THE CULT OF THE VIEW
Comparing and Evaluating the Effectiveness of View Corridor Protection in Montréal and Vancouver

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EXECUTIVE SUMMARY

INTRODUCTION

This report compares and evaluates the effectiveness of view corridor protection in two Canadian cities. The view corridors in Montréal, Québec toward Mont-Royal and in Vancouver, British Columbia toward the North Shore Mountains were chosen for their Canadian context and because they are the only cities in Canada that protect views of mountains. This report examines the extent to which these significant landmarks have been protected and the effectiveness of the current policies and guidelines in implementing and maintaining view corridors. Specifically, it answers the following research question: Is view corridor protection more effective in Montréal or Vancouver, and why?

CONTEXT

Montréal is located in southeastern Québec and was named after Mont-Royal, one of the Monteregian Hills between the Laurentians and the Appalachians. Mont-Royal’s summit overlooks Montréal at 232.5 metres above sea level, or 175.5 metres above the St. Lawrence River. The Mountain is important for its recreational component as the largest park in Montréal and for its significance to Montréal’s image and identity.

Vancouver is situated on a peninsula in the southwest corner of British Columbia. Growth is constrained by surrounding water bodies including the Strait of Georgia, the Fraser River and the Burrard Inlet. The city is also bordered by the North Shore Mountains, which are part of the Coastal Mountain Range. The heights of the mountains vary from 1,015 metres to 1,788 metres above sea level and provide a unique backdrop to the downtown skyline and shoreline, which is considered Vancouver’s signature view.

Montréal’s view corridor protection policies were first adopted in the 1990 Master Development Plan for the Ville-Marie District, which included 12 views toward Mont-Royal from locations within the District. Today, there are 110 protected views: 23 from the Mountain to the St. Lawrence River and 87 from the city to the Mountain. The views were most recently amended in the 2004 Montréal Master Plan.
City Council adopted Vancouver’s View Protection Guidelines in 1989 to preserve selected threatened views around the city. The Guidelines were most recently amended in 2011 and currently include 36 protected view cones and view cone sub-sections. Of these view cones, 24 fulfill the selection criteria and were observed for this report.

**RESEARCH METHODS AND EVALUATION CRITERIA**

A comparative case study method was adopted for this report using Montréal and Vancouver as units of analysis. Data was collected using qualitative research methods including a preliminary literature review, a document review, direct observation, document photography, Google Street View where available and interviews with two industry professionals in each city. Direct observation was conducted for view corridors that transect the downtown core. The evaluation criteria for data analysis were determined from the initial literature review and were organized into four sections: policy and legislation, the shape of the skyline, the decision-making process and view protection.

**CONCLUSIONS AND RECOMMENDATIONS**

**Montréal**

The analysis of policy and legislation demonstrates a strong commitment to view corridor protection in Montréal. Building heights are limited to the summit of Mont-Royal at 232.5 metres above sea level, not including building apparatuses. The increasing availability of technological tools to review and simulate building heights prior to their construction has helped ensure that buildings do not impede view corridors. The Comité d’architecture et d’urbanisme (Architectural and Planning Committee) functions as an urban design panel and assists to mitigate any attempts to build within a view corridor, as does the use of building setbacks which are implemented by each borough.

Clustering the tallest buildings within the Central Business District (CBD) creates a hill-and-bowl skyline shape. A “democratic” skyline is maintained by restricting the maximum height to the summit of Mont-Royal. This ensures that no individual building vies for attention on the skyline. The fractal dimensions (fd) of the buildings in Montréal do not match the shape of the Mountain. This creates an organic structure that is generally more liked by the public.
The decision-making process in Montréal follows the recommended process outlined by the National Capital Commission (NCC) and uses a mixture of experts and non-experts to determine which views to protect. However, information could not be found about how consensus was made among experts, or the extent to which non-expert opinions were considered in the final Plan.

Of the views examined, two were moderately well protected, with 28 assessed as well protected based on Montréal's view protection policies.

**Recommendations for Montréal:**
1. Implement the proposed amendments in the *Mount Royal Protection and Enhancement Plan* (2009)
2. Define all elements of each protected view
3. Ensure all views are publically accessible

**Vancouver**

Vancouver’s *View Protection Guidelines* are comprehensive and easily understood. Angular control planes are used to limit building heights, however there are various instances of buildings that have entered a protected view cone or view cone sub-sections. Additionally, a policy allows buildings to surpass the permissible building height and enter a protected view if they are in the view shadow of a tall building. An urban design panel advises on building proposals and policies. However, the Panel has used their influence in some instances to allow buildings to exceed the prescribed height. Building setbacks also used, though not explicitly, to protect views of the North Shore Mountains.

A domed skyline approach has been adopted in Vancouver’s CBD. A policy that allows taller buildings on predetermined sites makes the skyline “undemocratic”, as some buildings will vie for individual attention. The fd of Vancouver’s skyline does not match that of the North Shore Mountains, which is considered a good policy because it creates a more natural skyline.
The process used to determine the protected view corridors in Vancouver used expert and non-expert opinions. The limited number of experts used, however, may not be a representative group. Similarly to Montréal, it is not clear how the information gathered from non-experts was used to inform the final decisions relating to the protection of view corridors.

Of the 24 view cones and view cone sub-sections examined in Vancouver, 11 were considered moderately well protected and 13 were considered well protected, as per the city’s View Protection Guidelines.

**Recommendations for Vancouver:**
1. Amend the View Protection Guidelines to make them definite policies, eliminating the ability of other policies and advisory and decision-making bodies to reduce their effectiveness
2. Create long-term view protection policies
3. Protect views of Mount Baker from some prominent locations such as Queen Elizabeth Park

In addition to the recommendations for each city, two recommendations were made that apply to both Montréal and Vancouver.

**Recommendations for Montréal and Vancouver:**
1. Implement foreground control policies that maintain landscaping, preventing trees from blocking protected view corridors
2. Ascertain the public’s input through community engagement to refine the cultural meaning and significance of view corridors, thereby educating the public about their presence and importance

The limitations associated with this report are largely due to a lack of resources, particularly associated with time and financial constraints. Future research should be more comprehensive in the number of view corridors examined and interviews conducted. It should also look internationally to other cities that protect views toward mountains.
“In the end, our society will be defined not only by what we create, but also by what we refuse to destroy.”

- John C. Sawhill
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CHAPTER 1: INTRODUCTION

Urban areas worldwide are experiencing unprecedented population growth, the result of factors such as urbanization and increased life expectancy. To accommodate the growing population, cities are facing challenges associated with the need for additional housing and employment areas while minimizing urban sprawl to maintain agricultural areas and for environmental protection. The growth of many cities is further limited by surrounding topographical constraints. As a result, some cities are turning to densification through height instead of through sprawl. To maintain the image of a city and its unique features, however, regulating bodies must ensure the increasing height of buildings does not negatively impact the view toward important landscapes and landmarks. Implementing view corridors is one method of protecting these significant vistas.

This report focuses on view corridors from public locations, such as parks, bridges and sidewalks. View corridors are sightlines between the observer and a significant landmark or panorama. These sightlines change as the observer moves through the public realm, depicted in the sequence of images in Figure 1.1, which demonstrates how the perspective of an object or group of objects changes with the observer’s movement. Reading down the images, the objects appear to move and change position relative to each other as the observer moves away from and around the cluster of buildings. The same effect occurs when the individual moves through public space around a significant landmark or panorama. View corridor protection policies define view corridors and the viewpoint locations to preserve views toward the landmark. The degree of importance placed upon the landmark varies by city and is reflected accordingly in their protection. Berelowitz refers to “the cult of the view”, which appropriately demonstrates the importance of view protection in some cities (2005, 27).

1.1 RESEARCH QUESTION

The objective of this report is to compare and evaluate view corridor protection in Montréal, Québec and Vancouver, British Columbia. The report will answer the following research question: Is view corridor protection more effective in Montréal or Vancouver, and why?
1.2 SCOPE OF WORK

This report will focus on view corridor protection in the Canadian context by examining the protected views and associated policies in Montréal and Vancouver. Other cities in Canada also protect significant views, such as Parliament Hill in Ottawa, City Hall in Kingston and from Citadel Hill to various parts of Halifax. However, Montréal and Vancouver are unique in the Canadian context for their protection of mountainous landscapes. Due to the constraints of this report, only view corridors that protect sightlines toward the mountains and that transect the downtown core were evaluated. In Montréal, 30 of the 110 protected views fulfill this criterion, as do 24 of the 36 view cones and view cone sub-sections in Vancouver.

1.3 REPORT STRUCTURE

The following chapters have been arranged to guide the reader through the process of the research, analysis and evaluation. Chapter 2: Context gives the significance of the two cities chosen by describing the geographical locations of Montréal and Vancouver and the importance of their mountains. Chapter 3: Methods follows and explains the qualitative methods used in this report. Data was collected through a document review, direct observation, document photography, Google Street View where available and interviews with two industry professionals in each city. Chapter 3 also provides a brief theoretical background of the evaluation criteria and how it was used to evaluate the data. The analysis of this data is provided in Chapter 4. Montréal and Vancouver are evaluated separately for each criterion provided in Chapter 3 and a summary table is included for the results of the direct observation. Chapter 5: Conclusions and Recommendations summarizes the analysis in the previous chapter. It provides three recommendations each for Montréal and Vancouver, followed by two recommendations that both cities should implement. This is followed by an explanation of this report’s limitations and recommendations for future research on view corridor protection.
CHAPTER 2: CONTEXT

This chapter describes the geographical locations of Montréal and Vancouver and provides a brief history of Mont-Royal and the North Shore Mountains. In doing so, the significance of these mountains will become apparent, as will the reasons for protecting view corridors towards them.

2.1 MONTREAL

Montréal is the largest city in Québec, located in the southeastern portion of the province on the banks of the St. Lawrence River. The city is named after Mont-Royal, which is situated west of downtown Montréal. Mont-Royal is part of the Montréal-Richelieu Hills between the Laurentian and the Appalachian mountain ranges. Its summit is 232.5 metres above sea level, or 175.5 metres above the St. Lawrence River. The Mountain provides 200 hectares of park space, making it the largest park in Montréal.

Frederick Law Olmsted, a prominent landscape architect, was commissioned to design Mont-Royal Park in the 1870s. In his design, Olmsted aimed to preserve the natural character of the area while allowing people to enjoy the park through the use of accessible roads and walks, a public house for shelter, seats and drinking fountains, among other design elements (Olmsted 1881). Although many of Olmsted’s ideas for the Park were modified, he is credited for its present design and the main walkway was named in his honour.

The importance of Mont-Royal stems from its role in defining Montréal’s image and identity (Montréal 2009, 9). The Mountain’s visibility represents a sense of belonging for Montrealers. Its significance to Montréal was recognized in 1987 when Mont-Royal was designated as a heritage site (Montréal 2009, 3). For all these reasons, it was decided that the protection of views toward and away from the Mountain was important (Montréal 2009, 12).
2.2 VANCOUVER

Vancouver is a coastal city located on a peninsula in southwest British Columbia, surrounded by the Strait of Georgia, the Fraser River and the Burrard Inlet. The North Shore Mountains are part of the Coastal Mountain Range and overlook Vancouver from their position north of the Strait of Georgia. The North Shore Mountains are made up of a number of individual mountain groups. Of particular significance for this report are the Cypress Group, the Grouse Area (which includes Mount Fromme, Grouse Mountain and Crown Mountain), Cathedral Mountain, the Fannin Range (including Seymour Mountain) and the Lions. The Mountains provide a distinctive backdrop to the downtown skyline against the shoreline. This view of the shoreline, the downtown skyline and the North Shore Mountains is considered Vancouver’s signature view, and are included in the composition of the protected views. It helps that there is a general agreement within Vancouver that this is a significant view and an important aspect of the city’s identity (Vancouver 2012b, “Background and History”). Berelowitz describes this consensus as “the cult of the view” (2005, 27).

In addition to their aesthetic attributes, the height of the Mountains, which range from 1,015 metres to 1,788 metres, and their steep terrain provide recreational opportunities such as mountain biking, hiking and skiing which are popular with locals and tourists alike.

The prominence of the North Shore Mountains and their proximity to Vancouver make them important landmarks, providing a source of civic identity in Vancouver and the surrounding municipalities.
CHAPTER 3: METHODS

3.1 THEORETICAL BACKGROUND OF VIEW CORRIDORS

3.1.1 Landscape Views
View corridor protection policies can be implemented to mitigate the impact of built features on natural landscapes. The term ‘landscape’ encompasses a variety of natural forms. Those with large- and small-scale patterns, such as a mountain range or even a group of rocks, are most easily appreciated (Crowe and Mitchell 1988, 75). The amount of visible landscape is also important. The panoramic vista is one of the most popular elements of the landscape, as it links the viewer to the remote landscape and produces a sense of omnipresence (Cullen 1961, 41). Although we typically think of landscapes as the wide-open vistas that Cullen describes, Crowe and Mitchell add narrow, tunneled views to their definition. Creating a tunneled view by framing through natural or man-made features, such as a tree or the archway of a bridge, can create a focused and enhanced view (Crowe and Mitchell 1988, 60). Landscapes are not only appreciated for their aesthetic qualities, they are also valued for their symbolic qualities. They can symbolize such things as hazards, prospects, and refuges, each with different levels of symbolism (Appleton 1996, 74). The importance of protecting landscapes therefore goes beyond aesthetics to their symbolic meanings, which may differ for every person.

There is no established method for evaluating landscapes. This may be due to the variation in responses that each person has to landscapes and the ability of landscapes to touch all the senses. It is therefore difficult to apply rigid criteria to their evaluation (Crowe and Mitchell 1988, 57). Landscapes can be described in relation to the individual emotions they invoke. One method of evaluating the landscape is through the visual and emotional reactions it raises (Crowe and Mitchell 1988, 114). Visual and emotional reactions, though, are personal and vary from one person to another. They would therefore be difficult to measure with certainty. Visual perception, in particular, is difficult to measure because it cannot be directly observed. What can be observed are its inferred consequences (Appleton 1996, 21). Such a qualitative method of measuring landscape is unreliable due to the difficulty of measuring individuals’ unique emotional reactions. It could therefore be argued that creating view corridor protection policies based on the emotional reactions to certain landscapes would be an unreliable method for establishing policies.

3.1.2 View Corridors
The importance of view corridor protection for maintaining the unique character of an area is not a contemporary idea. The ancient Romans recognized the significance of an area’s individuality and consequently created a maxim declaring that a city should preserve the unique symbols of its identity to give its citizens a sense of security (Duerksen 1986, 1). The Romans understood that symbols are not only important to maintain the city’s unique identity, but also for the well being of
its citizens. The significance of protecting important features such as a building, a view, or a river can be understood and supported by everyone, from the layman to the courts (ibid). This makes it a universal concept that can be understood and therefore scrutinized by all members of a community. Although the idea of view corridors has been used historically, people are increasingly recognizing the importance of vistas to a community’s sense of place and image, and their contribution to the overall quality of life and attracting new business (Duerksen 1986, 17). It is therefore necessary that politicians and planners understand the aesthetic and emotional benefits of vistas and unique characteristics of a city.

However, view corridor protection policies do not benefit all members of a community. For the private real estate industry, view corridors can lead to decreased economic potential of a building. This industry functions by maximizing profit, which can occur by capturing views of an amenity from buildings to increase the real estate value (Zacharias 1999, 217). Good views, therefore, lead to increased economic value, particularly through high-rise buildings. When view corridor protection policies curtail this ability through height restrictions, profitability of a site decreases. However, maximizing the view for one property can negatively affect the view for real estate owners outside the view corridor. Therefore, politicians and planners should also be aware of the negative impacts of height restrictions for developers, and potentially for the housing market, by becoming knowledgeable about the different types of views and view restrictions.

There are various types of views that should be considered when creating view corridor protection policies. These range from completely unobstructed to mostly obstructed views. The most unrestricted view is the panorama, which is defined as having a 360-degree view of the landscape (Appleton 1996, 77). However, a panorama can also denote a broad view that is in some way restricted, providing that its breadth remains remarkable characteristic (ibid). A panorama occurs in a view corridor if the view to a symbol is completely unrestricted by the city skyline. An interrupted panorama occurs when minor obstacles intrude on the view without destroying the general impression of the panorama. In this case, any interruption to the view would be small enough that the imagination could complete the picture to create the impression of an unobstructed view (ibid). This type of view may be the case if a small number of tall buildings obstruct the view of a symbol. The most restricted view is the simple vista, where a view is obstructed by a screen but does allow some visual penetration (ibid). This
may be in the form of a screen of trees or latticework that does not completely block the view. By understanding these different types of views, policymakers can make more informed decisions about what type of view is most appropriate for a particular situation.

View corridors, as discussed for the purposes of this report are designed for the public domain, from parks, plazas, streets and bridges. However, as people in the public domain are rarely stationary, view corridors should be designed as visual sequences for an observer in motion (Appleyard, Lynch and Myer 1964, 2). Although much of the literature that surrounds this issue has to do with roads, it can be applied to the view corridor context, as both pertain to motion and visual sense in the public realm. This includes the sense of motion, the seeming motion of surrounding buildings, and the shape of the surrounding space (Appleyard, Lynch and Myer 1964, 8). As the individual moves, objects appear to come closer, fall back, or break apart (Appleyard, Lynch and Myer 1964, 11). When designing view corridors, the motion of the observer should be considered, as an unobstructed view corridor at one location may be obstructed from another.

According to the National Capital Commission (NCC), the view corridor to a landmark is composed of six parts: “...the viewpoint, the subject, the central foreground immediately between the subject and viewpoint, the central background immediately behind the subject, and the lateral foreground and lateral background areas” (NCC 2007, 43). Vancouver uses the term view cone to protect the mountainous landscape, which is comprised of three elements, shown in Figure 3.4. The viewpoint is the view cone’s origin point, which should take into consideration the “X” and “Y” planes, as well as the “Z” elevation from the pedestrian’s eye level (Vancouver 2011c, “View Cone Composition”). Where view cones are broken into sub-sections, each sub-section responds differently to the existing and maximum building heights (ibid). The view cone extent takes into consideration the length of the view cone, as well as its width, which varies according to the distance from the terminus to view point origin (ibid).

Zacharias outlines a process for establishing protected view corridors. The first step is to define the amount of view corridor required, acknowledging that buildings will occupy the remaining portion. Then, it must be decided whether the preference is for a small number of large views of the symbol or a large number of small views. Finally, it should be determined whether fewer, but taller buildings should be allowed to retain more of the symbol at the risk of the tall buildings overshadowing the symbol (Zacharias 1999, 219). Other considerations for view corridor protection policies relate to how the view corridor designations will be applied, which can be done through blanket height limits or angular control planes. Blanket height limits designate the maximum permitted height above ground level, and are uniformly applied across a large enough area of the city to ensure the
symbol is visually prominent from all directions (NCC 2007, 2). Conversely, angular control planes utilize view planes projected from specific viewpoints toward, and extending behind, the amenity to control the height of buildings. These view planes establish rigid visual thresholds, which do not tolerate additional height privileges. Angular control planes are less restrictive than a blanket approach and provide more design flexibility. However, they are less effective at protecting visual primacy at the city scale, since viewsheds affect a smaller area of the city than a blanket approach (NCC 2007, 3). Each of these decisions plays a role in the impact of view corridors to protect landscapes and city environments.

### 3.1.3 Protected Mountain View Landscapes

Hong Kong has recognized the importance of their surrounding topography by restricting the height of buildings that would impede the view of mountain ridgelines from key vantage points. These ‘building free zones’ protect the upper 20 percent of a mountain, which must remain visible, allowing building heights to consume 80 percent of the height of the mountain. The policies are not as restrictive as others that use angular planes, as it allows for flexibility for special landmark buildings to give a punctuation effect in the skyline at suitable locations (Hong Kong 2006). In an area where land is at a premium, however, these policies ensure the surrounding mountains are visible to the public from certain vantage points.

The view of the Rocky Mountains is protected in Denver, Colorado to guard the unique environmental heritage and attributes of the city. The municipality employs an angular view plane approach, protecting panoramic mountain views from specific parks and public places within the city (Denver Colorado 1950, 41).

Portland, Oregon has a detailed plan to protect scenic resources that are perceived as having a good aesthetic quality. Although the Plan protects boulevards, parks, and the waterfront, it also protects views of Mount Hood. The Plan describes in detail how the views were determined, using a combination of citizen participation and professional opinion. In addition, Portland is one of only two cities reviewed that calculates maximum building heights to protect significant views using a mathematical formula (Portland 1991, 21). The other city that uses this quantitative method for evaluating building heights is Vancouver, British Columbia.
3.2 CASE SELECTION

This report focuses on the view corridor protection policies in Montréal and Vancouver. These cities were chosen for their Canadian planning context and for their uniqueness of protecting mountainous landscapes. Other Canadian cities predominantly protect landmarks, such as Parliament Hill in Ottawa, City Hall in Kingston and views of the city from the Citadel in Halifax. In Montréal, the predominance of Mont-Royal is considered an important symbol of the city due to the Mountain’s symbolic and historic importance for Québec (Ville de Montréal 2004a, 115). The Montréal Master Plan aims to preserve the character of Mont-Royal and its predominance on the urban landscape, a result of its central location and relative height, through a number of measures. These include limiting construction on its slopes, concentrating the tallest buildings in the Central Business District (CBD) to maintain its distinction from Mont-Royal, restricting the height of any building to the height of the mountain’s summit (232.5 metres above sea level) and protecting the broad vistas and framed views of interest toward and from the Mountain (Ville de Montréal 2004a, 116). This Plan employs a combination of blanket height limits to regulate the height of all buildings, and a view corridor policy to protect the 87 protected views toward the Mountain (see Appendix A).

Vancouver has a strong history of implementing height limits to protect view corridors. In 1975, building heights were limited in the city’s Downtown Plan, though the condition of restricting building height for view corridors was added later (Punter 2003, 64). Prior to 1989, building heights were regulated on a site-by-site basis while planners completed downtown view studies (Punter 2003, 99). During this time, a team of architectural consultants conducted a review of residents’ attitudes toward view protection and found overwhelming support (Punter 2003, 100). The idea of protecting certain views in Vancouver was introduced when creating the 1975 Downtown Official Development Plan (Interview C). Vancouver’s View Protection Guidelines were adopted by City Council in 1989 and were most recently amended in February 2011, initiated by a study for the Metropolitan Core Jobs and Economy Land Use Plan (Interview D). Following private and public input, four new view cones were added to the View Protection Guidelines from Choklit Park, the Olympic Village Stage, the Olympic Plaza Pier and Creekside Park (Vancouver 2011d). The Guidelines outline 36 protected view cones and view cone sub-sections, which maintain views of the North Shore Mountains, including Mount Seymour, the Lions, Grouse Mountain and Mount Fromme from public parks, bridges, streets and plazas (see Appendix B). The Guidelines use a mathematical formula to create angular control planes from viewpoints toward the protected feature (Vancouver 2011c, “Calculation Formula”).
To limit the number of views examined, this report focuses on view corridors that transect concentrations of tall buildings in the downtown core. View corridors that protect views of the mountains but do not transect the downtown core were not examined, nor were view corridors that protect any feature other than mountains. Within Montréal, there are 30 view corridors that bisect the area of tall buildings designated by the Ville de Montréal. These viewpoints are located between Rue Sherbrooke Ouest to the north, Rue Riverside to the south, Rue Ropery and Avenue Atwater to the west, and Pont Jacques-Cartier to the east. In Vancouver, 24 view cones and view cone sub-sections transect the area with the highest concentration of tall buildings in the downtown core, defined for the purposes of this report as the areas zoned Downtown District and Central Business District by the City of Vancouver. All the viewpoint locations are within Vancouver, between False Creek to the north, Queen Elizabeth Park to the south, Granville Street to the west, and Cambie Street to the east (Appendix B).

3.3 DATA COLLECTION METHODS

This report employs a comparative case study method using the pre-determined view corridors in Montréal and Vancouver as units of analysis. In addition to an initial literature review to reinforce the method, five sources of evidence were used to collect data for the report: documentation, direct observation, document photography, Google Street View and interviews. This created a triangulation of data sources, which addressed issues of construct validity by using multiple sources of evidence to measure the same phenomenon (Yin 2009, 116). Documentation includes the view corridor protection policies and supporting documents for Montréal and Vancouver. These are available online or were obtained through the cities’ planning departments. Direct observation, document photography and Google Street View were used to observe the view corridors in each city. Images from document photography and Google Street View, where available, were used to complement each other in the analysis. Four semi-structured interviews, two for each city, were conducted with pre-selected industry professionals to validate the analysis of the view corridor protection policies. One interview in each city was conducted with a municipal planning professional, and the other with a critic or professor. The interviews required a Graduate Research Ethics Board application and a method of coding the information.

The method for this report is similar to that used by a Queen’s University School of Urban and Regional Planning Master’s report prepared by Julie Dolezel (2008). The report examines building project compliance with Heritage Conservation District (HCD) design guidelines in the Village of Rockcliffe. Fieldwork was required to assess the completed projects and to photograph them. Having developed a set of criteria to determine compliance with the HCD guidelines, Dolezel conducted the necessary fieldwork. The analysis component of the report compared the current state of the property with the pertinent HCD guidelines. From this analysis, Dolezel was able to identify whether trends and deviations from the guidelines. The method employed by Dolezel is appropriate for this report as a means of evaluating the implementation of guidelines based on
observable criteria.

### 3.4 DATA ANALYSIS

The evaluation criteria for this report fall under four sections: policy and legislation, the shape of the skyline, the decision-making process and view protection. Following the direct observation and photographing stage, each view corridor was evaluated against these criteria.

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3.4.1 Policy and Legislation

Policy and legislation can be used to protect the view of a natural feature. A document review assessed the presence and type of building height policies that protect the mountains in Montréal and Vancouver. There are various ways to mandate building height, such as formulae, blanket height limits, angular control planes, view corridor policies and windows policies (Attoe 1981, 85; Portland 1991, 21; NCC 2007, 3; Zacharias 1999, 220). A document review of policies was used to assess the presence, type and strength of height limit controls to preserve designated views.

Building design review is another method of protecting the view of natural features by giving authority to a panel to reject designs based on architectural character and shape (Attoe 1981, 85). A document review of relevant policies was used to determine the presence of building design review to protect the natural feature. The building design review was analyzed for its effectiveness based on the current condition of the protected view corridors.

Building setbacks are used to increase views of the natural feature and protect view corridors (Attoe 1981, 85). A document review indicated the presence of building setback policies as a method for protecting the natural feature. The analysis ascertained the presence of building setbacks for this purpose and their effectiveness was determined through direct observation, document photography and Google Street View.
3.4.2 Shape of the Skyline

The shape of the skyline can be used to accentuate or hide the topography of the protected feature (Attoe 1981, 10). Direct observation, document photography and Google Street View were used to evaluate the skyline of the downtown core in Montréal and Vancouver against the mountain landscape. The hill-and-bowl and the cluster of tall buildings are preferred (ibid). These skyline designs were therefore used as a benchmark for analysis.

A democratic skyline is the third method of evaluation in this category, where no individual building vies for attention. Individual buildings that do vie for attention take away from the overall skyline and were therefore considered ‘poor’ in the analysis (Attoe 1981, 15). Direct observation, document photography and Google Street View of the downtown core in both cities provided the data for this criterion. A document review of the policies was also used to determine any changes to height policies since the view corridor protection policies were established.

Fractal dimensions are another method of evaluating the shape of the skyline. A fractal dimension (fd) is a geometric image that repeats at different scales, such as a snowflake. This method also determines whether the fractal dimension of the skyline matches the fractal dimension of the natural features (Stamps 2002, 163). Preference is for fractal dimensions that do not match that of the surrounding natural features (ibid). Direct observation, document photography and Google Street View were used to examine the shape of the skyline in Montréal and Vancouver, as was a document review to examine the existing policies for each city. The presence of a skyline with a fractal dimension that does not match that of the surrounding features, and policies that support that shape, were considered ‘good’ in the analysis.
3.4.3 Decision-making Process
The process used to select the current view corridors is important for their justification. Zacharias outlines two approaches to defining policy options for a mountainous region based on a view corridor policy or a windows policy (1999, 219). The NCC has a six-step approach to view protection, which is as follows:

- “Define the subjects...which should be visually protected and enhanced, and assign relative visual and symbolic values to the component parts.
- Define the vantage zones and viewing positions from which visual assessments can be made more effectively. Isolate key viewpoints within the zones and analyse the important visual, compositional characteristics of the views from the viewpoints. Summarize the compositional attributes, which should be maintained and/or improved.
- Define the areas in which building heights should be controlled in the background and the foreground of the views from the key viewpoints.
- Define appropriate measures or “standards” for protecting the visual integrity of the subjects in each of the views from key viewpoints.
- Isolate a minimum number of key viewpoints from which the projected height control planes will provide comprehensive view-protection for all of the other identified key viewpoints.
- Assess the impact of height controls on the development capacity of affected sites to ensure that as-of-right redevelopment densities are protected.” (2007, 38)

This approach was used to analyze the methods of determining the protected view corridors in Montréal and Vancouver, as described in the view corridor protection policies.

Another method for evaluating the decision-making process is based on an expert or design approach. The evaluation by experts method employs industry experts to evaluate and rank the proposed views (Daniel 2001, 273). The Delphi method is a systematic collection of judgments from a group of experts based on responses to a questionnaire. Through a series of subsequent questionnaires, respondents are able to revise their responses until the group has reached a consensus (Damigos, Dimitris and Fotis Anyfantis 2011, 172). The Fuzzy-Delphi method is similar the Delphi method but can be used for issues of uncertainty in real-life situations (ibid). The presence of these methods was analyzed in the report to determine the existence of expert opinion in the selection of view corridors.

The perception-based approach uses evaluation by non-experts through online and paper surveys and perception-based assessments (Daniel 2011, 273). A document review of the view protection policies and subsequent analysis was conducted to verify the presence of non-expert evaluation of the view corridors.

3.4.4 View Protection
An evaluation of view protection occurred by determining the effectiveness of view corridor policies in protecting the natural features. Direct observation, document photography and Google Street View were used to assess whether the views are being protected. The analysis looked for obstructions in the protected view corridors.
3.5 LIMITATIONS OF THE RESEARCH METHODS

The minimum number of interviews was established at two in each city due to time and resource constraints. This limited sample size may reduce triangulation and affect the generalizability of the responses. In addition, the interviewees were pre-selected, which may result in a response bias. However, the interviews were used to complement and validate the research and analysis, not as primary data collection. The weaknesses of this method may therefore have been overcome by the manner in which the interviews were used to inform the research.

This report examines and assesses a select number of view cones in each city. In Montréal, 30 of the 87 protected views toward Mont-Royal were examined, and 24 of the 36 protected view cones and view cone sub-sections toward the North Shore Mountains were examined in Vancouver. As described in Section 3.2, these views were selected because they transect the downtown core and protect views of mountains.
3.6 RESEARCH PROTOCOL

Literature Review
- What are view corridors?
- How are they used to protect landmarks?
- What is the significance of protected landmarks?

Document Analysis
- Review view corridor policies for Montréal and Vancouver, including supporting documents

Evaluation Criteria
- Create a method of evaluating view corridors using the literature reviewed

Direct Observation
- Develop a method to determine which view corridors to observe
- Visit the selected view corridors in Montréal and Vancouver

View Corridor Evaluation
- Using the evaluating criteria, evaluate the effectiveness of view corridor policies in Montréal and Vancouver

Semi-structured Interviews
- Conduct interviews to validate the findings from the 'View Corridor Evaluation'

Conclusions and Recommendations
- Make conclusions and recommendations using the information gathered in the previous steps
CHAPTER 4: ANALYSIS

The analysis for this report was conducted using a document review of relevant policies and guidelines, interviews with two industry professionals for each city, document photography, Google Street View where available and direct observation. This section is organized according to Table 3.1, analyzing Montréal and Vancouver separately for each evaluation criterion, followed by the implications by category. Direct observation and document photography was conducted in October (Montréal) and December (Vancouver) 2011. The observations may differ in other months.

4.1 POLICY AND LEGISLATION

The first view protection policies in Montréal appeared in the 1990 Master Development Plan for the Ville-Marie District, which implemented 12 views toward Mont-Royal with viewpoint locations within the District, including locations situated within the Central Business District (CBD) (Montréal 1990, 60). These views were re-affirmed in the Montréal Master Plan by protecting and enhancing broad vistas and framed views toward the Mountain (Montréal 2004a). The Mount Royal Protection and Enhancement Plan, which was developed in 1992 and was last amended in 2009, further protects the views toward the Mountain (Montréal 2009). Currently, there are 110 protected views, of which 87 are toward Mont-Royal. Of these views, 86 are from publically accessible locations and one (Terrasse de l’hôtel de ville) is not. Information about the exact viewpoint location and view corridor are available for 13 of the protected views observed, with accompanying photos showing the protected area (Montréal 2004b). There are photos only for an additional 15 protected views. Two views (Avenue Atwater at Avenue Lionel Groulx and Rue Guy at Rue William) do not have any corresponding information (Montréal 2004b).

In Vancouver, the View Protection Guidelines were first adopted by City Council 1989 to protect selected threatened views and were most recently amended in February 2011 to include a total of 36 view cones and view cone sub-sections (Vancouver 2011b). Unlike Montréal, none of the viewpoint locations in Vancouver are downtown (see Appendix B). The Guidelines show the viewpoint location and the view cone or view cone sub-sections, which were used to conduct observations of 24 of the protected views. The Guidelines are supplemented by a website that lists each view cone and view cone sub-section individually with the protected view area (Vancouver 2011c, “View Cone List”). It should be noted that Vancouver does have street-end view protection guidelines to maintain views of the water and mountains along north-south streets, which are incorporated in downtown neighbourhoods’ Official Development Plans. It is beyond the scope of this report to examine these in detail.

As well as view protection policies, other policies and pieces of legislation are important for view corridor protection.
4.1.1 Policies for Building Height

Building height can be regulated through formulae, blanket height limits, angular control planes, view corridor policies and window policies. A document review assessed the presence, type and strength of height limit controls.

Montréal

Montréal uses blanket height limits to control building heights and a view corridor policy to preserve views above and between buildings. Building height in Montréal is limited to the height of Mont-Royal’s summit, 232.5 metres above sea level or 175.5 metres above the St. Lawrence River (Montréal 2004a, 117). Furthermore, borough by-laws are prohibited from allowing building heights to exceed the lesser of the Mountain’s summit or 200 metres (Montréal 2004b, 14). This is re-affirmed in the planning regulations for the Ville-Marie District, which provide more detailed information about building height (Montréal 2011, Article 34). Although the height of the building may not exceed the maximum height permitted in the by-laws, this policy does not include building apparatuses such as mechanical towers, which may exceed the height of the Mountain (Montréal 2011, Article 21).

The strength of the height policies is demonstrated in La Tour IBM-Marathon, an office building constructed in 1992 at 1250 Boulevard René-Lévesque Ouest in the Ville-Marie District. At 226 metres, it is one of the tallest buildings in Montréal. The building is oriented along the northwest to southeast streets, shown by a red rectangle in Figure 4.1, to minimize the tower’s impact on the view from Bassin Peel toward the Mountain, reaffirming the importance of the view protection policies (Interview B).

The ability of the Ville de Montréal to regulate the height of buildings has improved with the introduction and availability of technology such as geographic information system (GIS) mapping tools. Although most buildings conform to the height restrictions, there are examples of buildings that surpass the prescribed heights, thereby obstructing views toward Mont-Royal. The Cité du commerce électronique at 1350 Boulevard René-Lévesque Ouest consists of two towers at 27 and 17 floors respectively. The initial simulations given by the consultant indicated that the height of the taller tower would not impact the views. However, upon completion of the building’s construction, it was evident that the highest two floors obstruct views toward Mont-Royal (Interview B). Verification of building heights can now be conducted within the Ville de Montréal office to ensure all proposed developments conform to the building height requirements.
Vancouver

Building height in Vancouver is controlled through a formula and angular control planes that preserve views above and between buildings. A height calculator has been developed to determine the maximum allowed height of a building located within a view cone, taking into account the distance from a viewpoint to the site, the elevation of the reference point, the elevation of the viewpoint, the elevation of the site, and the distance from the viewpoint to the reference site (see Appendix C).

In October 2010, Council adopted a policy for buildings in the view shadow of existing developments. It allows the Director of Planning to, “consider future development to enter the “view shadows” of existing buildings if they do not create an additional, significant impact on protected public views of the mountains...” (Vancouver 2010a, 1). Through this policy, an office building at 1075 West Hastings Street was permitted to enter views 9.1: Cambie Street to the North Shore Mountains, 9.2.2: Cambie Street to the North Shore Mountains and 3.2.3: Queen Elizabeth Park to the North Shore Mountains due to its location in the view shadow of an existing development at 1033 Marinaside Crescent and the Shaw Tower at 1077 West Cordova Street (Vancouver 2010a, 6). This view shadow policy does not take into consideration the age of buildings; when the building in the forefront reaches the end of its life and is demolished, the building behind it, previously in its view shadow, will come to the forefront. It creates a precedent that may permit continuously taller buildings to enter the protected view cones.

The downtown core is zoned as a special Downtown District with height limits imposed through the Downtown Official Development Plan. This Plan restricts buildings in the Downtown District to heights between 21.3 metres and 137.2 metres (Vancouver 1975, 26). The General Policy for Higher Buildings permits significantly taller buildings at predetermined sites, which may exceed current height limits and enter into the 9: Queen Elizabeth Park view cone (Vancouver 2011a, 1). This policy permits buildings between 114.3 metres and 213.6 metres, with the tallest buildings located on Georgia, Burrard and Granville Streets (ibid).

The strength of Vancouver’s View Protection Guidelines is demonstrated in the design of the Shangri-La Hotel, which is intersected by view cones D: Heather Bay to the Lions and 3.2.1: Queen Elizabeth Park to the North Shore Mountains. The tower, outlined in red in Figure 4.6, occupies only 30.5 metres of a 213 metre site due to its potential impact on the protected view cones (Mackie 2009).
The ability of the Guidelines to limit building height has failed in multiple instances. For example, in 2001 building height increases were approved at the site of two new developments at 201 Burrard Street (Burrard Landing), which are within the view cones of 9.1: Cambie Street to the North Shore Mountains and 9.2: Cambie Street to the North Shore Mountains. Parcel 2A, renamed the Fairmont Pacific Rim Hotel, was permitted to increase from 115 metres to 143.9 metres, including rooftop equipment, thereby encroaching the view cones by 10.1 metres and 13.4 metres respectively. Parcel 2B, Shaw Tower, was permitted to increase in height from 92 metres to 137 metres, which City Staff believed would be hidden by other developments (Vancouver 2001). Council believed the height increase at the Fairmont Pacific Rim Hotel would create a more flexible area to accommodate the new nearby convention centre (Vancouver 2004). When the development’s rezoning application was submitted, City Staff examined ways to bring the Hotel into better conformity with the View Protection Guidelines by reducing the building’s height to 139.7 metres with reduced floorplates at the penthouse levels of the tower to lessen its encroachment on the view cones (ibid). This example shows a lack of commitment to View Protection Guidelines by Council and demonstrates a precedent for encroachment in the future.

4.1.2 Building Design Review
Building design review enables a panel to make recommendations based on various characteristics such as architectural features and shape, which can be used to protect the view of natural features.

Montréal
In Montréal, the Comité d’architecture et d’urbanisme (Architectural and Planning Advisory Committee) was created in April 2002 following the recognition that a committee composed of experts in architecture, planning and urban design should consult on projects that fall under the City’s jurisdiction (Ville de Montréal 2006). The Committee is comprised of seven permanent members and six alternate members, including two politicians who do not participate due to their lack of expertise in the subject area. The Committee meets as necessary and its members are paid on a contractual basis based on the allocated budget.

In addition to the Comité d’architecture et d’urbanisme, boroughs may have their own committees. The Ville-Marie District’s Comité consultatif d’urbanisme (Planning Advisory Committee) makes recommendations to the Ville-Marie Council about minor variances, development plans, site plans and architectural integration (Montréal 2012a). The Committee is comprised of nine individuals who are chosen by Council based on their expertise in planning and architecture (ibid). According to Montréal’s Charter, the Ville de Montréal’s Council can overturn the decision made by a borough council in various instances, including a project within the business district, which is located in the
4.1.4 Implications
Both Montréal and Vancouver use policies for building height to protect views of the natural feature. Whereas building height controls in Montréal are based on a blanket height limit but do not include appurtenances such as antennae and chimneys, Vancouver uses an angular control planes approach with a formula to prescribe height limits that include all building accessories. Height controls based on angular control planes are less restrictive and allow for greater design flexibility than blanket height limits (NCC Figure 4.5: Vancouver uses angular control planes to determine building height (Vancouver 2011d)).

Ville-Marie District (Québec 2012, Section 89).

Vancouver
The City of Vancouver’s Urban Design Panel is composed of 13 industry members (six members from the Architectural Institute of British Columbia, two members from the Association of Professional Engineers, two members from the British Columbia Society of Landscape Architects and one representative from each of the Vancouver Planning Commission, the development industry and a practicing professional artist) who are appointed by Council (Vancouver 2012a). The Panel is a volunteer advisory body, which makes recommendations to the Director of Planning, Development Permit Board or City Council on any proposal or policy that affects Vancouver’s physical environment (Vancouver 2009, Schedule A). They can, therefore, use their influence to reject or support a proposed development that enters a protected view cone.

4.1.3 Building Setback
Building setbacks may be used to increase views of the natural feature.

Montréal
Building setbacks are used in Montréal as one of the regulatory instruments to maintain the existing building environment (Montréal 2004a, 133). Each borough implements specific building setbacks. Ville-Marie, for example, outlines the required building setbacks for buildings in that area (Montréal 2011, Articles 59-86). However, their prescription is not used explicitly to protect views of Mont-Royal.

Vancouver
In Vancouver, zoning policies determine building setbacks and are regulated by zoning regulations (Vancouver 2010d). For example, the Downtown South Goals and Policies outlines the setbacks required for the sub-areas within that district (Vancouver 1993). These policies, however, do not state that the setbacks are used to protect natural features. They are used more to protect street-end views within each district than in conjunction with the views cones.

4.1.4 Implications
Both Montréal and Vancouver use policies for building height to protect views of the natural feature. Whereas building height controls in Montréal are based on a blanket height limit but do not include appurtenances such as antennae and chimneys, Vancouver uses an angular control planes approach with a formula to prescribe height limits that include all building accessories. Height controls based on angular control planes are less restrictive and allow for greater design flexibility than blanket height limits (NCC Figure 4.5: Vancouver uses angular control planes to determine building height (Vancouver 2011d)).
Montréal and Vancouver both employ the expertise of industry professionals through building design review. These individuals are given the authority to reject designs based on architectural character and shape. While the members of Montréal’s Comité d’architecture et d’urbanisme receive compensation for their commitment, those on Vancouver’s Urban Design Panel do not.

Both cities have building setback regulations prescribed by sub-area policies. Neither Montréal nor Vancouver use building setbacks explicitly to protect views of the natural features. This may be because they were not originally implemented to protect view corridors or because their applicability for this use is unknown by city staff.

4.2 SHAPE OF THE SKYLINE

The shape of the skyline is controlled by the city’s desired skyline shape and the approach adopted to protect the natural feature. Other considerations include fractal dimensions (fd) and the commitment to maintain a “democratic” skyline, where no individual building vies for attention.

4.2.1 Shape of the Skyline in Relation to the Protected Feature

The shape of the skyline in relation to the protected feature can be used to emphasize or hide the topography of the natural feature. The hill-and-bowl approach, where tall buildings are encouraged at the crests of hills to exaggerate the feature, or the cluster of tall buildings approach are preferred (Attoe 1981, 10).

Montréal

In Montréal, the policies promote a domed skyline with a cluster of tall buildings located in the CBD (Montréal 2004a, 117). This may create a hill-and-bowl effect, depending on the viewpoint location, as seen in Figure 3.7 where the tallest buildings are clustered at or near the summit of Mont-Royal.

Vancouver

Vancouver City Council initiated the Downtown Vancouver Skyline Study in May 1996 to identify potential skyline approaches. The Study was initiated in response to a general feeling that the skyline was becoming uninteresting and flat (Vancouver 2007, 3). It recommended buildings up to 600 feet (182.9 metres) be considered in the previous 450 feet (137.2 metres) area of the downtown core north of Robson Street, that 400 feet (121.9 metres) buildings be considered in the north westerly area of the previous 300 feet (91.44 metres) area of the downtown core and that buildings exceeding the height limits generally not be considered elsewhere, particularly if
they intrude into a protected view cone (Vancouver 1997, 1). These policies create a cluster of tall buildings, with the highest towers in the centre of the downtown core, decreasing in height towards the water, as seen in Figure 3.8 (Vancouver 2010b, 8). This domed skyline approach, with a cluster of tall buildings, is in line with the preferred approaches.

### 4.2.2 Democratic Skyline

A “democratic” skyline is one where no individual building vies for attention, which would take away from the overall skyline (Attoe 1981, 15). For the purposes of this analysis, therefore, a “democratic” skyline is one that has a uniform building height, where no individual building demands more attention than others on the skyline.

#### Montréal

The *Montréal Master Plan* limits the height of buildings to the height of the Mountain’s summit at 232.5 metres above sea level (Montréal 2004a, 117). Furthermore, borough by-laws must also limit building heights to the lesser of the Mountain’s summit or a height of 200 metres, not including rooftop equipment (Montréal 2004b, 14). This ensures that no building vies for individual attention on the skyline. Furthermore, the *Montréal Master Plan* outlines an area of tall buildings located within the Ville-Marie District. The Plan requires buildings be uniform with the surrounding area in the architectural integration of mechanical equipment, rooftop enclosures, volume and building façade (*ibid*). While these policies function theoretically to ensure no building vies for individual attention, the prominence of rooftop equipment undermines the goal of the policies. Figure 3.7 shows Montréal’s preferred skyline where the mechanical equipment of two buildings, La Tour CIBC at 1155 Boulevard René-Lévesque and La Tour IBM at 1250 Boulevard René-Lévesque Ouest, surpass the summit of the Mountain and are therefore prominent on the skyline.

#### Vancouver

In 2011, the City of Vancouver amended the *General Policy for Higher Buildings*, which identified sites for taller buildings, with the tallest buildings on Georgia, Burrard and Granville Streets in downtown Vancouver. The Policy stipulates that these tall buildings must, “establish a significant a recognizable new benchmark for architectural creativity and excellence, while making a significant contribution to the beauty and visual power of the city’s skyline” (Vancouver 2011a, 1). It should be noted, however, that the view of the downtown skyline is dependent on the viewpoint. The City has created renderings of the recommended skyline from various locations around Vancouver (Vancouver 2011a, Appendix C). The renderings show the domed shape of the skyline with the proposed tall buildings, which are visually competitive with the skyline of the mountains, creating a skyline that is not “democratic”. While the domed skyline is subordinate to the height and scale of the mountains, the tall buildings punctuate the skyline and demand visual attention.
4.2.3 Fractal Dimensions
Fractal dimensions (fd) can be used to evaluate the skyline by determining whether the shape of the skyline matches the peaks and ridges of the natural feature. A good policy, based on the responses from experiments to determine skyline preferences, is one where the shape of the skyline does not match that of the surrounding natural feature (Stamps 2002, 164). It creates a more “organic” or natural-looking appearance than the fd of a skyline that does match the surrounding natural feature. The skyline formed by a uniform height limit and flat-top buildings is an example of a non-organic skyline.

Montréal
As shown in Figure 3.7, Montréal’s preference is for the fd of the skyline to not match that of Mont-Royal. This creates an organic appearance and is therefore considered a good policy.

Vancouver
Vancouver’s recommended downtown skyline, shown in Figure 3.8, does not match the peaks and ridges of the surrounding mountains. For the purposes of the report, this is considered a good policy.

4.2.4 Implications
Both Montréal and Vancouver have implemented policies to create a domed skyline by clustering tall buildings within the downtown core. Montréal employs a hill-and-bowl method, encouraging the tallest buildings at or near the crest of Mont-Royal. For the purposes of this report, the skylines in Montréal and Vancouver are considered good practice.

In Montréal, heights are limited to the summit of Mont-Royal and tall buildings are clustered in the Ville-Marie District. Although these policies should create a “democratic” skyline, the restrictions do not include rooftop equipment, which allows buildings with spires and antennae to be more visible on the skyline than buildings without. In Vancouver, the General Policy for Higher Buildings aims to have some prominent, architecturally significant buildings, which creates a skyline that is not “democratic”.

Neither the fd of the skyline in Montréal nor in Vancouver matches the fd of the surrounding natural feature. As a result, the policies in both cities are considered good for this report.
4.3 DECISION-MAKING PROCESS

4.3.1 Process Used to Define the View Corridor
The process by which the view corridors were selected is an important aspect of their justification. Both Zacharias and the National Capital Commission (NCC) outline approaches to view protection, as discussed in Chapter 3: Methods (1999, 219; 2007, 38). For the purposes of this report, the six-step approach by the NCC will be used to analyze the process employed to define view corridors:

• “Define the subjects...which should be visually protected and enhanced, and assign relative visual and symbolic values to the component parts.
• Define the vantage zones and viewing positions from which visual assessments can be made more effectively. Isolate key viewpoints within the zones and analyse the important visual, compositional characteristics of the views from the viewpoints. Summarize the compositional attributes, which should be maintained and/or improved.
• Define the areas in which building heights should be controlled in the background and the foreground of the views from the key viewpoints.
• Define appropriate measures or “standards” for protecting the visual integrity of the subjects in each of the views from key viewpoints.
• Isolate a minimum number of key viewpoints from which the projected height control planes will provide comprehensive view-protection for all of the other identified key viewpoints.
• Assess the impact of height controls on the development capacity of affected sites to ensure that as-of-right redevelopment densities are protected.” (2007, 38)

Montréal
In Montréal, concern about view corridors first appeared in the Master Plan for the Ville-Marie District, which protected 12 views toward Mont-Royal (Montréal 1990). This was re-affirmed most recently in the Montréal Master Plan, which has added to the number of views protected toward the Mountain (Montréal 2004a). To determine which views to adopt, the City examined historic photos of streets and chose views the public could enjoy from the street (Interview B). The Mount Royal Protection and Enhancement Plan identifies a planned approach to improve the effectiveness of protecting views. It includes improving the effectiveness of the regulatory tools by specifying the location of viewpoints and by ranking the elevations above which a project would impact the views, as well as developing a means of improving the quality views (Montréal 2009, 12). These correspond to steps two to four of the NCC’s six-step approach. Although the Ville de Montréal does not specifically include the NCC’s remaining three steps, they are covered within the other documents reviewed.

Vancouver
Although the detailed steps taken initially to define the view cones in Vancouver are not available for the purposes of this report, the information available for the Vancouver Views: Downtown View Corridors and Capacity Study suggests the steps outlined by the NCC were addressed for the most recent amendments (Vancouver 2010b). While the View Protection Guidelines are applicable only to the view cones and view cone sub-sections listed within that document, additional view corridors will be added as development continues east (Interview D).
4.3.2 Expert/Design Approach
The expert/design approach uses industry experts to evaluate the proposed views. Two methods of evaluating views are the Delphi method, which employs a series of questionnaires to reach a consensus, and the Fuzzy-Delphi method, which is similar to the previous method but can be used for issues of uncertainty in real-life scenarios (Damigos, Dimitris and Fotis Anyfantis 2011, 173).

Montréal
The process used in Montréal to define protected view corridors employed a combination of experts from municipal and provincial departments, institutions and organizations with an interest in Mont-Royal. The Table de concertation du Mont-Royal was established in 2004 and is comprised of 21 members, including a citizen representative (Montréal 2012b). It was integral to the update of the 1992 *Plan de mise en valeur de Mont-Royal* (*Mount Royal Enhancement Plan*) (ibid). Although the membership is extensive, there is little information available about how these members are chosen, or how consensus is made.

Vancouver
In 1989, the City of Vancouver recognized the need for a skyline and view study, which was undertaken by private consultant Peter Busby. For the most recent amendments, the City used the expertise of four urban design and architecture professionals from Vancouver, Toronto and Boston who provided peer advice through a two-day workshop with City Staff (Vancouver 2010b, 8). Professional advice was also sought from the Urban Design Panel, which engaged in a non-voting workshop to discuss the recommendations of the *Downtown View Corridors and Capacity Study* (Vancouver 2010b, 9). The incorporation of experts from around North America and the Urban Design Panel shows a commitment to the expert/design approach. However, the limited number of experts used outside those on the Urban Design Panel may not be a representative group. Also, no information is available about how or why these individuals were chosen, or the methods used to reach consensus.

4.3.3 Perception-based Approach
The perception-based approach uses non-experts to evaluate the proposed ideas through surveys and assessments.

Montréal
The draft version of the *Montréal Master Plan* employed public consultation methods for information dissemination and to garner the public’s opinions and comments on the Plan, including the implementation of additional view corridors. The process, which was led by the Office de consultation publique de Montréal (Montréal Public Consultation Office), included ten information sessions, which attracted approximately 1,000 participants, and a number of public hearings that attracted approximately 200 private citizens and representatives of interested organizations (Montréal 2012b, “Public Consultation On the Draft Version of the Master Plan”).
Vancouver

Prior to their implementation, the View Protection Guidelines in Vancouver went through an extensive public process to determine whether view corridors were necessary and to define the most important views (Vancouver 2010c, 9). For the amendments made in 2011, public input was sought in spring and fall 2009 through eight open houses that attracted approximately 2,000 residents, media techniques such as Facebook, Twitter, e-newsletters and listserves, a downloadable walking tour of view corridors and a random poll and opt-in survey (ibid). Additionally, meetings were held with interest groups (including the Urban Development Institute, the Board of Trade and Business Improvement Areas), resident groups and City Advisory Committees (ibid). This extensive public consultation was held to assess the public’s opinions on view preservation, which was considered during the technical and urban design analysis for new views (ibid). This shows a commitment to public consultation, however it is unclear how, and to what degree, the information gathered was used to inform the amendments to the Guidelines.

4.3.4 Implications

In Montréal and Vancouver, the six steps outlined by the NCC to determine the protected view corridors were addressed, though not in the successive steps outlined by the NCC.

The expert/design approach was used in both cities, though the number and variety of experts used differed. For neither city is an explanation of how consensus was used readily available, therefore it is not possible to determine whether they used the Delphi or the Fuzzy-Delphi methods. Montréal used a broader variety of experts than Vancouver, from a wider range of relevant disciplines, using individuals from various levels of government and interests.

The perception-based approach was well received in both Montréal and Vancouver, where large numbers of citizens were involved in the process through various public participation methods. However, it is unclear how or to what extent the public’s feedback was used in the final documents in both cities.

4.4 VIEW PROTECTION

4.4.1 Effectiveness of Policies in Protecting the Natural Feature

The following analysis of view corridors is based on direct observation, document photography, Google Street View where available and a document review. This analysis has been compiled in Appendix F (Montréal) and Appendix G (Vancouver). Each view corridor was analyzed and designated well protected, moderately well-protected or poorly protected. A well protected view corridor is one where the protected feature is clearly visible with no obstructions. A moderately well protected ranking means that the landmark is visible, with some obstructions to the view. A poorly protected ranking is one where the mountain is not visible. The document photographs for each view can be seen in Appendix D (Montréal) and Appendix E (Vancouver). This section will discuss
those view corridors that have been designated as moderately well protected and poorly protected. All other view corridors are well protected.

Montréal

Of the 30 protected view corridors examined in Montréal, two were determined as moderately well protected. The rest were considered well protected views, based on the view protection policies. The view from Terrasse de l’hôtel de ville could not be observed as it is not publically accessible. The ranking for this view corridor is based on the photographs available in the document review, and may have since changed. The following analyzes the moderately well protected views.

Table 4.1: Evaluation of Montréal’s View Corridors

<table>
<thead>
<tr>
<th>Well protected</th>
<th>Avenue Atwater at Boulevard de Maisonneuve Ouest</th>
<th>Rue Guy at Boulevard René-Lévesque Ouest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Avenue McGill College (esplanade de la Place Ville-Marie)</td>
<td>Rue Guy at Rue William</td>
</tr>
<tr>
<td></td>
<td>Avenue de Musée</td>
<td>Rue Lambert-Closse</td>
</tr>
<tr>
<td></td>
<td>Bassin Peel</td>
<td>Rue Mansfield</td>
</tr>
<tr>
<td></td>
<td>Belvédère de la pointe du parc de la Cité du Havre</td>
<td>Rue McTavish</td>
</tr>
<tr>
<td></td>
<td>Belvédère des Îles</td>
<td>Rue Metcalfe</td>
</tr>
<tr>
<td></td>
<td>Canal de Lachine (Redpath)</td>
<td>Rue de la Montagne</td>
</tr>
<tr>
<td></td>
<td>Marché Atwater</td>
<td>Rue de Montmorency</td>
</tr>
<tr>
<td></td>
<td>Place Vauquelin</td>
<td>Rue Peel</td>
</tr>
<tr>
<td></td>
<td>Pont Champlain</td>
<td>Rue Redpath</td>
</tr>
<tr>
<td></td>
<td>Pont Jacques-Cartier</td>
<td>Rue Ropery</td>
</tr>
<tr>
<td></td>
<td>Quai de l’Horloge</td>
<td>Rue Simpson</td>
</tr>
<tr>
<td></td>
<td>Rue Bridge</td>
<td>Rue Stanley</td>
</tr>
<tr>
<td></td>
<td>Rue Drummond</td>
<td>Terrasse de l’hôtel de ville</td>
</tr>
<tr>
<td>Moderately well protected</td>
<td>Avenue Atwater at Avenue Lionel Groulx</td>
<td>Avenue University</td>
</tr>
<tr>
<td>Poorly protected</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The view toward Mont-Royal from Avenue Atwater at Avenue Lionel Groulx is impeded by buildings located between the viewpoint and the Mountain, creating a simple vista. The Canadian Broadcasting Corporation (CBC) transmission tower is the only part of the Mountain still visible from this location, shown by a red square in Figure 4.7. One of the major built impediments is l’Hôpital de Montréal pour enfants (Montréal

Figure 4.8: Buildings obstruct Montréal view Avenue Atwater at Avenue Lionel Groulx to Mont-Royal (Author’s photo 2011)
Children’s Hospital) located at 2300 Rue Tupper. It was built in 1956 and therefore predates the presence of the view protection policies. The fact that the CBC transmission tower is the only remaining view of the Mountain from this viewpoint may be the reason this location was chosen to be part of the protected views, as it ensures no further obstruction.

The framed view from Rue University was completely impeded in October by the foliage of the trees lining the street, seen in Figure 4.8, creating a simple vista. Due to optical perception, the street trees converge at a distance, prior to the view of the Mountain. The Mountain is visible from this location, however, when the trees have lost their leaves, shown in Appendix C. As a result, this view was evaluated as moderately well protected instead of poorly protected, since the view is unobstructed for a portion of the year.

**Vancouver**

Of the 24 view cones and view cone sub-sections examined in Vancouver, 11 were considered moderately well protected and 13 considered well protected based on the *View Protection Guidelines* (Vancouver, 2011d). This analysis will focus on the view corridors that were deemed moderately well protected.

<table>
<thead>
<tr>
<th>Well protected</th>
<th>Moderately well protected</th>
<th>Poorly protected</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Alder Terrace to Mount Seymour</td>
<td>B2: Charleson Seawall to Crown/Grouse</td>
<td>N/A</td>
</tr>
<tr>
<td>B1: Charleson Seawall to the Lions</td>
<td>C1: Laurel Landbridge to the Lions</td>
<td>N/A</td>
</tr>
<tr>
<td>D: Heather Bay to the Lions</td>
<td>C2.1: Laurel Landbridge to Crown/Grouse</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>C2.2: Laurel Landbridge to Crown/Grouse</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>F1.1: Choklit Park to Crown/Grouse</td>
<td>N/A</td>
</tr>
<tr>
<td>F1.2: Choklit Park to Grouse and Mount Fromme</td>
<td>H1: Olympic Plaza Stage to the N. Shore Mountains</td>
<td>N/A</td>
</tr>
<tr>
<td>F1.3: Choklit Park to Grouse and Mount Fromme</td>
<td>G1.1: Olympic Village Pier to the N. Shore Mountains</td>
<td>N/A</td>
</tr>
<tr>
<td>G1.2: Olympic Village Pier to the N. Shore Mountains</td>
<td>G1.2: Olympic Village Pier to the N. Shore Mountains</td>
<td>N/A</td>
</tr>
<tr>
<td>G1.3: Oxygen Village Pier to the N. Shore Mountains</td>
<td>E1: Cambie Bridge to Crown/Grouse</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>F1.1: Choklit Park to Grouse and Mount Fromme</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>C2.2: Laurel Landbridge to Crown/Grouse</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>C2.1: Laurel Landbridge to Crown/Grouse</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>B2: Charleson Seawall to Crown/Grouse</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>C1: Laurel Landbridge to the Lions</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>B1: Charleson Seawall to the Lions</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>D: Heather Bay to the Lions</td>
<td>N/A</td>
</tr>
</tbody>
</table>
View B2: Charleson Seawall to Crown/Grouse is partially obstructed by the Fairmont Hotel Vancouver at 900 West Georgia Street, shown by a red square in Figure 4.13. Built in 1939, the building predates the View Protection Guidelines and has historical significance. It was, therefore, a conscious decision to include the building the in the view cone.

Views C1: Laurel Landbridge to the Lions and C2.1 and C2.2: Laurel Landbridge to Crown/Grouse are obstructed by trees, creating a simple vista seen in Figure 4.14. These view cones were observed in December after the foliage had dropped. It is likely the views are completely obstructed by the trees during the spring and summer. Pruning would ameliorate the situation, as was done for views 3.2.1, 3.2.2 and 3.2.3: Queen Elizabeth Park to the North Shore Mountains (see Appendix E).

View E1: Cambie Bridge to Crown/Grouse is partially obstructed by the Harbour Centre Tower, shown by a red rectangle in Figure 4.15. Also obstructing this view are the mechanical arms for the retractable roof at B.C. Place Stadium, shown by a yellow rectangle. Both these obstructions create an interrupted panorama.

B.C. Place Stadium opened in 1983 and is owned and operated by the B.C. Pavilion Corporation, a Provincial Crown Corporation. As a provincial corporation, it is not bound by municipal policies, including the View Protection Guidelines. The Stadium’s retractable roof was added in 2011, with 35 support masts that extend vertically from the building. Prior to these renovations, the roof of the Stadium was air-supported and extended to the base of the view cone (Figure 4.15). The new mechanical arms protrude into view E1: Cambie Bridge to Crown/Grouse (Figure 4.16). In
conjunction with the City of Vancouver, these arms were deemed acceptable by City Staff due to the building’s history and its use as a public facility (Interview D).

View F1.1: Choklit Park to Grouse and Mont Fromme is partially obstructed by Grace Residences at 1280 Richards Street. Shown by a red square in Figure 4.17, the building creates an interrupted panorama of the view cone. This view was implemented in 2010, three years after the building was constructed. It therefore predates the implementation of the view cone.
View H1: Olympic Plaza View to the North Shore Mountains is partially obstructed by the Creekside Community Recreation Centre, outlined in red in Figure 4.18, creating an interrupted panorama. Construction on the Community Centre started in 2008 and was completed for the Olympic and Paralympic Winter Games in February 2010. It is located at 1 Athletes Way in the Village at Southeast False Creek, next to the viewpoint location. Other obstructions to this view are from cranes at the Port Metro Vancouver. Both obstructions were included in the view cone deliberately (Interview D). In particular, the Community Centre was included for its use as a public space.

View 9.1: Cambie Street to the North Shore Mountains is obstructed by the Harbour Centre Tower at 555 Hastings Street in Downtown Vancouver. The partial obstruction, shown by a red rectangle in Figure 4.9, creates an interrupted panorama. Harbour Centre opened in 1977 and was therefore built prior to the first View Protection Guidelines in 1989. At 168.6 metres, it was the tallest building in Vancouver until 2001. When the view cones were established, some important landmarks were included in the view for their historical importance, which is true of this view cone (Interview D). Another obstruction to this view comes from Quaywest I at 1033 Marinaside Crescent, shown by a yellow rectangle in Figure 4.9, built in 2001. Due to a technical implementation error, this building obstructs all the Cambie Street views (9.1, 9.2.1 and 9.2.2) (Interview D). Although Vancouver uses a formula to determine the allowed height of a building, the advancement of more sophisticated GIS mapping tools will likely mitigate this from occurring again (City of Vancouver 2010a, 3).
View 9.2.1: Cambie Street to the North Shore Mountains is obstructed by the Scotia Tower, shown by a red rectangle in Figure 4.10, at 650 West Georgia Street, creating a simple vista. Constructed in 1977, the building predates the original Guidelines. Also within this view cone is the Hotel Georgia tower at 801 West Georgia Street, shown by a yellow square in Figure 4.10. The height of the tower is 4.6 metres higher than the area’s zoning allowances.

The Urban Design Panel considered this to be a minor impact on the view corridor, based on the slimness and attractiveness of the building’s façade and massing (Vancouver 2002a). Instead, the Panel believed that a greater emphasis should be on the quality of the architecture than on the minor encroachment on the view cone. The issue was put before Council in May 2002 and a motion was carried allowing the height of the tower to increase by 4.8 metres from 137.2 metres to 142 metres (Vancouver 2002b). This decision has created a precedent, which may be exploited by developers in the future. Although it is within an area that allows some taller buildings, the Hotel Georgia tower did not undergo a higher building review (Interview D). This demonstrates a breakdown of the planning system, which is meant to ensure a democratic review system for all proposed developments.

View 9.2.2: Cambie Street to the North Shore Mountains is obstructed by the Harbour Centre Tower, shown by a red rectangle in Figure 4.11. The building creates an interrupted panorama.
View 12.1.2: Granville Bridge to Crown/Grouse is partially obstructed by The Ellington at 1010 Burnaby Street, creating an interrupted panorama. The building, shown by a red square in Figure 4.12, was constructed in 1991. The development permits may have been approved prior to the implementation of the View Protection Guidelines.

Figure 4.19: Vancouver view 12.1.2: Granville Bridge to Crown/Grouse is obstructed by The Ellington (Author’s photo 2011)

4.4.2 Implications
Of the 30 protected views observed in Montréal, two were ranked as moderately well protected, with the remaining 28 ranked as well protected. In Vancouver, 24 protected views were observed with 11 ranked as moderately well protected and 13 as well protected. Based on this ranking system, Montréal’s views are better protected than Vancouver’s. It should be noted, however, that the ranking of each view corridor was based on the cities’ own policies and guidelines. In Vancouver, this meant comparing the photos taken during observations with the City’s articulated view sheds (City of Vancouver 2011d). The policies in Montréal are not so prescriptive. While the Montréal Master Plan provides photographs of many of the views toward Mont-Royal, only a portion have accompanying information about which sections of the view should be maintained. For this reason, the assessment of view corridors where this information is not provided was based on the ability to see some portion of the Mountain.
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

With the increasing densification of urban areas worldwide, many cities are encouraging increased building heights to mitigate the effects of sprawl. In doing so, views of natural features are at risk of being obstructed if they are not adequately protected. View corridor protection policies are one method of ensuring that these views are maintained. Through a method of comparison and evaluation that used document review, interviews, direct observation, document photography and Google Street View, this report examined whether view corridor protection policies are more effective in Montréal or Vancouver, and why.

This chapter summarizes the findings detailed in Chapter 4: Analysis and makes recommendations to strengthen and improve view corridor protection in Montréal and Vancouver. A description of the limitations of the research follows, as do suggestions for future research on this topic.

5.1 CONCLUSIONS

5.1.1 Montréal

Policy and Legislation
Policy and legislation are used to protect views through such measures as building height, urban design review and building setback. In Montréal, the height of buildings is limited to the lesser of the summit of Mont-Royal at 232.5 metres above sea level or 200 metres (Montréal 2004b, 14). This does not include rooftop apparatuses, however, which may extend beyond the Mountain’s peak. In the past, some buildings have surpassed the prescribed height limitations due to a lack of technological capacity at the City level. This has been mitigated more recently through advancements in technological tools such as geographic information systems (GIS) mapping.

The Comité d’architecture et d’urbanisme (Architectural and Planning Advisory Committee) fulfills the role of an urban design panel in Montréal. It is comprised of seven permanent members, six alternative members and two non-participating politicians (Montréal 2006). Boroughs may also have urban design panels, such as the Ville-Marie District’s Comité consultatif d’urbanisme (Planning Advisory Committee).

Building setbacks are another method of maintaining views toward a protected feature. Montréal has implemented broad setback requirements through the Montréal Master Plan and more specific requirements through each borough’s development plan (Montréal 2004a, 133). The setback requirements, however, are not used explicitly to protect views toward Mont-Royal.
Shape of the Skyline

The shape of the skyline affects views of the protected feature by determining the degree to which it remains visible. The hill-and-bowl or clustering of tall buildings are the preferred methods, as they best maintain views of the protected feature (Attoe 1981, 10). Montréal’s domed skyline approach creates a hill-and-bowl effect, with the tallest buildings clustered at or near the summit of Mont-Royal.

The height restrictions aim to create a “democratic” skyline by limiting height to the summit of the Mountain, thereby ensuring that no individual building vies for attention, which would take away from the overall skyline. However, because rooftop equipment is not considered part the building’s height, certain buildings with antennae or spires appear more prominent than others, creating a “non democratic” skyline.

Fractal dimensions (fd) is another method of maintaining the view of a mountain landscape. The preference in Montréal is for the fd of the buildings to not match the shape of the Mountain. This is considered a good policy because it creates an organic appearance and is generally preferred by the public (Stamps 2002,164).

Decision-making Process

The decision-making process in Montréal for the view corridor protection policies in the Montréal Master Plan fulfills the six steps outlined by the NCC for view protection (2007, 38).

The use of a variety of experts from municipal and provincial departments, institutions and organizations with an interest in Mont-Royal conforms to the requirements for the expert/design approach. Information was not available, however, regarding how consensus was reached in the decision-making process.

Non-expert advice was also sought in the decision-making process to protect views toward Mont-Royal through information sessions and public hearings. It is unclear, though, to what extent these non-expert opinions were considered in the final Plan.

Of the 87 protected views toward Mont-Royal, thirty transect the CBD and were therefore observed as per the selection criteria. Of these views, two were moderately well protected and the rest were considered well protected, based on Montréal’s view protection policies. The impediments to the views are in the form of built and natural features.
5.1.2 Vancouver

Policy and Legislation
Vancouver has comprehensive policies and guidelines to protect views of the North Shore Mountains. The heights of buildings located within a protected view cone are controlled through a formula and angular control planes (Vancouver 2011c). However, as a result of human error in calculations and decisions made by City Council, various instances have allowed developments to surpass the height prescribed by these policies. Furthermore, proposed developments located in the view shadow of existing buildings that penetrate a view cone are permitted additional height, providing it does not further impede the view (Vancouver 2010a, 4).

Similarly to Montréal, Vancouver uses the expertise of an urban design panel to advise the Planning Department, Development Permit Board and City Council on building proposals and policies (Vancouver 2012a). In some instances, the Panel has used its influence to recommend developments that penetrate an existing view cone, thereby eroding the strength of the View Protection Guidelines. As discussed in Chapter 4: Analysis above, the panel permits buildings to enter the protected view cones if the impact is deemed minor or if the quality of architecture is thought to be more significant than the intrusion.

Building setbacks are used in Vancouver and are regulated through zoning regulations (Vancouver 2010d). Although the setbacks are not used explicitly for view corridor protection toward the North Shore Mountains, they are used to protect street-end views and function to protect views of the Mountains.

Shape of the Skyline
Vancouver has adopted a domed skyline approach, clustering the tallest buildings in the downtown core (Vancouver 2007, Appendix C). Unlike the hill-and-bowl method adopted in Montréal, the tallest buildings do not align with the summits of the North Shore Mountains.

A policy that permits a few taller buildings in predetermined sites creates an “undemocratic” skyline where some buildings vie for individual attention on the skyline (ibid). This takes away from the overall skyline, drawing the viewer’s attention away from the surrounding natural feature and toward the taller buildings (Attoe 1981, 15).

The fd in Vancouver is similar to that of Montréal, where by the fd of the skyline does not match that of the surrounding North Shore Mountains. This is considered a good policy in the analysis, as it creates an organic appearance (Stamps 2002, 164).

Decision-making Process
The process used to re-affirm the importance of views and add additional view corridors, as
An expert/design approach was employed in Vancouver using a private consultant for the initial View Protection Guidelines of 1989, and the expertise of four urban design and architecture professionals for the most recent amendments. While the analysis considers the use of the expert/design approach to be good, the limited number of experts used in Vancouver may not be a representative group, nor do the documents explain how and why these individuals were chosen, their interest in the view corridors or the methods used to reach consensus.

The perception-based approach was also used in Vancouver for the most recent amendments to the Guidelines. A variety of methods were used to engage the public and solicit their opinions. It is not clear, however, how or the extent to which the information gathered from these sessions was used in the final decisions.

Of the 35 protected views in Vancouver toward the North Shore Mountains, 24 bisect the downtown core and were therefore observed for this report. Eleven of these views were considered moderately well protected and the remaining 13 were considered well protected as per the View Protection Guidelines. Obstructions to the views were a result of both built and natural barriers.

5.2 RECOMMENDATIONS

The following recommendations were made in response to the weaknesses of view protection discussed in Chapter 4: Analysis. They have been separated into unique recommendations for Montréal and Vancouver, followed by recommendations for both cities. The list of recommendations below is not exhaustive, nor is it necessarily applicable outside the Montréal and Vancouver contexts. However, it provides some suggestions to strengthen and improve the view corridor protection in each city.

5.2.1 Montréal

Montréal’s view protection policies include 87 views toward the Mont-Royal to maintain sightlines to the Mountain from locations within the CBD and surrounding boroughs. The following recommendations will improve the current policies by making them more detailed, thereby reducing any ambiguity to ensure the presence of view corridors in the future.

Montréal Recommendation 1: Implement the proposed amendments in the “Mount-Royal Protection and Enhancement Plan”

The Mount Royal Protection and Enhancement Plan proposes specific amendments to “Part III: Complementary Document” in the Montréal Master Plan for protecting and enhancing landscapes and landscaped environments. Those specific to Mont-Royal are to:
• “Identify new views that should be protected and enhanced and add criteria;
• Introduce more specific criteria for views at risk of being obscured;
• Add provisions relating to the appearance of mechanical equipment and other rooftop structures;
• Introduce provisions relating to the lighting of buildings and signs...
• Introduce provisions limiting the height and coverage ratios of new, expanded or altered buildings” (2009, 75).

Based on the analysis conducted for this report, these proposed amendments are relevant and should be implemented to improve the view corridor protection of Mont-Royal.

**Montréal Recommendation 2: Define all elements of each protected view**

To remove any ambiguity or uncertainty surrounding the established view corridors, each protected view should have a defined view point location, view cone and protected view area. The map provided in the *Montréal Master Plan* does not provide sufficient detail in this regard (see Appendix A). The Plan’s “Complementary Document” provides this level of information for 13 of the 30 views observed, and provides only photographs for an additional 15 views. Two views (Avenue Atwater at Avenue Lionel Groulx and Rue Guy at Rue William) do not have any corresponding information. As a result, the view protection policies seem ambiguous and are difficult to interpret.

**Montréal Recommendation 3: Ensure all views are publically accessible**

The *Montréal Master Plan* protects public views toward Mont-Royal. However, the Terrasse de l’hôtel de ville (City Hall Terrace) view is only accessible from the Mayor’s Office. Although the Place Vauquelin view is nearby, the existence of a private view blurs the distinction between the public and private nature of view corridor protection. With the implementation of the Place Vauquelin view, the Terrasse de l’hôtel de ville view seems redundant and contrary to the aim of protecting public views.

5.2.2 Vancouver

Vancouver’s *View Protection Guidelines* are comprehensive and easily implemented. The corresponding website provides additional detail and eliminates any ambiguity (Vancouver 2011c, “View Cone List”). Despite the presence of these Guidelines, the importance of view protection has been compromised, creating precedents that make the Guidelines obsolete.

**Vancouver Recommendation 1: Amend the ‘View Protection Guidelines’ to make them definite policies, eliminating the ability of other policies and advisory and decision-making bodies to reduce their effectiveness**
The view corridor protection document in Vancouver is a set of guidelines, as its name suggests, and is therefore subject to interpretation as deemed necessary. This reduces the effectiveness of the document as other policies and advisory and decision-making bodies can make decisions that reduce their effectiveness.

The Analysis chapter described instances that have created precedents for future development in Vancouver’s view cones and view cone sub-sections. Among these is the view shadow policy that allows proposed developments to enter a view corridor if they are in the view shadow of an existing building (Vancouver 2010a, 14). Although the proposed development will not impact the view cone immediately, the policy neglects to consider its future impact. When the existing building reaches the end of its life, the view cone will remain obstructed by the proposed building. This policy, therefore, does not consider its long-term implications.

Furthermore, instances were described in the Analysis chapter where the Urban Design Panel and City Council made decisions that disregarded the View Protection Guidelines by allowing a proposed development to enter a view cone. These instances have created precedents that erode the purpose and strength of the Guidelines, and should have been addressed by the planning department prior to reaching these decision-making bodies.

**Vancouver Recommendation 2: Create long-term view cone protection policies**

In their current form, views are protected between Granville Street and Trout Lake near Nanaimo Street. Additional view cones will be added as development moves eastward (Interview D). The City of Vancouver should take a more long-term approach to view protection. The Guidelines should add views at locations toward Boundary Street to protect views for the future, before they are obstructed by development.

**Vancouver Recommendation 3: Protect views of Mount Baker from prominent locations**

The current Guidelines protect views of the North Shore Mountains only. Mount Baker, located in Washington State, is clearly visible from various prominent locations within Vancouver. It is part of the Cascade Volcanic Arc and is an active volcano. Although it is not located in British Columbia, the Mountain acts as a landmark in the city. The importance of its views was acknowledged through their inclusion in the Urban Design and Planning Principles for Little Mountain (Draft), a proposed development near Queen Elizabeth Park (Vancouver 2010c). In this Draft, views are maintained of the Mountain from the summit of Little Mountain in Queen Elizabeth Park, seen in Figure 5.2. The protection of views toward Mount Baker is already being incorporated in individual development proposals, which demonstrates its importance to Vancouver’s landscape.
5.2.3 Montréal and Vancouver

The following recommendations can be applied to both the Montréal and Vancouver contexts.

**Montréal and Vancouver Recommendation 1: Implement foreground control policies that maintain landscaping, preventing trees from blocking protected view corridors**

As indicated in the analysis, both Montréal (at Rue University) and Vancouver (at C1: Laurel Landbridge to the Lions and C2: Laurel Landbridge to the North Shore Mountains) have views that are completely obstructed by trees. Pruning is one way of re-establishing these views. This method has been used effectively in Vancouver at view cone 3: Queen Elizabeth Park, where trees had grown into the view cone. Pruning re-established the view, creating a panoramic view as seen in Figures 5.3 and 5.4. Montréal and Vancouver would benefit from pruning to reaffirm the importance of these obstructed views.
Montréal and Vancouver Recommendation 2: Ascertain the public’s input through community engagement to refine the cultural meaning and significance of view corridors, thereby educating the public about their presence and importance

Although retaining views of Mont-Royal in Montréal and the North Shore Mountains in Vancouver is important to the public, very little is known about the existence of view protection policies and their impact on the built environment. Educational tools that explain the importance of the natural feature, the composition of a view corridor and their location should be developed in both cities. This information may come in the form of information plaques at view point locations, self-guided walking tours available to the public in print, on the city’s website or through application software, or city-wide information campaigns. The proliferation of this kind of information will not only inform and educate the public about the existence of view corridor protection, but will also reaffirm the importance of view corridor protection to Council and other decision-making bodies, and maintain public support for preserving the views.

5.3 LIMITATIONS AND FURTHER RESEARCH

The limitations of this report were largely related to resource constraints associated with time and finances. View corridors were examined only in two cities: Montréal and Vancouver. Although these are the only cities in Canada that protect views of mountain landscapes, there are many others internationally, as discussed in Chapter 3: Methods. Due to the limited amount of time within which to complete this report, each city’s view corridors were observed only once. The short amount of time spent in each city and the financial constraints associated with transportation meant that only view corridors that transected the downtown core were taken into consideration. The limited time spent in Montréal and Vancouver also resulted in only two interviews with industry professionals from each city. These constraints affect the generalizability of the observations and analysis, and the applicability of the recommendations to cities other than Montréal and Vancouver.

With additional resources, future research in Montréal and Vancouver should examine view corridors at various times of day and in different seasons. This would give a more accurate indication of the daily and seasonal variation of visibility. As the sun shifts throughout the day, parts of the mountain may become better illuminated or may be hidden in shade, changing the categorization of the view. Since the observations for Montréal were conducted in the fall, some trees had lost their leaves while others had not. Future research should be conducted in the winter and summer months to show the full continuum of the impact of natural barriers to Mont-Royal. In Vancouver, the observations were conducted in the winter. Future research should take place in the summer when the deciduous trees have their leaves. View corridors that are unobstructed in the winter may be obstructed by foliage in the summer months.

Without time and financial constraints, future research should observe all the protected view corridors in Montréal and Vancouver. This would provide a more comprehensive assessment of
the view corridors. Particularly, since the views that bisect the downtown core are likely the most viewed corridors, those that are outside this area may not be as well maintained.

To increase the generalizability of the research, view corridors of mountain landscapes in other cities should be considered, such as Portland, Denver and Hong Kong. This would provide a better indication of how the policies and guidelines in Montréal and Vancouver compare in view corridor protection. Cities with similar planning policies should be included, as should cities with policies from which the Canadian context can learn.

Finally, future research should conduct more interviews with industry professionals. Particularly interesting information to ascertain would be about the usability of the policies from the perspective of architects, developers and members of design panels who use and apply these policies frequently. Additional information to ascertain is in regards to the methods of consultation and the degree to which public consultation was used in the final decision-making process. Interviews could also be conducted with individuals who are considered experts on view corridors from other cities.

Due to the limited amount of research that has been conducted on view corridors to date, there are numerous options for additional research. This report should be seen as a starting point for future research in a topic that is increasingly relevant as population increases and cities turn to options for densification while acknowledging the importance of views toward significant natural landscapes.
REFERENCES


References


APPENDIX A: MONTREAL VIEW CORRIDOR MAP

Source: Montréal 2004b, Appendix D
APPENDIX B: VANCOUVER VIEW CONE MAP

VIEW LOCATION MAP 1 (FALSE CREEK)

FALSE CREEK VIEW CONES
A Alder Terrace to Mount Seymour
B1 Charleston Seawall to the Lions
B2 Charleston Seawall to Crown/Grouse
C1 Laurel Landbridge to the Lions
C2 Laurel Landbridge to Crown/Grouse
D Heather Bay to the Lions
E1 Cambie Bridge to Crown/Grouse
E2 Cambie Bridge to Mount Seymour
G1 Olympic Village Shipyard Pier to North Shore Mountains
H1 Olympic Plaza View to North Shore Mountains
J1 Creekside Park to the Lions & North Shore Mountains
10 Granville Island to Hollyburn Mountain
12.1 Granville Bridge to Crown/Grouse
12.2 Granville Bridge to Mount Seymour

This map shows the locations of View Cones from points along the False Creek shoreline and bridges. For View Cones from outlying areas refer to View Location Map 2. Refer also to area specific policies, regulations and guidelines which council has adopted that may apply to the protection of other views. This map does not note allowable heights for the Downtown North Study Area. These are available on a separate map. For height in other areas consult the City Planning Department.

Source: Vancouver 2011b, 4
VIEW LOCATION MAP 2 (OUTLYING AREAS)

OUTLYING AREA VIEW CONES

3.1 Queen Elizabeth Park to Downtown (Revised, Council report 1990 12 11)

3.2 Queen Elizabeth Park to the North Shore (this View is composed of four sub-sections) (Revised, Council report 1990 12 11)

9.1 Cambie St. at 10th/11th to the North Shore (Revised, Council report 1990 12 11)

9.2 Cambie St. at 10th/11th to the North Shore (Revised, Council report 1990 12 11)

20 Granville at Broadway to the Gualanl Valley

21 Commercial Dr. at 15th to Crown/Grouse

22 Main St. at 6th to the North Shore

27 Trout lake to Crown/Grouse

F1 Chuckit Park to Grouse & Mount Fromme

This map shows the locations of View Cones from outlying areas. For View Cones from False Creek shoreline and bridges refer to View Location Map 1. Refer also to area specific policies, regulations and guidelines which council has adopted that may apply to the protection of other views.

VIEW PROTECTION GUIDELINES
Reduced View Location Map 2
City of Vancouver

Date: 2011-02-10
Scale: NTS

Source: Vancouver 2011b, 5
The City of Vancouver uses the following calculation to determine the maximum height of a building that lies within a view cone (Vancouver 2011d, Formula).

\[
H_x = \frac{(D_x) \,(LR - LV) - (LB_x - LV)}{DR}
\]

DR: Distance from the viewpoint to the reference point
Dx: Distance from the viewpoint to the site
Hx : Maximum building height
LBx: Elevation of the site
LR: Elevation of the reference point
LV: Elevation of the viewpoint
APPENDIX D: IMAGES OF MONTREAL’S VIEW CORRIDORS

Avenue Atwater at Avenue Lionel Groulx

View to Mont-Royal from Avenue Atwater at Avenue Lionel Groulx, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Avenue Atwater at Avenue Lionel Groulx, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Avenue Atwater at Avenue Lionel Groulx
Source: Google Street View 2009 (April)
Avenue Atwater at Boulevard de Maisonneuve Ouest

View to Mont-Royal from Avenue Atwater at Boulevard de Maisonneuve Ouest, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Avenue Atwater at Boulevard de Maisonneuve Ouest, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Avenue Atwater at Boulevard de Maisonneuve Ouest
Source: Montréal 2004b, 18

View to Mont-Royal from Avenue Atwater at Boulevard de Maisonneuve Ouest
Source: Google Street View 2009 (April)
Avenue McGill College (esplanade de la Place Ville-Marie)

View to Mont-Royal from Avenue McGill College (esplanade de la Place Ville-Marie), 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Avenue McGill College (esplanade de la Place Ville-Marie), using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Avenue McGill College (esplanade de la Place Ville-Marie)
Source: Montréal 2004b, 13

View to Mont-Royal from Avenue McGill College (esplanade de la Place Ville-Marie)
Source: Google Street View 2009 (April)
Avenue du Musée

View to Mont-Royal from Avenue du Musée, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Avenue du Musée, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Avenue du Musée
Source: Montréal 2004b, 16

View to Mont-Royal from Avenue du Musée
Source: Google Street View 2009 (April)
Bassin Peel

View to Mont-Royal from Bassin Peel, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Bassin Peel, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Bassin Peel
Source: Montréal 2004b, 9
Belvédère de la pointe du parc de la Cité-du-Havre

View to Mont-Royal from Belvédère de la pointe du parc de la Cité-du-Havre, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Belvédère de la pointe du parc de la Cité-du-Havre, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Belvédère de la pointe du parc de la Cité-du-Havre
Source: Montréal 2004b, 9
Belvédère des Îles

View to Mont-Royal from Belvédère des Îles, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Belvédère des Îles, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Belvédère des Îles
Source: Montréal 2004b, 8
Canal de Lachine (Redpath)

View to Mont-Royal from Canal de Lachine (Redpath), 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Canal de Lachine (Redpath)
Source: Montréal 2004b, 10
Marché Atwater

View to Mont-Royal from Marché Atwater, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Marché Atwater, using camera zoom
Source: Author's photo 2011

View to Mont-Royal from Marché Atwater
Source: Montréal 2004b, 11
Place Vauquelin

View to Mont-Royal from Place Vauquelin, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Place Vauquelin, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Place Vauquelin
Source: Montréal 2004b, 9

Appendix D
Pont Champlain

View to Mont-Royal from Pont Champlain, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Pont Champlain, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Pont Champlain
Source: Google Street View 2009 (May)

View to Mont-Royal from Pont Champlain
Source: Montréal 2004b, 10
Pont Jacques-Cartier

View to Mont-Royal from Pont Jacques-Cartier, 28mm camera lens (taken from a vehicle)
Source: Author's photo 2011

View to Mont-Royal from Pont Jacques-Cartier
Source: Montréal 2004b, 8

View to Mont-Royal from Pont Jacques-Cartier
Source: Google Street View 2009 (June)
Quai de l’Horloge

View to Mont-Royal from Quai de l’Horloge, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Quai de l’Horloge, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Quai de l’Horloge
Source: Montréal 2004b, 8
Rue Bridge

View to Mont-Royal from Rue Bridge, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Bridge, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue Bridge
Source: Montréal 2004b, 10

View to Mont-Royal from Rue Bridge
Source: Google Street View 2009 (May)
Rue Drummond

View to Mont-Royal from Rue Drummond, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Drummond, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue Drummond
Source: Montréal 2004b, 15

View to Mont-Royal from Rue Drummond
Source: Google Street View 2009 (April)
Rue Guy at Boulevard René-Lévesque Ouest

View to Mont-Royal from Rue Guy at Boulevard René-Lévesque Ouest, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Guy at Boulevard René-Lévesque Ouest, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue Guy at Boulevard René-Lévesque Ouest
Source: Montréal 2004b, 17

View to Mont-Royal from Rue Guy at Boulevard René-Lévesque Ouest
Source: Google Street View 2009 (April)
Rue Guy at Rue William

View to Mont-Royal from Rue Guy at Rue William, 28mm camera lens
Source: Author’s photo 2011

View towards Mont-Royal from Rue Guy at Rue William
Source: Google Street View 2009 (April)
Rue Lambert-Closse

View to Mont-Royal from Rue Lambert-Closse, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Lambert-Closse, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue Lambert-Closse
Source: Montréal 2004b, 17

View to Mont-Royal from Rue Lambert-Closse
Source: Google Street View 2009 (April)
Rue Mansfield

View to Mont-Royal from Rue Mansfield, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Mansfield, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue Mansfield
Source: Montréal 2004b, 14

View to Mont-Royal from Rue Mansfield
Source: Google Street View 2009 (May)
Rue McTavish

View to Mont-Royal from Rue McTavish, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue McTavish, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue McTavish
Source: Montréal 2004b, 14

View to Mont-Royal from Rue McTavish
Source: Google Street View 2009 (April)
Rue Metcalfe

View to Mont-Royal from Rue Metcalfe, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Metcalfe, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue Metcalfe
Source: Montréal 2004b, 14

View to Mont-Royal from Rue Metcalfe
Source: Google Street View 2009 (April)
Rue de la Montagne

View to Mont-Royal from Rue de la Montagne, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue de la Montagne, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue de la Montagne
Source: Montréal 2004b, 16

View to Mont-Royal from Rue de la Montagne
Source: Google Street View 2009 (April)
Rue de Montmorency

View to Mont-Royal from Rue de Montmorency, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue de Montmorency, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue de Montmorency
Source: Montréal 2004b, 10

View to Mont-Royal from Rue de Montmorency
Source: Google Street View 2009 (May)
Rue Peel

View to Mont-Royal from Rue Peel, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Peel, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue Peel
Source: Montréal 2004b, 15

View to Mont-Royal from Rue Peel
Source: Google Street View 2009 (April)
Rue Redpath

View to Mont-Royal from Rue Redpath, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Redpath, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue Redpath
Source: Montréal 2004b, 16

View to Mont-Royal from Rue Redpath
Source: Google Street View 2009 (April)
Rue Ropery

View to Mont-Royal from Rue Ropery, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Ropery
Source: Montréal 2004b, 11
Rue Simpson

View to Mont-Royal from Rue Simpson, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Simpson, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue Simpson
Source: Montréal 2004b, 17

View to Mont-Royal from Rue Simpson
Source: Google Street View 2009 (April)
Rue Stanley

View to Mont-Royal from Rue Stanley, 28mm camera lens
Source: Author’s photo 2011

View to Mont-Royal from Rue Stanley, using camera zoom
Source: Author’s photo 2011

View to Mont-Royal from Rue Stanley
Source: Montréal 2004b, 15

View to Mont-Royal from Rue Stanley
Source: Google Street View 2009 (April)
Terrasse de l'hôtel de ville

View to Mont-Royal from Terrasse de l'hôtel de ville
Source: Montréal 2004b, 9
APPENDIX E: IMAGES OF VANCOUVER’S VIEW CONES

A: Alder Terrace to Mount Seymour

View to Mount Seymour from Alder Terrace, 28mm camera lens
Source: Author’s photo 2011

View to Mount Seymour from Alder Terrace
Source: Vancouver 2011d, “View Cone List”
B1: Charleson Seawall to the Lions

View to the Lions from Charleson Seawall, 28mm camera lens
Source: Author’s photo 2011

View to the Lions from Charleson Seawall
Source: Vancouver 2011d, “View Cone List”
B2: Charleson Seawall to Crown/Grouse

View to Crown/Grouse from Charleson Seawall, 28mm camera lens
Source: Author’s photo 2011

View to Crown/Grouse from Charleson Seawall
Source: Vancouver 2011d, “View Cone List”
C1: Laurel Landbridge to the Lions

View to the Lions from Laurel Landbridge, 28mm camera lens
Source: Author’s photo 2011

View to the Lions from Laurel Landbridge
Source: Vancouver 2011d, “View Cone List”
C2: Laurel Landbridge to Crown/Grouse

View to Crown/Grouse from Laurel Landbridge, 28mm camera lens
Source: Author's photo 2011

View to Crown/Grouse from Laurel Landbridge, using camera zoom
Source: Author's photo 2011

View to the Lions from Laurel Landbridge
Source: Vancouver 2011d, “View Cone List”
D: Heather Bay to the Lions

View to the Lions from Heather Bay, 28mm camera lens
Source: Author’s photo 2011

View to the Lions from Heather Bay, using camera zoom
Source: Author’s photo 2011

View to the Lions from Heather Bay
Source: Vancouver 2011d, “View Cone List”
E1: Cambie Bridge to Crown/Grouse

View to Crown/Grouse from Cambie Bridge, 28mm camera lens
Source: Author’s photo 2011

View to Crown/Grouse from Cambie Bridge
Source: Vancouver 2011d, “View Cone List”

View to Crown/Grouse from Cambie Bridge
Source: Google Street View 2009 (April)
F1.1/F1.2/F1.3: Choklit Park to Grouse and Mount Fromme

View to Grouse and Mount Fromme from Choklit Park, 28mm camera lens
Source: Author’s photo 2011

View to Grouse and Mount Fromme from Choklit Park, using camera zoom and cropping
Source: Author’s photo 2011

View to Grouse and Mount Frommer from Choklit Park
Source: Vancouver 2011d, “View Cone List”
G1.1/G1.2: Olympic Village Shipyard Pier to the North Shore Mountains

View to the North Shore Mountains from the Olympic Village Shipyard Pier, 28mm camera lens
Source: Author’s photo 2011

View to the North Shore Mountains from the Olympic Village Shipyard Pier, using camera zoom and cropping
Source: Author’s photo 2011

View to the North Shore Mountains from the Olympic Village Shipyard Pier
Source: Vancouver 2011d, “View Cone List”
H1: Olympic Plaza Stage to Grouse/the North Shore Mountains

View to Grouse/the North Shore Mountains from the Olympic Plaza Stage, 28mm camera lens
Source: Author’s photo 2011

View to Grouse/the North Shore Mountains from the Olympic Plaza Stage, using camera zoom and cropping
Source: Author’s photo 2011

View to the North Shore Mountains from the Olympic Plaza
Source: Vancouver 2011d, "View Cone List"
3: Queen Elizabeth to the North Shore Mountains

View to the North Shore Mountains from Queen Elizabeth, 28mm camera lens
Source: Author’s photo 2011

View to the North Shore Mountains from Queen Elizabeth
Source: Vancouver 2011d, “View Cone List”
9.1: Cambie Street to the North Shore Mountains

View to the North Shore Mountains from Cambie Street, 28mm camera lens
Source: Author’s photo 2011

View to the North Shore Mountains from Cambie Street
Source: Vancouver 2011d, “View Cone List”

View to the North Shore Mountains from Cambie Street
Source: Google Street View 2009 (May)
9.2.1/9.2.2: Cambie Street to the North Shore Mountains

View to the North Shore Mountains from Cambie Street, 28mm camera lens
Source: Author’s photo 2011

View to the North Shore Mountains from Cambie Street, using camera zoom
Source: Author’s photo 2011

View to the North Shore Mountains from Cambie Street
Source: Vancouver 2011d, “View Cone List”

View to the North Shore Mountains from Cambie Street
Source: Google Street View 2009 (May)
12.1.1: Granville Bridge to Crown/Grouse

View to Crown/Grouse from the Granville Bridge, 28mm camera lens
Source: Author’s photo 2011

View to Crown/Grouse from the Granville Bridge, using camera zoom
Source: Author’s photo 2011

View to Crown/Grouse from the Granville Bridge
Source: Vancouver 2011d, “View Cone List”

View to Crown/Grouse from the Granville Bridge
Source: Google Street View 2009 (April)
12.1.2: Granville Bridge to Crown/Grouse

View to Crown/Grouse from the Granville Bridge, 28mm camera lens
Source: Author’s photo 2011

View to Crown/Grouse from the Granville Bridge, using camera zoom
Source: Author’s photo 2011

View to Crown/Grouse from the Granville Bridge
Source: Vancouver 2011d, “View Cone List”

View to Crown/Grouse from the Granville Bridge
Source: Google Street View 2009 (April)
12.1.3: Granville Bridge to Crown/Grouse

View to Crown/Grouse from the Granville Bridge, 28mm camera lens
Source: Author’s photo 2011

View to Crown/Grouse from the Granville Bridge, using camera zoom
Source: Author’s photo 2011

View to Crown/Grouse from the Granville Bridge
Source: Vancouver 2011d, “View Cone List”

View to Crown/Grouse from the Granville Bridge
Source: Google Street View 2009 (April)
12.2: Granville Bridge to Mount Seymour

View to Mount Seymour from the Granville Bridge, 28mm camera lens
Source: Author’s photo 2011

View to Mount Seymour from the Granville Bridge, using camera zoom
Source: Author’s photo 2011

View to Mount Seymour from the Granville Bridge
Source: Vancouver 2011d, “View Cone List”

View to Mount Seymour from the Granville Bridge
Source: Google Street View 2009 (April)
## APPENDIX F: EVALUATION OF MONTREAL’S VIEW CORRIDORS

<table>
<thead>
<tr>
<th>View Corridor Name</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avenue Atwater at Avenue Lionel Groulx</td>
<td>●</td>
</tr>
<tr>
<td>Avenue Atwater at Boulevard de Maisonneuve Ouest</td>
<td>●</td>
</tr>
<tr>
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<td>Rue University</td>
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● Well protected  ○ Moderately well protected  ○ Poorly protected
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● Well protected  ○ Moderately well protected  ○ Poorly protected
Appendix H: Interview Protocol

Interview A Questions
1. Is there a way to determine whether a view policy is effective?
2. How do you know whether a view corridor is worth protecting?
3. How do you determine if the view corridor policies are “good”?
4. Would you consider the view corridor policies in Montréal to be “good”? Why or why not?
5. Would you consider the view corridor policies in Montréal to be effective? Why or why not?
6. Would you make any changes to the view corridor guidelines for Montréal?

Interview B Questions
1. When were the view corridor policies first put in place?
2. How many view corridors to Mont-Royal were there originally?
3. Why were those view corridors chosen? Were they important places or areas where the Mountain could be seen?
4. How were those view corridors chosen?
5. How many protected views are there toward the Mountain.
6. Why were more view corridors chosen?
7. How were these view corridors chosen?
8. How effective are the current view corridor policies at maintaining the views?
9. Do you have any examples of developments that have tried to block the view corridors? Have any succeeded?
10. Would you make any changes to view corridor policies in Montréal?

Interview C Questions
1. Why / how were the view corridor guidelines initiated? Did the height of the Harbour Centre have anything to do with it?
2. How do you know whether a view corridor is worth protecting?
3. Some view corridors have buildings in them that would have been there when the view corridor guidelines were established. Was that done on purpose?
4. Is there a way to determine whether a view policy is effective?
5. How do you determine if the view corridor guidelines that are “good”?
6. Would you consider the View Protection Guidelines in Vancouver “good”? Why or why not?
7. Would you consider the View Protection Guidelines in Vancouver to be effective? Why or why not?
8. Would you make any changes to the View Protection Guidelines for Vancouver?
Interview D Questions

1. Why / how were the most recent View Protection Guidelines initiated?
2. How do you know whether a view corridor is worth protecting?
3. Some view corridors have buildings in them that would have been there when the View Protection Guidelines were established. Was that done on purpose?
4. The new mechanical arms of B.C. Place are within the view corridors. Would that have been allowed by the Guidelines if it wasn’t crown land?
5. The new Hotel Georgia tower was knowingly built within a view cone. Does that set a precedent for the future of view corridors? Are there any other buildings that were knowingly built in a view corridor?
6. In Montréal, view corridor locations are in the downtown core. Why are they not located downtown in Vancouver?
7. Is there a way to determine whether a view policy is effective?
8. Would you consider the View Protection Guidelines in Vancouver are effective? Why or why not?
9. Would you make any changes to the View Protection Guidelines for Vancouver?