathering point supportive of retail/commercial development.



*Photo 3 - Park west of Bridgeland-Riverside Community building*

The concept plan incorporates a diversity of natural and man-made features and provides linkages to the existing pathway system. Development of the new park space and public system will be financed through the redevelopment of the site as a cost of development. Alternative financial resources would be required for any further enhancements to the parks that may be desired by community residents.

Table 7 outlines the breakdown of open space provision before and after redevelopment:

**Table 7 Open Space**

	Before BVC Redevelopment	After BVC Redevelopment
Municipal Reserve	1.15 ha (2.85 ac)	TBA
Non-municipal Reserve PE lands	3.03 ha (7.47 ac)	TBA
Total Open Space lands	4.18 ha (10.32 ac)	4.65 ha (11.50 ac)

In summary, redevelopment and relocation of existing parks will be conducted such that redevelopment of the BVC site will increase the total amount of open space within the study area and the community.

The Inner City Open Space Study (ICOSS) establishes the policy standard for assessing the appropriate amount of open space required to meet community local recreational and open space needs in inner city communities. According to the ICOSS, Bridgeland-Riverside is a Prototype B community where less than 10% of the population is less than 15 years old. The amount of open space that is adequate to meet the needs of a Prototype B community is 0.7 - 0.9 ha/1000. Assuming an ultimate population of 7900, the post-development ratio will be 0.97 ha/1000 which meets the policy standard. Therefore, even though the population is increasing significantly, the community will continue to enjoy an adequate amount of park space.

### 3.8 Schools

The schools in the community are as identified below:

#### Calgary Board of Education

- Langevin Elementary/Junior High School (107 - 6A Street NE)
  - capacity for 640 students;
  - 1999/00 enrolment of 450 students, including junior high students from Erin Woods who could be assigned to another school if more capacity were required for Bridgeland-Riverside students.
- Bridgeland Elementary School (414 - 11A Street NE)
  - capacity for 175 students;
  - currently surplus to the Board's needs, and leased to the Delta West Academy (private school).
- Christine Meikle School & Activity Centre (64 - 12 Street NE)
  - capacity for 255 students;
  - 1999/00 enrolment of 66 students;
  - serves "special needs" children from all areas of Calgary;

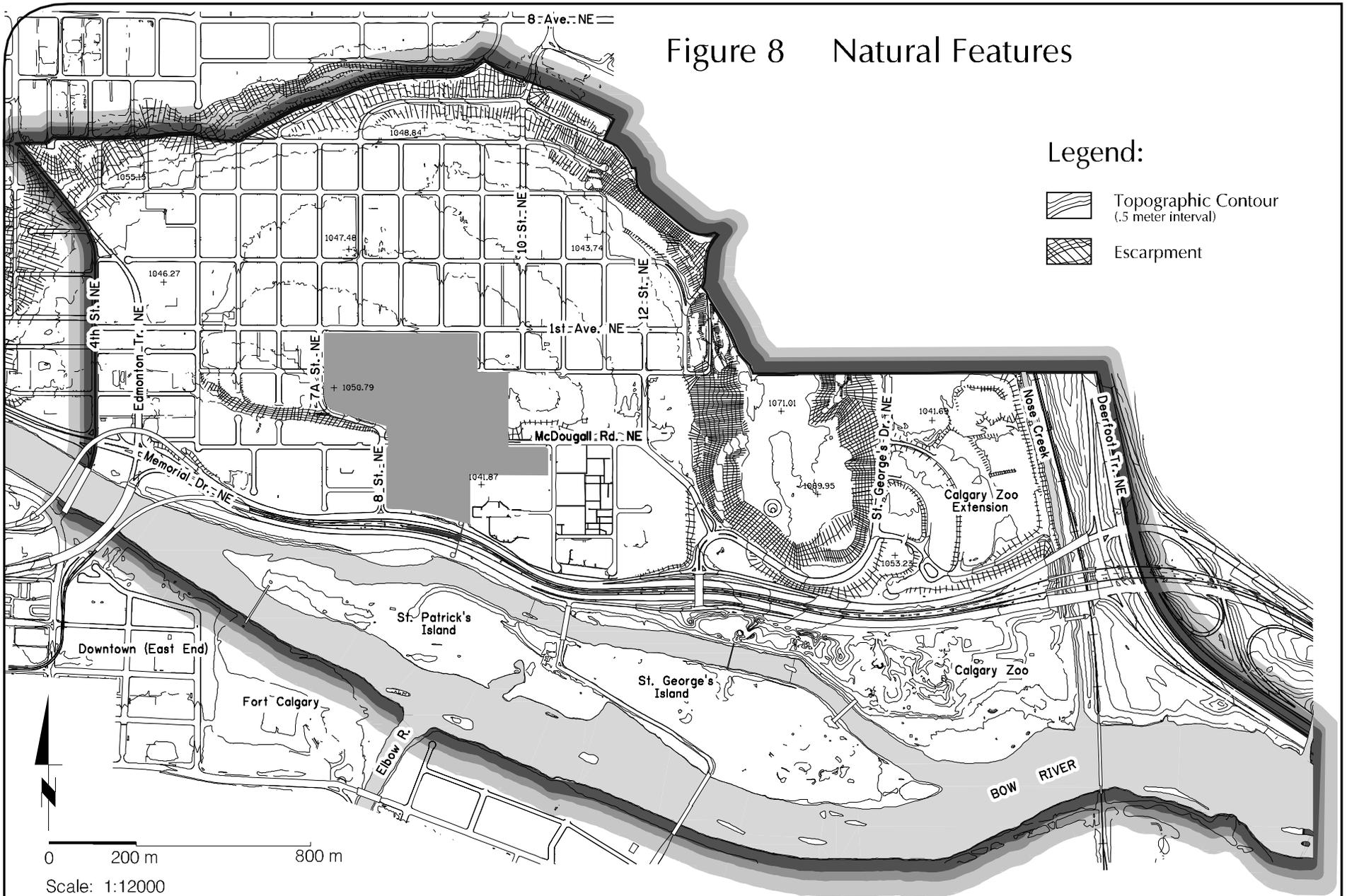
- no plans to change this function in the foreseeable future.

- Riverside Bungalow School (711 - 2 Avenue NE)
  - the administrative centre for ESL (English as a second language) testing;
  - no plans to change this function in the foreseeable future.

#### Calgary Catholic School District

- St. Angela Elementary School (231 - 6 Street NE)
  - capacity for 325 students;
  - 1999/00 enrolment of 125 students (kindergarten to grade 6);
  - no plans to close in foreseeable future, in spite of under-utilization;
  - serves only Bridgeland-Riverside children.
- Junior high school students attend St. Alphonsus School in Renfrew
- Senior high school students attend St. Francis Senior High School in Brentwood.

Figure 8 Natural Features



Legend:

-  Topographic Contour (.5 meter interval)
-  Escarpment

## **4.0 Bow Valley Centre Study Area Profile**

### **4.1 Study Area Topography and Natural Features**

The main topographic feature of the BVC site is an escarpment that separates the old Riverside neighbourhood (to the south) from Bridgeland (to the north) and the *Parking Lot* and *Hospital Lands* to the north and northeast (Figure 8). The average 5-metre embankment runs east-west on the north side of McDougall Road. The escarpment drops from an elevation of about 1046 metres to approximately 1041 metres. The lands north of Murdock Road and south of McDougall Road are relatively flat. The area north of Murdock Road representing the *Parking Lot Lands* is at an elevation of about 1050 metres. South of Murdock Road the topography drops off sharply to 1047.5 metres and then flattens for about 25 metres and then resumes a uniform slope down to the McDougall Road.

The height of the escarpment from Murdock Road and 7A Street NE provides spectacular views of the Bow River Valley and the Downtown.

### **4.2 Ownership of BVC Lands**

Following the decision to close the Calgary General Hospital (Bow Valley Centre), The Province of Alberta, the Calgary Regional Health Authority and The City of Calgary established a tri-party agreement regarding the future of the former hospital lands and buildings. The Province was responsible for demolishing the buildings

and grading the hospital site. The City was to retain title to the land, free of all title restrictions including those imposed by The Province and the Calgary Regional Health Authority.

### **4.3 Laundry Building**

The Laundry facility provides services to existing Calgary hospitals as well as a limited number of commercial businesses. It will continue to provide services in the current location until 2008. At that time, the laundry operation will relocate to a more suitable industrial location.

### **4.4 Environmental**

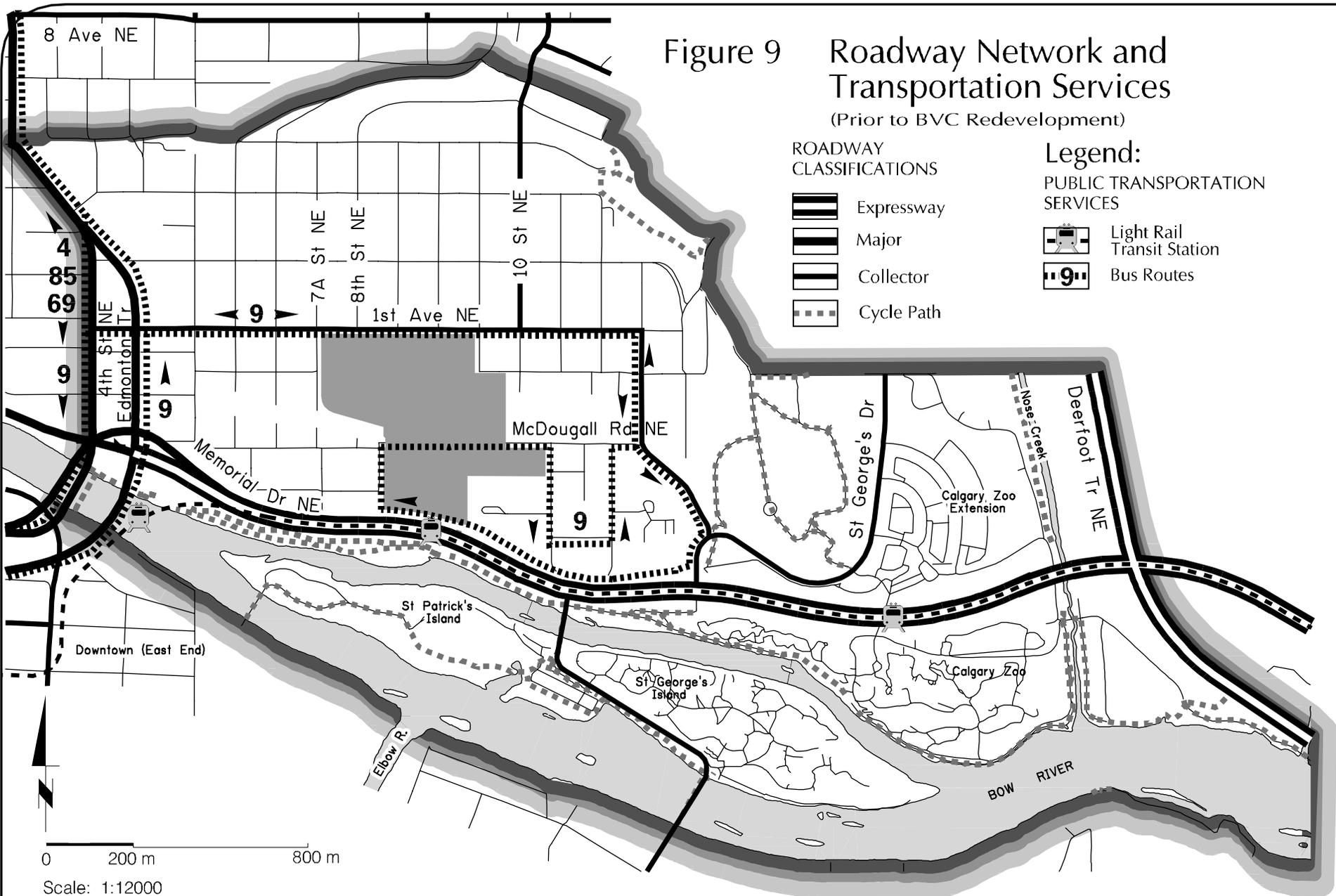
Phase 1 and 2 environmental assessments have been completed for the *Parking Lot* and *Hospital Lands*. Results indicate the lands met Alberta Environment Level I criteria suitable for residential development. A Phase I environmental assessment for the *Open Space Lands* is currently under way.

### **4.5 Existing Transportation System**

#### **4.5.1 Roadway Network**

As shown in Figure 9, Bridgeland-Riverside has excellent access to the city's roadway network. Both 8 Street NE (right-in, right-out access) and 12 Street NE interchange connect with Memorial Drive, which in turn links with Deerfoot Trail. Deerfoot Trail is the city's primary north-south artery accessing the Calgary International Airport,

**Figure 9** Roadway Network and Transportation Services  
(Prior to BVC Redevelopment)



- ROADWAY CLASSIFICATIONS**
- Expressway
  - Major
  - Collector
  - Cycle Path

- Legend:**
- PUBLIC TRANSPORTATION SERVICES**
- Light Rail Transit Station
  - Bus Routes

the extensive northeast industrial/commercial district, and the provincial highway network to the north, east and south.

Memorial Drive also provides access to Downtown Calgary via the Langevin Bridge (Edmonton Trail/4 Street NE), to the northwest sector of the city (including the University of Calgary) and to the Trans Canada Highway west to Canmore and Banff. 1 Avenue NE serves as an east-west collector through Bridgeland-Riverside, connecting the Edmonton Trail/4 Street NE couplet and the 12 Street NE interchange. Tenth Street runs north to the community of Renfrew and the Trans Canada Highway (16 Avenue NE), while 12 Street NE interchange provides all-turns access to Memorial Drive and provides direct access to the Calgary Zoo.

#### **4.5.2 Public Transportation**

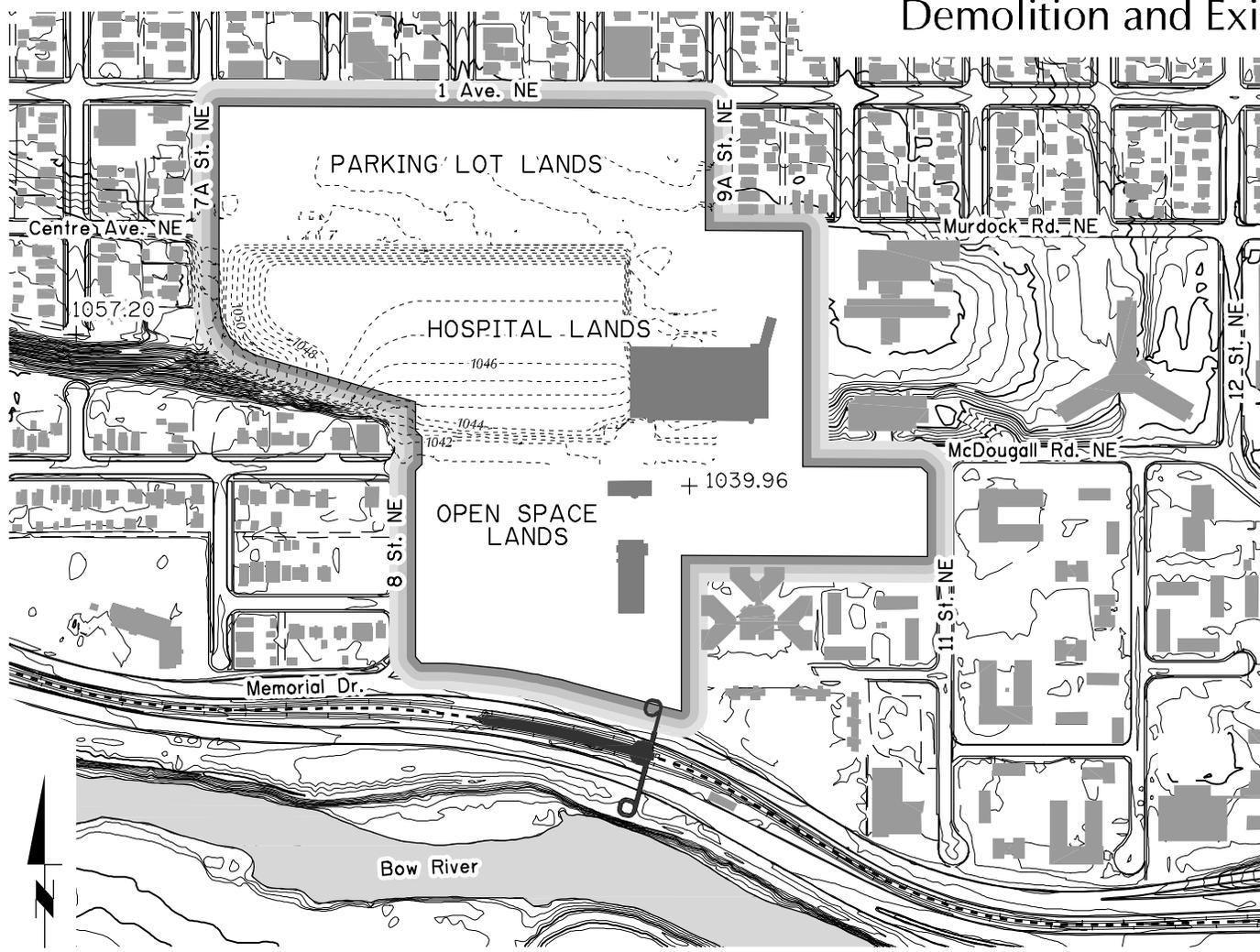
The community is well served by Calgary Transit, with the Bridgeland LRT Station being the focal point. This is the first station on the northeast LRT line outside the Downtown area, the next one being at the Zoo. The Bridgeland station was particularly effective in serving staff and visitors to the Bow Valley Centre, and with closure of that facility average weekday use at this station is estimated to have dropped from 1,175 to about 635 passengers. Calgary Transit is eager to recoup this lost ridership through redevelopment of the BVC site. LRT service operates at 5-6 minute intervals during weekday peak periods (6:00 - 9:00 AM, 3:00 - 6:00 PM), and every 15 minutes at all other times. The northeast line runs from the Downtown, where free transfers can be made to the

south/northwest line, to the Whitehorn station in northeast Calgary. The LRT System provides access at several stations en route to a wide range of commercial and light industrial destinations, as well as to many residential areas of the city.

As shown in Figure 9, Bridgeland-Riverside is also served by Calgary Transit's bus route #9. This route was revised effective September 01, 1997 in response to service demand changes resulting from the Bow Valley Centre closure. In addition to looping through the southeastern portion of the community where seniors' housing predominates, it stops at the Bridgeland LRT Station before returning to 1 Avenue NE. After exiting onto Edmonton Trail/4 Street NE it proceeds south into the Downtown, and then northwest through Kensington/Hillhurst to the University and Market Mall. Service is every 20 minutes during weekday peak hours, and 30 minutes otherwise. This route utilizes low floor buses to facilitate access by seniors and handicapped.

Calgary Transit also provides north-south bus service along Edmonton Trail/4 Street NE within convenient walking distance of many Bridgeland-Riverside residents. Routes #4 and #69 both provide access to the Downtown, as well as to various areas to the north. Route #4 utilizes low floor buses, and runs at 30 minute intervals at all times, whereas route #69 offers only irregular weekday peak period service with standard buses. A third bus route operating along Edmonton Trail (#85) provides peak period express service between the Huntington Hills area and the Downtown, and does not stop in the Bridgeland-Riverside area.

Figure 10 Proposed Site Grading Following Demolition and Existing Site Topography



Legend:

-  Topographic Contours
-  Proposed Site Grading Contours

NOTE: All contour intervals shown on existing and proposed plans are 0.5 m intervals.

Spot elevations show the lowest elevation and highest elevation.

Scale: 1:4800

### 4.5.3 Roadway Characteristics

Except for Memorial Drive, all of the public roadways within and adjacent to the study area have rights-of-way of 20.1 metres (66 feet) in width. The bylawed setback of 2.1 metres (7 feet) on either side of 12 Street NE from 1 Avenue NE to St. George's Drive and on 1 Avenue NE from 4 Street NE to 6 Street NE is currently under review. The roadway pavement widths vary from 9.8 metres (32 feet) to 13.4 metres (44 feet). The Bridgeland-Riverside ARP indicates that the setbacks on 1 Avenue NE should continue to be encroached upon. Most roadways in the vicinity of the study area are fairly flat. The only exception, with a gradient of 6.8 percent, is 7A Street NE from Central Avenue NE to McDougall Road NE. This gradient is due to the escarpment west of the study area.

### 4.5.4 Parking

A variety of curb parking regulations are in effect. For example, along the south side and portions of the north side of 1 Avenue NE, from 7A street to 9A Street NE, a two-hour parking limitation is in effect between the hours of 9:00 AM and 6:00 PM. Detailed information for all streets is available from the Traffic Operations Division of The City's Transportation Department.

### 4.5.5 Pedestrian Circulation

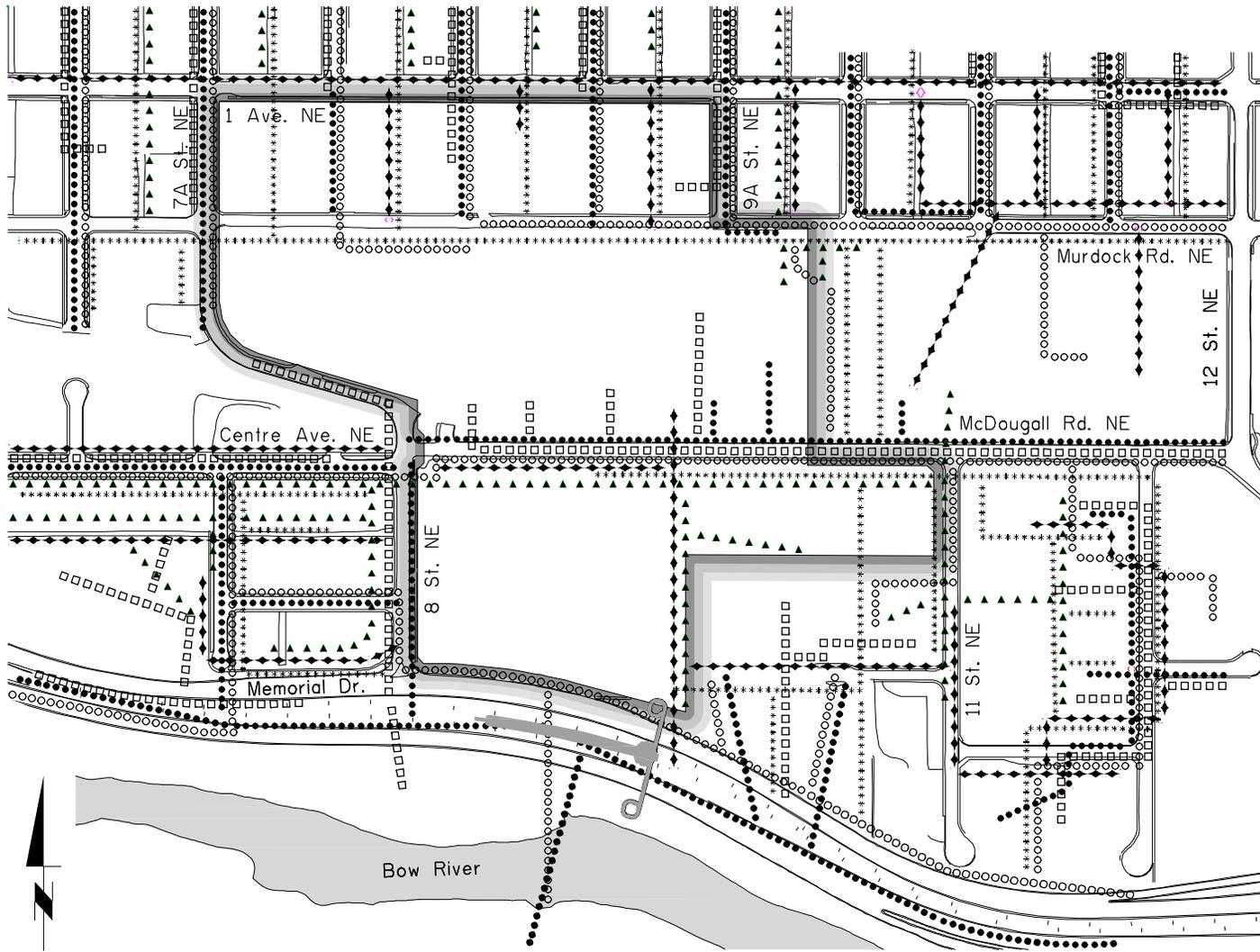
The former Calgary General Hospital was a significant barrier separating Bridgeland from Riverside. Redevelopment of the BVC will re-establish the neighbourhood grid pattern connecting the community north-south and east-west. The Plan will provide direct pedestrian links between the community, the new central park and the Bow River pathway system along with providing a significant, direct connection between 1 Avenue NE and Memorial Drive. This connection, 9 Street NE, will become the "front door" into the community and provides a direct pedestrian connection from the LRT, the Downtown and the Bow River pathway system to the heart of Bridgeland and the 1 Avenue businesses.

## 4.6 Existing Services and Utilities

### 4.6.1 Surface Topography and Drainage

The main topographic feature of the site is the average five metre embankment that runs east-west on the north side of McDougall Road. The areas to the north (*Parking Lot Lands* and *Hospital Lands*) and to the south (*Open Space Lands*) of the embankment, are relatively flat. North of the embankment, surface drainage generally flows to the north and east. In close proximity to the embankment, flows are to the south. In the open space south of McDougall Road, surface flows are generally to the east and south. All storm run-off is removed through the storm sewer system. The site of the former hospital has been graded as illustrated in Figure 10.

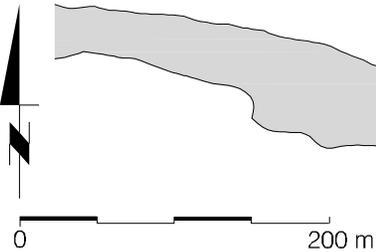
# Figure 11 Servicing and Utilities



## Legend:

-  Water Mains
-  Storm Mains
-  Sanitary Mains
-  Gas Lines
-  Electrical Lines
-  Telephone Lines

NOTE: All Utilities and Services are shown at their approximate locations only, and have been modified for graphic representation.



Scale: 1:4800



THE CITY OF CALGARY  
PLANNING & BUILDING DEPARTMENT

BOW VALLEY CENTRE  
REDEVELOPMENT CONCEPT PLAN

#### 4.6.2 Servicing and Utilities

Canadian Western Natural Gas advises that there are no high pressure gas lines within or adjacent to the study area, and therefore no building setbacks will be required on this basis. A 42 mm main in McDougall Road, which presently feeds the Regional Laundry and community buildings may have to be abandoned or relocated. The Bow Valley Lodge regulating station located at McDougall Road and 11 Street NE may also have to be relocated.

Discussions with Telus have confirmed that the existing telephone system infrastructure in the area can accommodate whatever pattern of development should occur.

The electrical services in this area are generally compatible with the redevelopment area. Overhead electrical service along McDougall Road NE between 8 Street NE and the east boundary of the *Open Space Lands* may need to be relocated or buried depending upon development decisions.

The existing sanitary, storm sewer, and watermain utilities in the study area may present opportunities for redevelopment through their re-use. Any existing rights-of-way for these utilities that may be re-located would be at the expense of the developer. In the case of re-located watermains, the developer would be required to reinforce the periphery mains to the site to restore the lost capacity of the water main grid. All storm run-off must be contained on each site and directed toward the storm sewer system (Figure 11).

Recent changes to Alberta Environment standards require that stormwater from new developments be treated to provide a cleaner quality of discharge into the Bow River. Redevelopment of BVC will be required to meet these standards and options will be reviewed through detailed site engineering studies.

#### 4.7 Development Constraints

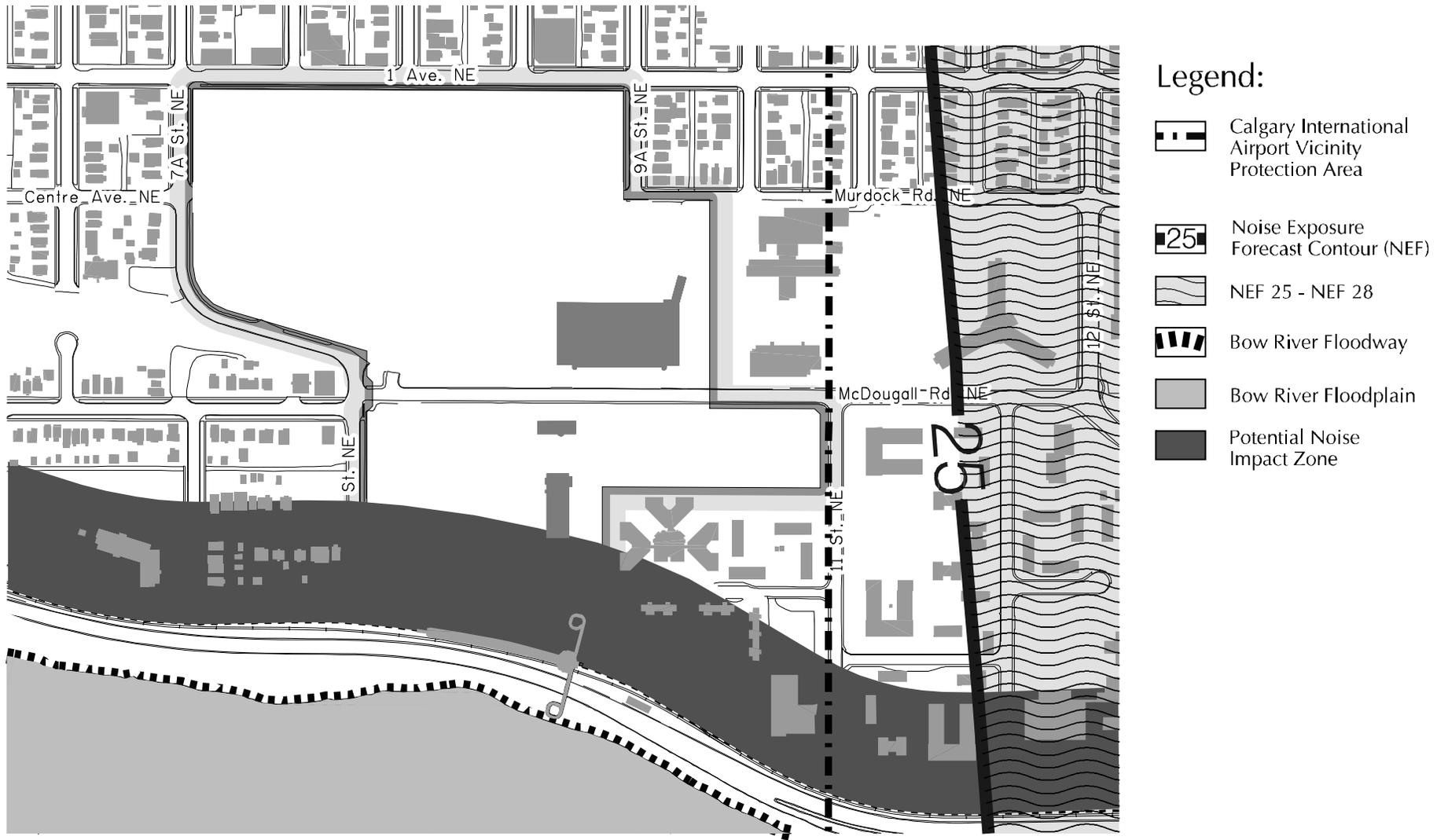
##### 4.7.1 Bow River Floodway and Floodplain

Based on the Canada-Alberta Flood Damage Reduction and Flood Risk Mapping completed in 1993, none of the land within the Bow Valley Centre study area falls within either the floodway or the floodplain of the Bow River. Consequently, redevelopment of the site is unconstrained in this regard. (Figure 12).

##### 4.7.2 Calgary International Airport Vicinity Protection Area

As defined within the Calgary International Airport Vicinity Protection Area Regulation, and as shown in Figure 12, the 25 NEF (noise exposure forecast) contour lies slightly to the east of 11 Street SE, just beyond the eastern boundary of the BVC study area. The 30 NEF contour is further east again. As a result, there are no restrictions under this Regulation on land uses or building height within the study area.

Figure 12 Development Constraints



Legend:

-  Calgary International Airport Vicinity Protection Area
-  Noise Exposure Forecast Contour (NEF)
-  NEF 25 - NEF 28
-  Bow River Floodway
-  Bow River Floodplain
-  Potential Noise Impact Zone

0 200 m

Scale: 1:4800



THE CITY OF CALGARY  
PLANNING & BUILDING DEPARTMENT

BOW VALLEY CENTRE  
REDEVELOPMENT CONCEPT PLAN

**4.7.3 Surface Transportation Noise Attenuation Requirements**

In 1983 City Council adopted a Surface Transportation Noise Policy for the City of Calgary. The policy established a design noise level (DNL) of 60 dB(A) Leq(24) for residential land uses adjacent to surface transportation facilities (e.g., roads, heavy rail or light rail transit lines).

In order to implement this policy, potential noise impact zones (PNIZ) were identified relative to roads, as shown below:

<b>Roadway Category</b>	<b>Potential Noise Impact Zone (distance from centre line of roadway)</b>
Major Roads Expressways Freeways	within 60 metres within 100 metres within 135 metres

The Memorial Drive NE expressway impacts the BVC study area in this regard. As shown on Figure 12, the 100 metre PNIZ impacts a portion of the *Open Space Lands* within the BVC study area, but does not extend into the *Hospital Lands*. With respect to the Northeast LRT line, the policy states that development proposals on adjacent lands will be evaluated on their own merits.

On lands affected by the PNIZ, the developer will be responsible, where technically and economically feasible, for providing noise attenuation necessary to achieve noise levels less than the DNL. Options for noise attenuation include walls, earth berms, distance setbacks, noise insensitive buffer zones (i.e., non-residential uses), orientation of outdoor leisure areas, and various architectural design treatments. In considering proposals for noise attenuation, the Development Authority should take into account aesthetic as well as acoustical criteria.

**4.8 Hospital Commemoration**

One of the objectives of the planning study, is to investigate the feasibility of providing a commemorative area which recognizes the Calgary General Hospital and its role within the city. Many opportunities exists within the concept plan to provide a commemorative area. The finalization of a hospital commemorative area will be addressed as future site specific development is finalized.

**5.0 Policies Affecting the Amendment**

**5.1 The Calgary Plan (Municipal Development Plan)**

The Calgary Plan was adopted by City Council in July 1998 in accordance with the requirements of the Municipal Government Act, 1995. The Calgary Plan is a consolidation of strategic policies including those contained in the Calgary Transportation Plan that will guide the city’s growth and development over the long-

term to accommodate a population of 1.25 million people. The key land use and transportation planning directions are aimed at greater land use efficiency, reducing the need for vehicle trips, and encouraging transit and other modes of transportation. The Plan seeks to develop a balance between community and environmental quality, mobility, costs and affordability.

The Calgary Plan did not anticipate any significant changes to the BVC site. However, the key policies that affect redevelopment of the site are:

- Encourage sensitive types of housing intensification in all neighbourhoods, in accordance with local plans, to promote a more compact, adaptable form.
- Encourage new housing close to transportation facilities and within mixed-use centres to support transit and pedestrian mobility choices.
- The transit system will offer Calgarians a reasonable alternative to auto travel by:
  - facilitating access to transit for seniors and people with disabilities;
  - integrating transit with other modes of travel.
- The City of Calgary will facilitate mobility for the transportation of disabled and low income persons by:
  - continuing to improve pedestrian accessibility to transit service;

- encouraging walking, by including the pedestrian environment as a design element in all land uses and plans for roads, LRT and transit facilities;
- recognizing cycling as a component of the City's transportation system.

## 5.2 Bridgeland-Riverside Area Redevelopment Plan

The Bridgeland-Riverside Area Redevelopment Plan (ARP) was adopted by City Council in 1980. In 1988, the Planning & Building Department commenced a review for the Bridgeland-Riverside community. The ARP was amended in 1992 to reflect revisions necessary to make the Plan more relevant and effective in achieving its goals and objectives. To date, the ARP has eight amending Bylaws. The policies that are specifically relevant to redevelopment of the BVC site are:

- To increase residential densities in appropriate locations.
- To implement the policies of the Calgary General Municipal Plan (subsequently replaced by the Calgary Plan).
- To provide opportunities for a wider range of residential alternatives for different age and income levels.
- To provide for the development of a land use pattern that will be better able to be served by public transit.

- To improve the physical environment within the community.
- To develop a more comprehensive strategy dealing with amenities such as recreation and open space.
- To provide for opportunities that would allow for the increased viability of local commercial development catering to residents of the community.
- To conserve and stabilize the family-oriented areas of the community and to ensure their long-term viability.

### **5.3 Transit Friendly Design Guide**

The Transit Friendly Design Guide, approved by City Council in 1995, describes techniques for improved integration of transit into residential and non-residential areas to achieve the vision described in the Calgary Transportation Plan. It explains and gives examples of the physical requirements necessary to encourage transit use.

The BVC Concept Plan and Bridgeland-Riverside ARP amendment is consistent with the principles contained in the Design Guide.

### **5.4 Inner City Transportation Study**

Due to the strategic nature of the Calgary Transportation Plan (CTP) issues relating to inner city roads were not directly addressed. In approving the Plan, Council instructed the Transportation and Planning & Building Departments to prepare Terms of Reference for an inner city transportation study. The objectives of the Inner City Transportation Study (ICTS) were derived within the framework of the CTP. These objectives strike a balance between mobility, cost and community and environment quality. The study area encompasses the BVC site and focuses on the major streets and network collectors within the context of the approved CTP serving the Downtown and inner city areas. The BVC Concept Plan and Bridgeland-Riverside ARP amendment are consistent with the Terms of Reference for the ICTS and findings developed to date.

## **6.0 Planning and Public Consultation Processes**

### **6.1 Planning and Public Participation Processes**

The Bow Valley Centre (former Calgary General Hospital) ceased operation on April 1, 1997. The decision to close this facility was made by the provincially established Calgary Regional Health Authority (CRHA) as part of a series of measures aimed at rationalizing public health services. Closure of the BVC was preceded by the closure of two other Calgary hospitals – the Holy Cross and the Grace.

## Bow Valley Centre Redevelopment Project Process

PLANNING  
PROCESS

PUBLIC  
INVOLVEMENT  
PROCESS

### Phase 1

### Phase 2

### Phase 3

### Phase 4

### Phase 5

Prepare package for proposal call

Receive submissions  
Evaluate  
Select 3 - 5 for public review & comment

Preparation of land use concepts  
Evaluation of concepts

Preparation of preferred land use concept

Preparation of ARP Amendment

Community visioning process  
Public review & comment on content

Public review & comment on 3 - 5 proposals

Public review & comment on concepts

Public review & comment re: Draft Amendment

Council Public Hearing

**Summer / Fall '98**

**Winter '98 / '99**

**Winter / Spring '99**

**Fall '99**

**Spring 2000**

Subsequent to the decision to close the hospital, The City of Calgary established an agreement with the Calgary Regional Health Authority and the Province of Alberta whereby The City was granted clear title of the subject lands. Apart from The Province's responsibility to demolish and grade the site, The City of Calgary assumed sole authority to redevelop the BVC lands.

The Bow Valley Centre Redevelopment project was to carry out a public process to develop a land use concept plan, urban design guidelines and implementation strategies. Terms of Reference for the Bow Valley Centre Redevelopment Concept Plan were approved by City Council on December 15, 1997. The Terms of Reference established a five-phase planning and public involvement process to produce an amendment to the Bridgeland-Riverside Area Redevelopment Plan (ARP). The proposed ARP amendment will incorporate the concept plan into the ARP outlining the existing conditions in the area; issues, concerns and problems perceived to exist; and recommendations for future growth and revitalization directed at improving the quality of life in Bridgeland-Riverside.

Figure 13 depicts the process that the proposed ARP amendment and its associated land use redesignation and outline plan applications followed in being reviewed by the Calgary Planning Commission and City Council at the Public Hearing in late 2000.

All five phases in the planning process included opportunities for public involvement. In total, eight open houses, several smaller public events, and numerous community surveys were conducted (Appendices IV-XI). Throughout the process, a 24-hour information and message phone line, and a web site with email links to The City of Calgary Planning Team were maintained. A newsletter was published on four occasions (included large print and Braille versions). Throughout the planning process, a media strategy helped to ensure the timely release of information to the press and the availability of key team members for interviews.

## 6.2 Planning Advisory Committee

The Planning Advisory Committee's (PAC) role was threefold:

- Representing a diverse cross-section of public interest (local community, business, city-wide) in the planning process
- Commenting and providing advice to the Planning Team regarding the selection of a preferred concept plan and design guidelines
- Assisting the Planning Team in designing and obtaining public input.

The PAC was comprised of 15 representatives:

- Bridgeland-Riverside Community Association (3)
- Local community residents (4)
- 1 Avenue NE businesses (1)
- Ward 4 Alderman (1)
- City at large representatives (6)

In addition, an independent person from the city at large sat as a volunteer chair for the PAC meetings.

The PAC met a total of 31 times over the course of the planning process.

### 6.3 Key Stakeholders

As key stakeholders, the Calgary Regional Health Authority (CRHA), the Metropolitan Calgary Foundation (MCF) and the 1 Avenue NE Businesses were all closely involved in the planning process.

The CRHA owns 4.42 hectares (10.92 acres) of land east of the BVC site. This area encompasses the Cross Bow Auxiliary Hospital. Although the Cross Bow Auxiliary Hospital is being phased out of operation, future plans for the facility and site are uncertain.

As previously mentioned, the Metropolitan Calgary Foundation is in the process of intensifying the development of its lands (8.03 hectares/19.85 acres) immediately east of the BVC *Open Space Lands* through the construction of new seniors' facilities.

As the principle local commercial area in the community, the 1 Avenue NE businesses participated in assessing the impact of development on the commercial needs of the community.

## 7.0 Context for the Concept Plan

### 7.1 General

The concept plan was developed based on an understanding of the historical forces that lead to the creation of the existing community, an understanding of the present conditions that will influence development and an anticipation of future forces. In short, the concept plan casts an eye not only to the past but is grounded in the present and anticipates the future. Further, the concept plan acknowledges that the context for redevelopment of the site is not only the immediately surrounding community but also the city as a whole. The following points briefly outline the major historical, current and future conditions that will influence redevelopment.

- Historical - The earliest development in Bridgeland-Riverside took place before it was officially part of the young city that was emerging on the south side of the Bow River and before there was even a bridge connecting the two. One of its most significant defining features was its adjacency to the Bow River and Nose Creek Valleys. It was also on the outskirts of a young and growing prairie city which itself was closely tied to the farm and ranchland that

surrounded it. The development pattern in the community evolved in response to prevailing conditions that for many years included the presence of the Calgary General Hospital.

- Present - The young prairie city is maturing into a large, multi-faceted community with a population fast approaching one million. Suburban development continues to absorb most of the population growth but at the same time, the Downtown and inner city are experiencing significant levels of redevelopment and intensification. Bridgeland-Riverside is an inner city community well connected to the centre by roads, transit, and walking and cycling paths. At the heart of the community is a 13.61 ha (33.64 ac) redevelopment site where the hospital once stood.
- Future - Calgary is expected to reach a population of 1.25 million people by 2018. The local economy will continue to diversify with a growing role for Calgary as a manufacturing and distribution centre for Western Canada. Downtown and inner city locations will become more attractive as the transportation system continues to experience pressures to keep up with the growth in travel demands. Within the boundaries of the study area, an additional 2,000 - 2,500 people will make Bridgeland-Riverside their home over the next decade. As well, about 900 more seniors will move into the community over the next twenty years on

the Metropolitan Calgary Foundation lands. There will also continue to be new development occurring throughout the community as older buildings are replaced with newer ones and low-density development is replaced with higher densities.



# APPENDICES



## OBJECTIVES OF THE PLANNING STUDY

### (Excerpt) Terms of Reference Bow Valley Centre Redevelopment Concept Plan

1. Achieve the objectives of the Calgary Transportation Plan in a manner appropriate to the local context (Appendix II).
2. Ensure redevelopment contributes to a sense of community, consistent with the goals of the Bridgeland-Riverside Area Redevelopment Plan (Appendix III).
3. Provide reasonable opportunities for community residents, 1st Avenue business owners and interest groups involvement in the planning process.
4. Provide opportunities for innovative and creative ideas to be considered.
5. Identify market opportunities.
6. Explore opportunities to enhance the viability of the 1st Avenue businesses.
7. Examine opportunities for innovation in residential and mixed-use development, including consideration of special needs and affordable housing.
8. Review opportunities to optimize the distribution of open space and community facilities in relation to the surrounding community, while ensuring that the quality of facilities and amount of open space is equal to, or better than, that currently in place.
9. Investigate the feasibility of providing a commemorative area which recognizes the contributions of the Calgary General Hospital and its role within the City.

10. Develop a land use concept plan and urban design guidelines.
11. Ensure the feasibility of land use concepts and design guidelines, in order that revenues from any disposition of these lands can be optimized.
12. Develop a public systems plan for lands within the study area that accommodates appropriate connections to the surrounding area.
13. Develop implementation and marketing strategies consistent with the land use concept plan and urban design guidelines.

## Calgary Transportation Plan

### Strategic Planning Objectives

1. Encourage sensitive types of housing intensification in all neighbourhoods, in accordance with local plans, to promote a more compact, adaptable form.
2. Encourage new housing close to transportation facilities and within mixed-use centres to support transit and pedestrian mobility choices.
3. The transit system will offer Calgarians a reasonable alternative to auto travel by:
  - facilitating access to transit for seniors and people with disabilities
  - integrating transit with other modes of travel.
4. The City of Calgary will facilitate mobility for the transportation of disabled and low income persons by:
  - continuing to improve the pedestrian environment accessibility to transit service, public facilities and community services.
5. To encourage walking, the pedestrian environment will be a design element in all land uses and plans for roads, LRT and transit facilities.
6. Cycling is recognized as a component of the City's transportation system.

Source: Calgary Transportation Plan, 1995



## Goals of the Bridgeland-Riverside

### Area Redevelopment Plan

1. To increase residential densities in appropriate locations.
2. To implement the policies of the Calgary General Municipal Plan.
3. To provide opportunities for a wider range of residential alternatives for different age and income levels.
4. To provide for the development of a land use pattern that will be better able to be served by public transit.
5. To improve the physical environment within the community.
6. To develop a more comprehensive strategy dealing with amenities such as recreation and open space.
7. To provide for opportunities that would allow for the increased viability of local commercial development catering to residents of the community.
8. To conserve and stabilize the family-oriented areas of the community and to ensure their long-term viability.

Source: Bridgeland-Riverside Area Redevelopment Plan (as amended), 1995



## July & August 1997 Survey Results

### (Highlights)

#### Community Values and Objectives

During the months of July and August, 1997, The City's Planning & Building Department distributed over 2,000 survey questionnaires to residents of Bridgeland-Riverside, asking for their views on issues related to redevelopment of the Bow Valley Centre site. A total of 114 questionnaires (approximately 5.7%) were returned (self-selected). Responses are summarized as follows:

1. Special features of the Bridgeland-Riverside community include:
  - the unique character of well-maintained diverse older buildings, green spaces, parks, recreation facilities and mature trees (112)
  - proximity to the Downtown, zoo, river, pathways and major roads (75)
  - a friendly community and family-oriented neighbourhood (66).
2. Concerns about the area that were identified included:
  - uncertainty about the future of the General Hospital lands (BVC site), and specifically the impact of redevelopment on the community (31)
  - lack of a local grocery store (8)
  - lack of an inner-city hospital (7)
  - loss of hospital business for local businesses (6)
  - security/crime (3).

3. Issues that should be addressed during the planning process include:

- integration of new development into the community (24)
- potential increase in traffic and parking (15)
- development to support family life and meet children's needs (7)
- maintenance and enhancement of green spaces (6)
- increased property values and taxes (5)
- impact during hospital demolition (5).

4. The following opportunities for redevelopment were identified:

- development of specialty services (e.g., health facility, seniors' housing, facilities adapted for special needs) (24)
- development integrated with the existing community (21)
- potential to attract more families (21)
- increased specialty businesses (17)
- mix of retail, housing and open space (17)
- enhancement of parks (14)
- enhancement and expansion of amenities and services to the community (11)

- revitalization and beautification (9)
- a mix of housing types (8)
- enhanced opportunities for 1 Avenue businesses (7).

5. Other comments received:

- ensure an open public planning process (28)
- ensure a thorough yet speedy process (5)
- concern about the preservation of mature trees (5)
- queries about reuse of building materials (e.g., bricks) from the BVC demolition (2).



## Draft Terms of Reference Open House - October 1997

### (Highlights)

#### Community Comments

Following the October, 1997 Open House on the Draft Terms of Reference for the BVC Redevelopment Concept Plan, The City's Planning & Building Department received fifteen comment sheets from the Open House. Elements of these responses are summarized below:

1. Concern that the Planning Advisory Committee (PAC) was not representative of the community and required a different composition of members. (3)
2. Support the redevelopment process and maintain a high level of community involvement. (3)
3. Concern regarding the inclusion of the *Open Space Lands* and the possible relocation process for the community hall. (4)
4. Encouraged development that supported existing and future businesses along 1 Avenue N. (3)
5. Concern for traffic problems and other issues arising from overly intensified residential or commercial development. (2)
6. Concern for additional parking in the 1 Avenue N area. (2)
7. Suggest a new hospital, clinic or commemorative as part of redevelopment. (3)
8. Acceptance for intensification with architectural controls that respected surrounding environment maintained green space and supported functional beauty. (4)
9. Discourage high-rises. (2)
10. Encourage social or affordable housing. (2)
11. Discourage social housing. (2)



## Co-Design Fair on November 7 and 8, 1998

(Extract) Complete results can be found in "Co-Design Fair, November 7 and 8, 1998, Follow-Up Report"

### General Results of Co-Design Fair

The Co-Design Fair was held on November 7 and 8, 1998 at the Bridgeland-Riverside Community Association Hall. Approximately 70 individuals took part in producing the images with the Co-Design artists and these participants, along with 130 others rated the image features on both days. There were three pre-Fair charettes conducted (i.e., City technical staff - 25 participants, 1 Avenue NE Bridgeland Merchants - 10 participants, and Co-Design Fair volunteers - 20 participants) and a post-Fair Seniors Co-Design Event - 70 participants. The images from the pre-Fair events were also rated at the Co-Design Fair and they are included in this report. There were 47 images produced in total. Interested participants at the Co-Design Fair also completed a written survey (Round of Life Survey - Appendix VII) on the general aspects of daily life in the future at the Bow Valley Centre Site (29 surveys were completed).

### Summary of Responses and Recurring Themes

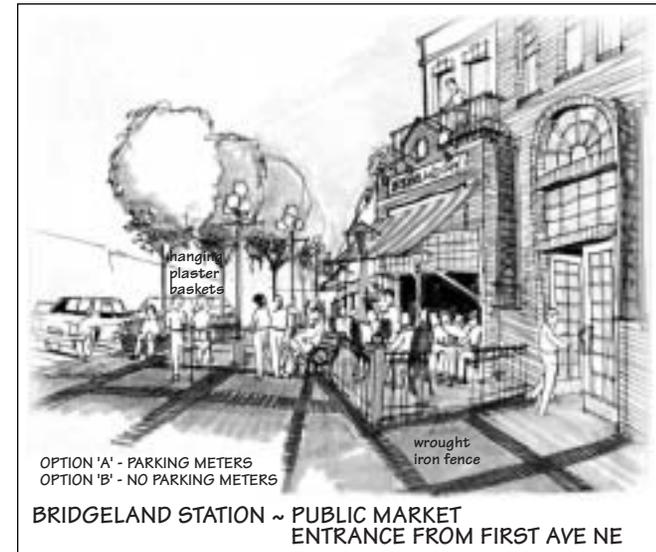
Generally, the participants state a strong preference for socializing as the main function of public open spaces:

Scenes of socializing appeared in 34 out of a total 47 images. Cars appeared in only 19 images. Trees feature importantly in the predominantly urban scenes, appearing in 43 of the 47 images.

Several recurring themes of activity are evident and appear in the form of words and images in a very noticeable frequency in all 47 images produced. Eight categories of use are identifiable, from which patterns and frequency of activity occur. The following lists the number of images that contain a particular activity or pattern:

1. Movement and Circulation
  - walking 41
  - cycling 27
  - cars 19
  - concealed parking 16
  - transit 7

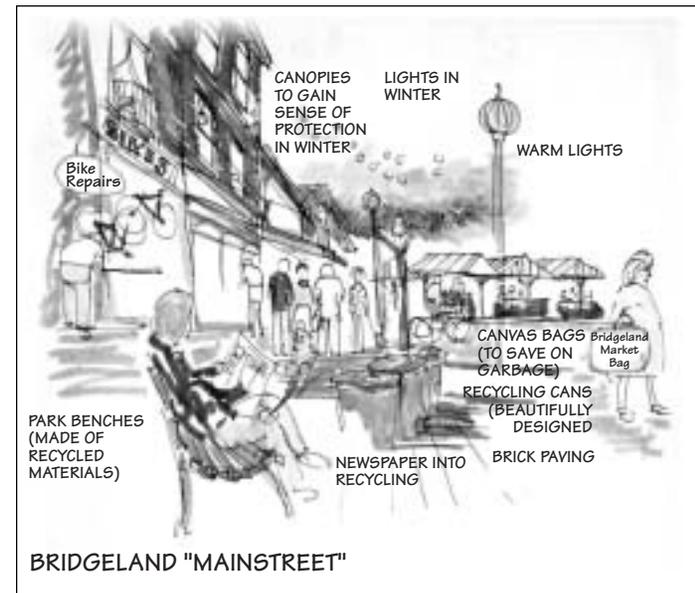
2.	Shopping	
	• retail at street level	21
	• specialty stores	20
	• retail in a plaza environment	12
	• public market	12
3.	Recreation	
	• passive	32
	• active	12
4.	Eating	
	• street café	18
	• kiosks	12
	• picnic	10
	• dining	5
5.	Entertainment	
	• structured events (e.g., live theatre)	27
	• unstructured events	16
6.	Work	
	• business	21
	• health	9
	• education	7
	• gardening	5



Two images produced at the Co-Design Fair

7. Community Life
- public social interaction 32
  - residential areas 15
  - private spaces 11
  - community association 11
  - special events 10
  - volunteer events 5
8. Special Events
- Outdoor festivals 10
  - Outdoor music concerts 9
  - Outdoor parades 3

The frequency of certain activities provides a particular reading of public desires for the site. On review of the above, it is evident that those who participated in the charettes envision a safe environment for walking and cycling with limited traffic and concealed parking; street retail cafes, and businesses on second levels; plenty of space, such as plazas, for public social interaction, special events, and festivals; and passive recreation activities and unstructured events.





## Round of Life Survey

(Extract) Complete results can be found in "Co-Design Fair, November 7 and 8, 1998, Follow-Up Report"

### Introduction & Survey Organization

The Daily Round of Life Survey was a questionnaire that some individuals completed at the Co-Design Fair. It provided another option for involvement - particularly those who did not have the time to participate in the full, day long Co-Design charette groups. A copy of the Survey is included in Appendix VIII.

The survey had three main sections. Section A asked respondents to identify an activity, or special event they may want to do at the Bow Valley Site in the future and the site's features as they related to that activity. Section B asked respondents general questions about daily life at the site in the future. Finally, Section C asked respondents to summarize how they saw the site redeveloping and if they had any other concerns they would like addressed through the planning process. A summary of each section follows:

### Section A – Questions 1 – 11

This section asked respondents to first identify an activity and to then describe its context.

#### Common Elements of note:

*Activity* – All were either taking place outdoors, had the option of taking place outdoors, or were closely connected to the outdoors (e.g., outdoor café). The majority were social events, such as festivals, social outings, or sporting events.

*When* – All seasons of the year were represented in the responses, with the activities often taking place in spare time (e.g., weekends or evenings).

*Frequency* – Responses varied.

*View* – Trees, vegetation, people and a view were often cited.

*Sound* – Natural sounds and the sounds of people (e.g., children playing, laughter) were often cited.

*Surface* – Natural (e.g., grass) and textured surfaces (e.g., cobblestone, brick, etc.) were largely seen as being appropriate.

*Air Feel* – Exposure to the climate, but protected from its harshness.

*Taste/Smell* – The smells of trees, grass, and various foodstuffs were often cited. Several respondents also indicated that they could not smell traffic.

*Mood* – Varied responses, however, several respondents felt that the mood could be either calm or festive-like.

*People* – All respondents indicated that they would either be with or see other people, ranging from small groups to large crowds.

## **Section B – Questions 12 – 21**

This section of the survey asked respondents some general questions about the site. Respondents were free to indicate more than one favourable option per question (e.g., mode of transportation to get to the site). The questions addressed the following themes:

- Transportation, both within and to the site;
- Food shopping;
- Eating;
- Waste disposal;
- Health and fitness;
- Work;

- Recreation;
- Cultural; and
- Relaxation.

Due to the nature of the survey – support for any particular option will be indicated as either “strong” or “general.” A strong rating indicates a favourable response from the majority of respondents. A general rating indicates a favourable response from a secondary majority of respondents. Those features that received little support are not rated.

12. How would you prefer to arrive at the site? (e.g., bus, LRT, car, bicycle, walk, etc.)?

Strong support for **walking** and general support for **bicycle**.

13. How would you prefer to move from place to place within the site? (e.g., bus, LRT, car, bicycle, walk, etc.)

*Strong support for **walking** and general support for **bicycle**.*

14. What types of places would you prefer to do food shopping at this site? (e.g., farmer’s market, supermarket, mall, specialty store, etc.)

*Strong support for both **farmers’ market** and **specialty stores**.*

15. If eating out, how would you prefer to experience eating out at different times of the day at this site (e.g., dining out, café, outdoor café, picnic in a park, community meal, etc.)

*Strong support for **picnic in park**, **café**, **outdoor café**, **restaurants**, and general support for **community meal**.*

16. How would you prefer to get rid of waste at this site? (e.g., recycling bins, compost, central garbage bins, individual pick-up, etc.)

*Strong support for **recycling** and general support for **central garbage bin and composting**.*

17. How would you prefer to accommodate health and fitness needs at this site? (e.g., clinic, exercise classes, individual exercise, exercise club, etc.)

*General support for **clinic, fitness club, exercise classes, individual exercise, and wellness centre.***

18. How would you see yourself at work on this site? (e.g., working in an office, working at home, in a workshop, in a classroom setting, etc.)

*Strong support for **work at home** and general support **for office.***

19. What types of recreation would you prefer to participate in at this site? (e.g., active sports, such as tennis, football or swimming, and passive sports such as walking, gardening, reading, drawing, etc.)

*An equal degree of support for **active or passive recreation.** In terms of active sport, general support for swimming and baseball. In terms of passive recreation, general support for walking, passive (not defined), gardening, and reading.*

20. What types of cultural activities would you prefer to experience at this site? (e.g., music concert, lectures, theatre, movies, television, etc.)

*Strong support for **theatre and concerts,** with general support for **lectures and live music.***

21. How would you prefer to rest in the area? (e.g., at home, sitting on a park bench, sitting in a commemorative area, sitting and watching activity, or sitting in a peaceful, meditative area, etc.)

*Strong support for **sitting on benches,** with general support for **sitting in a peaceful meditative area, sitting at home, sitting and watching activity, and commemorative area.***

### Section C – Questions 22 & 23

This section of the survey asked respondents to summarize what they preferred to see or do on the Bow Valley site and to identify any concerns they wished to be addressed in the Bow Valley Centre planning process.

Due to the nature of the survey, support for any particular element or concerns raised will be either indicated as “strong,” or “general.” The “strong” and “general” ratings are used in the same manner as Section B.

22. In a few words, please tell us about what would you prefer to do or see going on around you in:

a. Your daily Round-Of-Life at the Bow Valley Site.

*There was general support for **some retail and services**. Many respondents indicated that the community would be active with a mix of people (e.g., ages, incomes, ethnic background, etc.). There was strong support for **outdoor activities**, some passive and some active. There was strong support for **the creation of a pedestrian environment**.*

b. On Special Occasions at the Bow Valley Site?

*There was strong support for **some type of festive activities taking place on the site**. This included Old Bridgeland Days and some other types of festivals.*

23. Please use the following space to identify *other specific issues* that you feel need to be addressed during the Bow Valley Centre planning process.

*There was a wide range of responses to this question. Respondents generally supported the fostering of a strong feeling of community. Several respondents expressed a desire for some type of health facility. In addition, several respondents commented on the future configuration of open space lands.*





**Bow Valley Centre Co-Design Fair  
November 7th & 8th, 1998**

**APPENDIX VIII**

### **THE DAILY ROUND-OF-LIFE SURVEY**

The Co-Design Fair is part of the VISIONING phase of the Bow Valley Centre planning process. The Daily "Round-of-Life" Survey provides another option for involvement in the Co-Design Fair - particularly for those who don't have time to participate in the full, day-long Co-Design Charette groups.

The attached questionnaire survey will identify your preferences regarding future activities in, and use of, the Bow Valley site area. Your answers will be incorporated into the results of the overall Co-Design Fair and used by design teams to prepare conceptual design ideas for the site.

The survey asks you to consider the activities in your normal daily "Round-Of-Life", or at "Special Events" as they might occur on the site in the future. This will provide important design data for the planners and the architects to use during the planning and design process.

The normal activities of the day are often of three kinds:

- Necessary Activities such as going to the bank or waiting for the bus;
- Optional Activities such as pausing to look at the view or taking a stroll; and
- Social Activities such as meeting a friend to sit and talk.

Necessary activities will happen no matter how the site is designed. Optional and Social activities, on the other hand, require a suitably designed environment that meets the needs of those who use the area. These are the crucial environments that will strengthen the community. Your description of such an environment will provide essential information to the designers.

Please provide your comments to the attached questions wherever you have a specific preference or idea. You do not need to answer every question.

1. In what community do you live? (e.g., Bridgeland, Rosedale, Edgemont, etc.)

---

2. Suggest an activity, or a special event that you might want to do at the Bow Valley Site in the future. What is this activity or event?

---

3. When in the day or season would this activity take place? (i.e., consider the activity through a typical 24 hour period and during the seasons of spring, summer, fall, and winter)

---

4. Would it be an occasional activity, or a monthly, weekly, or more frequent activity?

---

5. What would you see in the area where this activity might take place? (e.g., view, sunlight, people, trees and plants, animals, traffic, homes, offices, stores, special sights or views, etc.)

---

6. What kinds of sounds would you hear? (e.g., natural, birds, wind, live or recorded music, conversation, singing, sound of children, traffic, animals, etc.)

---

7. What type of surface or textures would you walk on? (e.g., brick, cobblestone, pavers, grass, gravel, sand, etc.)

---

---

8. What would you feel in the air around you? (e.g., wind, warmth of the sun, rain, snow, cool shade, shelter, etc.)

---

---

9. What tastes or smells would you experience? (e.g., food and drink, trees and plants, traffic, the smells of a barbecue, etc.)

---

---

10. What would the aura or mood of the place be like? (e.g., quiet, busy, active, exciting, calming, festive, celebratory, diverse, etc)

---

---

11. How many people would be around? (i.e., are you alone, with another, with a group or crowd, and are you among them or an observer?)

---

---

***And now for some questions about how you see the future of the whole Bow Valley Centre site....***

12. How would you prefer to arrive at the site? (e.g., bus, LRT, car, bicycle, walk, etc.)

---

---

---

**13.** How would you prefer to move from place to place within the site? (e.g., bus, LRT, car, bicycle, walk, etc.)

---

---

---

**14.** What types of places would you prefer to do food shopping at this site? (e.g., farmer's market, supermarket, mall, specialty store, etc.)

---

---

---

**15.** If eating out, how would you prefer to experience eating out at different times of the day at this site? (e.g., dining out, cafe, outdoor cafe, picnic in a park, community meal, etc.)

---

---

---

**16.** How would you prefer to get rid of waste at this site? (e.g., recycling bins, compost, central garbage bins, individual pick-up, etc.)

---

---

---

**17.** How would you prefer to accommodate health and fitness needs at this site? (e.g., clinic, exercise classes, individual exercise, exercise club, etc.)

---

---

---

18. How would you see yourself at work on this site? (e.g., working in an office, working at home, in a workshop, in a classroom setting, etc.)

---

---

19. What types of recreation would you prefer to participate in at this site? (e.g., active sports, such as tennis, football or swimming, and passive sports such as walking, gardening, reading, drawing, etc.)

---

---

20. What types of cultural activities would you prefer to experience at this site? (e.g., music concert, lectures, theatre, movies, television, etc.)

---

---

21. How would you prefer to rest in the area? (e.g., at home, sitting on a park bench, sitting in a commemorative area, sitting and watching activity, or sitting in a peaceful, meditative area, etc.)

---

---

22. In a few words, please tell us about what would you prefer to do or see going on around you in:

a. Your daily Round-Of-Life at the Bow Valley Site

---

---

b. On Special Occasions at the Bow Valley Site

---

---

**THANK YOU FOR COMPLETING THE ROUND-OF-LIFE SURVEY**

**BOW VALLEY CENTRE PLANNING**  
THE CITY OF CALGARY  
PLANNING AND BUILDING DEPARTMENT (#8108)  
Station M  
Calgary Alberta T2P 2M5



## Recreation Needs and Preferences Survey

In early 1999, on behalf of The City of Calgary, International Management Technologies conducted a study to examine recreational needs and preferences in the community of Bridgeland-Riverside. Over 400 telephone surveys were conducted of primarily Bridgeland-Riverside residents along with a lesser number from neighbouring communities. Approximately 200 other stakeholders in the redevelopment also participated in qualitative interviews.

### Results of telephone survey:

*Location is important:* being close to downtown and the high degree of accessibility to other amenities (e.g., zoo) and transportation routes (e.g., Memorial Drive) were the things people liked about living in Bridgeland-Riverside.

*Popular recreation and leisure activities:* walking, cycling, and swimming were the most frequent activity, however the most common response was “none” (39% of respondents).

*New activities desired:* children’s programs, health and wellness programs, arts centre, and music classes/performances.

*Essential activities:* programs for children (42%) and seniors (21%). Swimming and “sports in general” were also frequent responses.

*Regional/Non-resident use:* the majority of respondents (87%) felt that the BRCA should encourage non-residents to make use of the community’s programs, facilities, and spaces.

*Redevelopment preferences:* respondents were asked about the arrangement, location, and use of facilities and open spaces. Most did not want the location of the existing park space changed and they felt the present arrangement and use (mostly ball diamonds) were appropriate. 35% of respondents wanted to keep the space as it is and 47% wanted to redevelop the existing community hall on site as part of a larger multi-use development.

*(At this stage of the planning process, there was a conservative tendency towards relocating the open space, but not toward some type of redevelopment of the hall itself. People were not given suggestions by the interviewers as to the exact proposed location or configuration of new open space. It should be noted that the sentiment to keep the park space where it now sits*

*shifted dramatically after the May open house. At the open house, options that moved the park space and provided a different range of activities were shown in redevelopment concepts. The results from the May 13 & 15 open house make it clear that the public do want to move the park space further north in the study area and are open to uses besides ball diamonds. See the summary of the open house results for more details.)*

Arrangement of open space: 79% of respondents wanted to keep the existing uses and 88% felt that ball diamonds were a good use of space in Bridgeland-Riverside. However, when asked if they would use existing park space for pathways, approximately 65% said they wanted the park space to be used for “long, pathway type parks.” This conflicting result is consistent when considered in the light that the most popular recreation activity for respondents is walking (43%) versus softball/baseball (16%).

The stakeholder interviews revealed that the softball players will continue to play at Bridgeland-Riverside if the same or better quality of facilities are provided in the redevelopment.

Strength of current facilities: the pool is the most “appreciated” of existing facilities (noted by 30% of respondents).

Weaknesses of current facilities: 30% feel that the hall needs work.

Strength of present open space: just having it (27%) and its quality/amount (32%). The river pathway system was mentioned often.

Weaknesses of present open space: none (38%) and need more (21%).

Undesired community recreation or leisure program outcome: traffic/parking problems (40%). Throughout the planning process, residents have indicated their concern for traffic congestion/lack of parking as a possible result of the site redevelopment.

---

**Results of Qualitative Interviews:**

BRCA

Generally, the concerns of the BRCA are similar to the residents'. They have the additional concern of the viability and vitality of the association itself.

Associate members of BRCA

The ball players will continue to play at the Bridgeland-Riverside fields if the same or better facilities (in terms of number and quality of diamonds and access to the lounge at the Community Hall.

Other associate members feel that the Community Hall needs sprucing up and that it also needs some meeting space for groups of less than 40 people.

Youth

Child Friendly Calgary was actively involved throughout the planning process with the local schools. IMT had the opportunity to hear from four Grade Six classes. The children want any future redevelopment to be:

- accessible
- all amenities within close proximity; and
- affordable



## Preliminary Concepts Open House - May 13 & 15, 1999

### Preliminary Concepts Open House - 13 & 15 May 1999

The five preliminary concepts submitted as part of the design competition were highlighted at an open house held over two days that was attended by almost 600 hundred people. Over the duration of the open house, each team gave presentations to the public on their designs and were on hand to answer questions. Members of the public also had a chance to tour the site with planning staff to get an idea of what the proposals could look like on the ground. On behalf of The City of Calgary, International Management Technologies gathered public comment and summarized the results. Attendees at the open house were asked to complete a survey indicating their preferences for design features and overall concepts (over 200 were submitted).

To encourage maximum attendance both local transportation assistance and daycare were offered through a local poster ad campaign. The daycare was used on the Saturday, however there were no requests for local transportation assistance. As with the Co-Design Fair, staff from the Community and Social Development Department organized a group walkover from Bridgeland Place. There were also newspaper advertisements in the Calgary Sun and Calgary Herald, posters put up locally, a banner was suspended over Memorial Drive NW at 14th St. NW, a flyer was delivered to every dwelling in Bridgeland-Riverside and neighbouring portions of Renfrew and Crescent Heights, and local churches were notified and asked to distribute additional flyers to their congregations. As well, local stakeholders (e.g., The Children's Cottage, CNIB, etc.) were personally notified of the open house.

### Results

The percentages after the bulleted comment indicates the proportion of similar responses from those open house attendees who submitted completed surveys.

#### *Park arrangement:*

- corridor/connecting - 58%
- gathered together - 25%
- spread out - 17%

*Preferred location of main park:*

- centre of study area - 61%
- current location - 39%

*Would concepts accommodate preferred future recreational activity?*

- yes - 56%
- some - 29 %

(the favourite activity of 52% of respondents is walking)

*Park treatment:*

- more naturalized areas rather than playing fields
- respondents were split over whether a community garden was desired

*Community Hall:*

- build it in to the escarpment - 28%
- reuse the laundry building - 28%
- move it north to Murdock Road - 13%

(In total, 69% were in favour of moving the hall to locations north McDougall Road. Non-residents preferred reuse of the laundry building more than residents of Bridgeland-Riverside.)

*Pedestrian bridge over river:*

- yes - 82%

*Building Height:*

- Respondents were sensitive to building height. By a ratio of 2:1, they were willing to trade off having less park space so that buildings could be lower (1.5-4 storeys versus 4-8 storeys).

*Hospital Commemoration:*

- Most respondents suggested that a modest form of commemoration would be appropriate.

*Concept Preference:*

There was no overwhelming preference for (or aversion to) any of the original five concepts. The distribution of scores for each of the concepts was quite similar, with 3/4 of the respondents assigning 40 or fewer points to each plan. This suggests that there are features of more than one plan that have some appeal to respondents.

For concepts 1 - 4, there was no difference in preference between residents and non-residents; however, more non-residents preferred concept 5.

Mean scores, by concept:

<b>Concept#</b>	<b>Mean score</b>
4	28%
5	22%
2	19%
3	15%
1	13%



## **PUBLIC COMMENT AT THE BOW VALLEY CENTRE REDEVELOPMENT DRAFT CONCEPT PLAN AND ARP AMENDMENT OPEN HOUSE DECEMBER 4 & 7, 1999**

The Draft Concept Plan and ARP Amendment were presented to the public at an open house held over two days. The open houses were attended by approximately 240 people. The survey was filled out by 101 people. The public had a chance to tour the site, and members of the Design Team and City staff were on hand to answer questions. The Bridgeland-Riverside Community Association also had representatives in attendance and conducted a separate survey questionnaire.

### **Survey Highlights**

The results of the survey indicate **strong support for the Draft Concept Plan** - 65 respondents (75%) gave an overall rating to the plan of either 'excellent' or 'good'. There was strong support for the distribution of public park space - 70 respondents (81%) felt it represented an 'optimum' distribution. There was also a high level of support for the proposed range of housing types (61 respondents or 69%) and built form (59 respondents or 66%).

**The most liked features** of the plan related to the park space, location of the community hall and other components of the public system (40 responses or 31%). A playground was ranked most frequently as one of the three most important activities to accommodate in the public park.

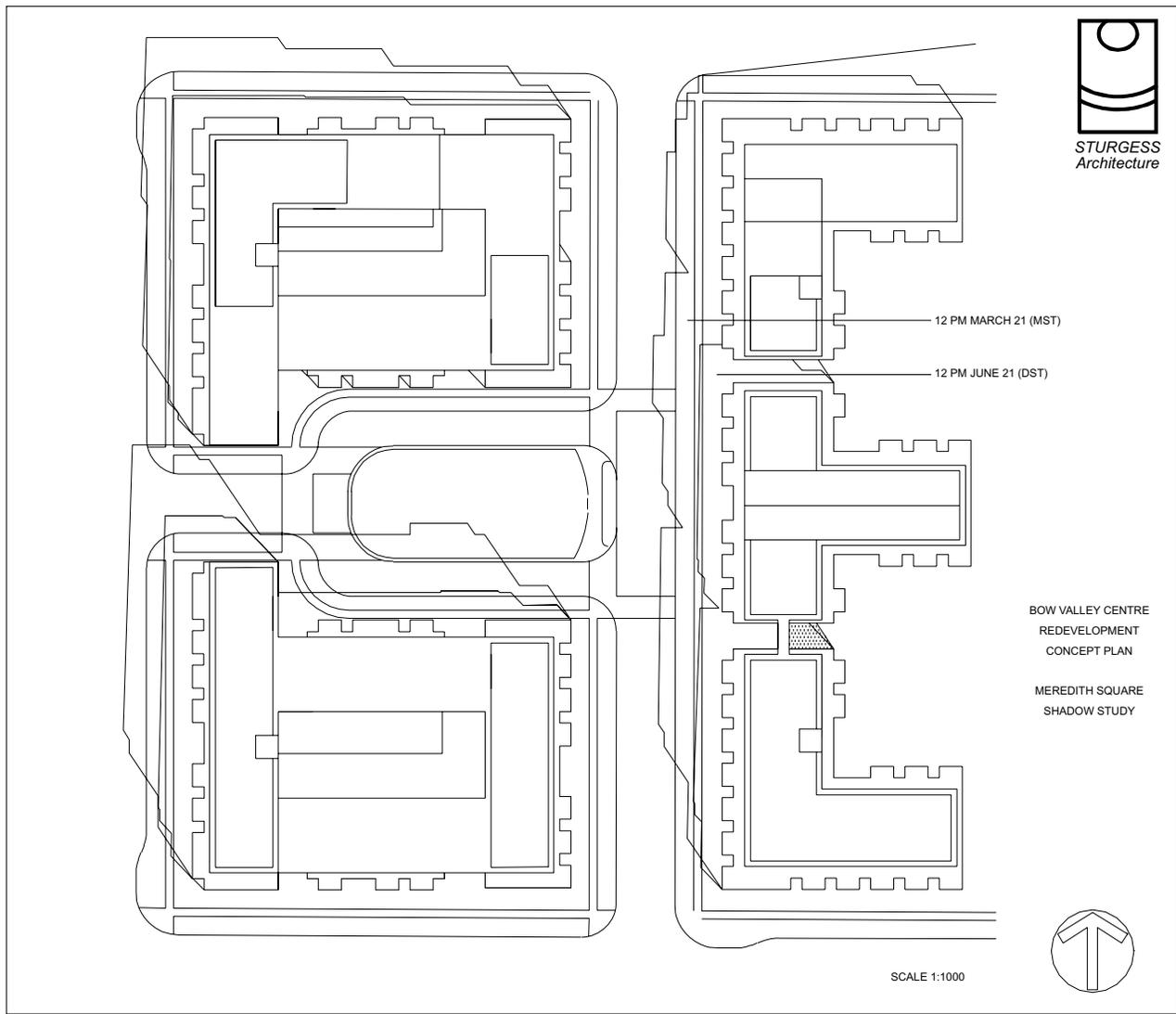
Forty-six percent of respondents indicated that they felt the most **appropriate land use adjacent to Memorial Drive** would be a mixture of residential and office development.

When asked to identify features of the plan they **didn't like**, respondents mentioned traffic and short-cutting (12 respondents or 18% of responses) and parking (12 respondents or 18% of responses) concerns most frequently. The most frequently mentioned suggestions for improvement were to reduce the density and/or building heights (6 respondents or 19% of responses). When asked if there was anything missing that should be added to the plan, the most common responses related to a hospital or medical/health facility (11 respondents or 16% of responses).

Respondents were asked to state their preference regarding a location from which to **commemorate the Calgary General Hospital** and a preferred commemorative 'theme'. The most frequently mentioned location was within the large park (34 respondents or 42%) and the most favoured approach would be a commemorative monument or interpretative plaque (29 respondents or 36%).



APPENDIX XII



Shadow Study



## ACKNOWLEDGEMENTS

The Planning Team gratefully acknowledges the contributions of the citizen's Planning Advisory Committee, who dedicated many long hours towards the success of this planning process. The contributions of the consultants, Design Team, Interdepartmental Team and Technical Support staff are also greatly appreciated.

### Planning Advisory Group

Rose Bichel	Jim Goertz
Trish Bond	Bob Hawkesworth (Alderman)
Rod Chapman	Margaret Lounds
Jim DeWald	Mike Robinson (Chair)
David Down	Leanne Serada
Stan Eisenberg	Claudia Shepherd
Bruno Friesen	Brad Sinclair
	Nawaf Traya

### Design Team

Sturgess Architecture with:

- Carlyle and Associates
- Cooper Robertson & Partners
- D.A. Watt Consulting Group Ltd.
- Finn Transportation Consultants
- Glen Lyons Consulting
- Intergulf Cascadia
- Intergulf Cidex
- Ulinder Rennie Project Marketing

## **Consultants**

Brown & Associates Planning Group (Public consultation consultants)  
Chomik Architects (Design Competition Advisor)  
Colliers International Realty Advisors, Inc.  
IMT International Management Technologies Inc. (Public consultation consultants)

## **City of Calgary Planning Team**

Deborah Cooper	Assistant Planner, Planning & Transportation Policy Business Unit
Ian Fawcett	Section Head, Planning & Transportation Policy Business Unit
Debbie Graham	Project Leader, Corporate Properties
Susan Palmer	Project Leader, Planning & Transportation Policy Business Unit
Colleen Roberts	Land Development Planner, Corporate Properties

## **Interdepartmental Team**

Cynthia Busche-Hiebert	Community & Neighbourhood Services Business Unit
Dave Colquhoun	Calgary Transit
Ian Cope	Development and Building Approvals Business Unit
Ted Grant	Development and Building Approvals Business Unit
Jack Scissons	Planning & Transportation Policy Business Unit
Nancy Scott	Planning & Transportation Policy Business Unit
Cst. Larry Shoren	Calgary Police Services
Gae VanSiri	Park Development & Operations Business Unit
Glenn Whittick	Development and Building Approvals Business Unit

## **Technical Support Staff**

Helen Adamus	Planning & Transportation Policy Business Unit
Lisa Jeczmiowski	Planning & Transportation Policy Business Unit
Sharon Jensen	Planning & Transportation Policy Business Unit

---

## **BIBLIOGRAPHY**

City of Calgary; Bow Valley Centre Redevelopment Concept Plan Co-Design Fair, November 7 & 8, Follow-Up Report; February, 1999.

City of Calgary; Bow Valley Centre Redevelopment Concept Plan Discussion Paper - Design Competition Evaluation - Principles, Issues and Choices; June, 1999

City of Calgary; Bow Valley Centre Redevelopment Concept Plan - Planning Design Competition Information Package; October 1998.

City of Calgary and Brown & Associates Planning Group; A Report on Public Comment at the Bow Valley Centre Redevelopment Draft Concept Plan and ARP Amendment Open House, December 4 & 7, 1999; February, 2000.

Colliers International Realty Advisors Inc.; Market Feasibility of Bow Valley Centre; March 1999.

Finn Transportation Consultants; Bow Valley Centre Concept Plan - Traffic Assessment; July, 2000.

International Management Technologies, Inc.; A Report on Community Needs and Preferences for Open Spaces, Community Facilities and Community Programs in the Bridgeland-Riverside Area; March, 1999.

International Management Technologies, Inc.; A Report on Public Comment at the Bow Valley Centre Design Concept Open House, May 13 & 15, 1999; May, 1999.

Nowell Berg Market Insight; Bridgeland-Riverside Community Association - Community Survey Report; February, 1997.

Sturgess Architecture; Bow Valley Centre Redevelopment Concept Plan for the Community of Bridgeland Riverside Planning Design Competition; November, 1998.

