

The background of the entire page is a photograph of the Science World dome in Vancouver, Canada. The dome is a large, geodesic sphere made of metal and glass, situated on a pier in the water. Behind it, several tall city buildings are visible against a hazy sky. The entire scene is reflected in the calm water in the foreground.

APRIL 2007

QUEBEC STREET

Public Realm Improvement Project

CARL MEESE
School of Community
and Regional Planning

QUEBEC STREET

PUBLIC REALM IMPROVEMENT PROJECT

by

Carl Meese

B.A. (Mathematics and Urban Design & Architectural Studies),
New York University, 2002

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We accept this project as conforming to the required standard

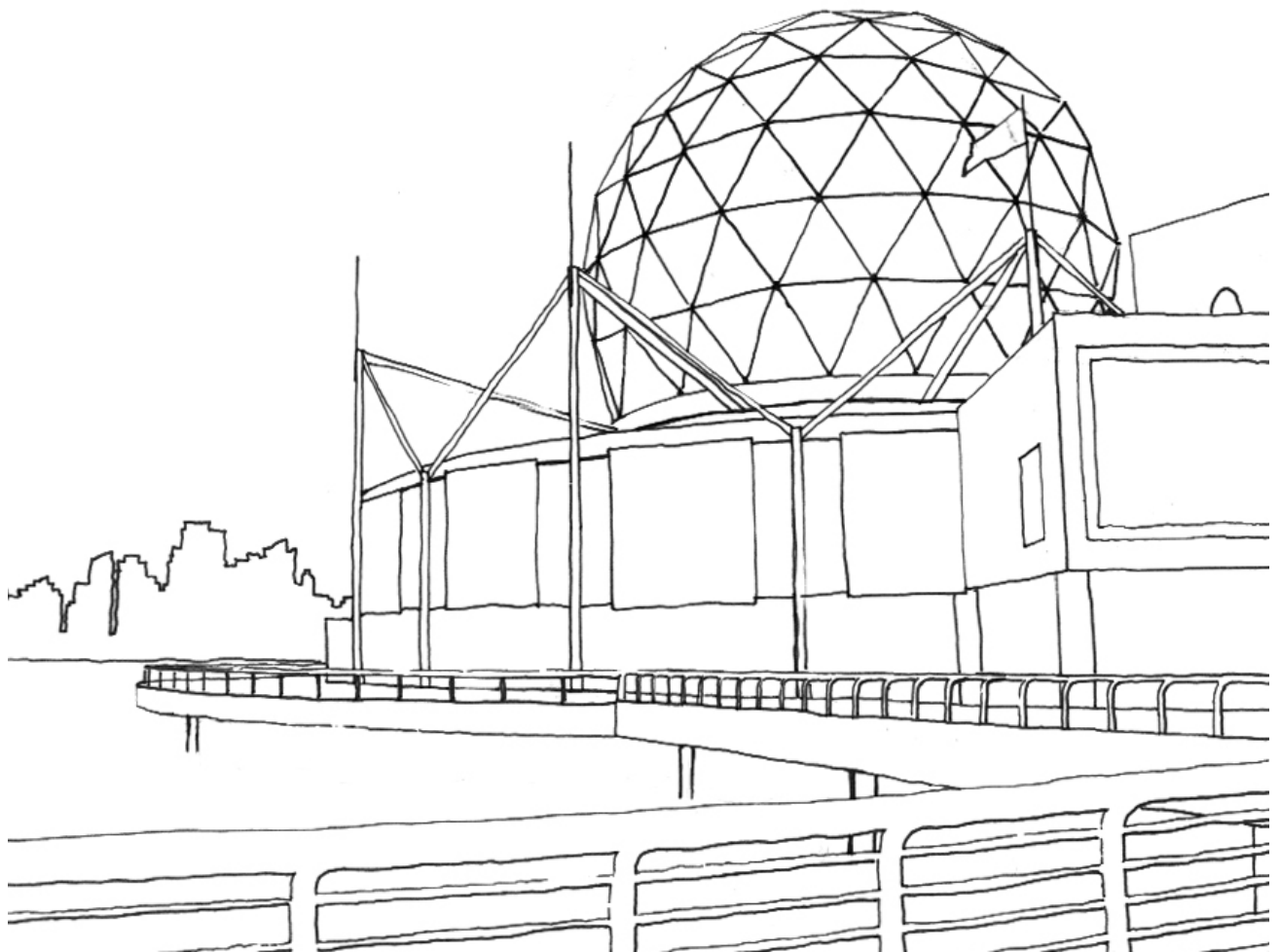
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THE UNIVERSITY OF BRITISH COLUMBIA

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EXECUTIVE SUMMARY

This professional project provides city planners with strategies for how to improve the public realm of city streets. Specifically, this research explores the public realm of Quebec Street in Vancouver, British Columbia. This project introduces the topic of great streets, examines why Quebec Street is not a great street and recommends ways to transform the public realm into a great street.

First, this project reports on the successes and failures of three examples of streetcar projects from around the world to show how other cities are designing their transportation systems and public spaces. By analyzing projects in Toronto, Portland, and Seattle this project summarizes a set of key findings to be applied to the design of Quebec Street. Some of these findings include:

- Exclusive streetcar right-of-ways provide greater streetcar efficiency, this helps reduce car dependency and makes transit more competitive.
- Transit improvements provide a greater opportunity for wider public realm improvements along the corridor.
- Transit shelters should be designed with adequate space and amenities to maximize comfort and safety for all users.

The site analysis examines in detail the specific context of the Quebec Street site, specifically identifying the strengths, opportunities, weaknesses, and constraints. This project presents many different layers of information, which are synthesized into a summary of the main opportunities and constraints for the successful design of Quebec Street. A few opportunities and constraints are to:

- Create False Creek Ring Road Connecting Pacific to 2nd Ave.
- Expand False Creek Open Space Network
- Increase Transit Connections
- Extend Existing Streetcar Network
- Create Place: Address Lack of Character and Identity
- Minimize Site Isolation

With a set of design principles in mind the project recommends eight specific design goals with two or three supporting design strategies to improve the public realm along Quebec Street. The design strategies are illustrated with supporting images, maps and drawings to further describe the intended outcome of the proposed design interventions. The design goals are:

- Generate a Strong Sense of Place and Identity Based on a Unified Image of False Creek
- Encompass False Creek with a Grand Tree Lined Boulevard
- Modernize and Extend the Existing Streetcar System
- Create a Public Transit Zone Linking All Systems
- Strengthen and Expand Street Network
- Reduce Visual and Physical Impact of Overpasses
- Extend Creekside Park to Quebec Street
- Develop an Integrated System of False Creek Oriented Open Spaces

The project concludes with a brief summary of the findings and design proposal as well as further details on some of the possible options for continuing this work. Including the potential for the City of Vancouver to use this document as the first phase a larger public process.



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Cover Page & Figure 0.2:
City Gate and Science World, 1999
Credits: Paul Smith

CHAPTER 1



INTRODUCTION



Figure 1.1: Bike Path on Ocean Parkway,
Brooklyn, New York, 1894

Credits: New York City Parks Photo Archive

While traveling the world and experiencing life in different cities I am constantly observing my surroundings and searching for clues on how people use the spaces they inhabit. I have found that it is in a city's streets where the most exciting public life takes place. Streets are urban spaces filled with activities which define our culture and society. There are many different types of streets with many different purposes, however there are only a select few which stand out as great streets. A great street for me makes daily life more enjoyable. A place with multiple opportunities for meaningful social and natural interactions. I love streets that are beautiful, comfortable, safe, functional, friendly, vibrant, mixed, and active. Streets are the stage of life and are vital to the health of our communities. They are physical spaces and when designed properly they can encourage and enrich the lives of those who use the space. A great street should also provide access to nature and act as a local example of sustainable design and communal management of city space. Not all streets can be great streets. However, I believe it is possible for all people to have access to a great street within their community, a space that is uniquely theirs, a place which on a daily basis makes their lives better.



Figure 1.2: Street Life on Calle Paula,
Havana, Cuba, 2005

I have experienced life on many great streets. While living in New York City I noticed a special quality of social interaction, physical design and natural integration on many streets. One in particular is 7th Avenue in the Park Slope neighborhood of Brooklyn. This street is special to me as a place where I lived for several years and conducted my daily life. It stands out as an ideal example of a well designed commercial high street. It is a place with a variety of interesting uses and users, diverse businesses and services, and unlimited visual activity. Often times I would get off the subway a stop or two early just to walk down the street on my way home. Another great street in Brooklyn is Ocean Parkway created by Frederick Law Olmsted and Calvert Vaux as a linear park. At over 64 meters (210 feet) wide there is space for regional and local automobile traffic and parking, as well as pedestrian pathways, and the first bike path in America. This parkway provides a major urban population access to nature and a place for relaxation. Located in Havana, Cuba, Calle Paula stands out as another example of a great street. In Cuba, life often takes place in the street and is so important that it occurs on featureless streets enclosed by once beautiful buildings at the expense of automobile traffic. Although the walls are often crumbling the community is strong, built on a social structure which cannot be undermined and this is represented in the actions visible on the street.

One of the main observations from my experiences is how important the vitality of a street is to the success of a community. The three streets described all possess this crucial quality. The primary role of the street is to act as the place where the majority of public life occurs in the city. It is where people come together outside of private space and where communities and societies interact and intermingle. They are spaces which are cherished and valued by the local residents. As the living rooms of our neighborhoods, all users must be able to easily access, navigate and use the street freely and comfortably. Public streets are the location for many of our “third places,” the places we frequent when not at home or work, such as businesses, services, parks, recreation and entertainment options, which bring people out during the day and night, creating a constantly active living space.

A second observation is that the physical shape and design of the street influences the user's experience as much as the activities which take place there. Great streets often possess a well defined and enclosed environment which is safe and comfortable. A place where life is encouraged to take place freely without compromise to greater automobile efficiency. Great streets have many amenities, such as, places to rest and relax, areas of refuge to take cover from the weather, and active and passive natural features to soften the hard elements of the roadway. There is also an aesthetic aspect to experiencing a great street; such as beauty, interest, local flavor, and intrigue. Overall, a street must provide usable space for public life to take place. A well designed street will meet the needs of all users as well as create a vibrant public realm.

A third observation is the crucial role nature plays in the experience on a street. Streets represent as much as 30% of our city space and are often little more than concrete, curbs and asphalt. By rethinking about this space as an opportunity to reintroduce nature into the city a green street can enrich our shared public spaces with plants, grass and trees. Landscaping not only enhances streets visually with living material, but also provides a great opportunity for storm water management. Water can infiltrate onto the site instead of being diverted to a nearby body of water. Public transit, automobiles and pedestrians should coexist fluidly and safely on a great street. In addition, public transportation contributes character and charm to the sustainable identity of a green street. Streetcars, specifically, are a realistic way of reestablishing locally based transportation while bringing a pulse to the life of the street. The design process to create green streets (i.e. charrettes) presents a great opportunity for public participation in the development of their community.

Streets are primarily the network of paths created by the public realm of the city. This is property not controlled by any one person or private corporation, but rather the city space which truly belongs to us all. I believe this premise should be key when making decisions which affect the design, accessibility and use of these spaces. Too often much of the public right-of-way of streets is exclusively allocated for efficient automobile circulation at the cost of all other users of the space. There are many benefits for creating great streets in our cities. Improving the public realm will not only increase happiness, create beauty and strive for environmental responsibility, but will also bring many economic benefits such as increased property values, more successful businesses, and higher tax revenues. A great street is designed to create long term sustainability and livability for a neighborhood, focusing on equal access and enjoyment for all users.



Figure 1.3: Street Trees and Infiltration Pavers on Nelson Street, Vancouver, Canada, 2006

Strategies to Create Green Streets & Neighborhoods

from Cynthia Girling & Ronald Kellett's *Skinny Streets & Green Neighborhoods

- Green space allows people to relate to nature within the city.
- Design of the street influences how people travel.
- Local land uses, services, and amenities should be complementary.
- The city should be viewed as part of nature and not as fragmented systems.
- The built form should engage and respond to local ecology.
- Connect the regional system to the neighborhood.
- Restore damaged landscape to repair missing links.
- Integrate transportation networks to encourage more pedestrian travel.
- Emphasize environmental quality by reducing pavement, increasing tree planting, and incorporating stormwater management.



Figure 1.4: Street Trees and Landscaping on Nelson Street, Vancouver, Canada, 2006

Street Planner Objectives

***from *The Sustainable Street*
edited by C. Jefferson, J. Rowe, &
C. A. Brebbia**

- Emphasize the variety of activities in the street.
- Create good accessibility to and within the street.
- Reduce motorized traffic to a level that is subordinated to the social activity.
- Create safer streets through design and physical measures such as street lighting, bollards, and buildings which face the street.



Figure 1.5: The Ramblas, Barcelona, Spain, 1993
Credits: Allan B. Jacobs

Three Qualities of Safe Streets

from Jane Jacobs' *The Death and Life of Great American Cities

- There must be a clear demarcation between what is public space and what is private space.
- There must be eyes upon the street, belonging to those we might call the natural proprietors of the street.
- The sidewalk must have users on it fairly continuously, both to add to the number of effective eyes on the street and to induce the people in buildings along the street to watch the sidewalks in sufficient numbers.

ALLAN B. JACOBS' GREAT STREETS

The most inspirational piece of literature reviewed for this project is Allan B. Jacobs' *Great Streets*. This four part book, about the physical, designable characteristics of great streets examines examples from around the world, summarizes specific information from the examples, analyzes the morphology (shape) of city street patterns, and outlines the requirements and qualities that make a great street. This book has informed my own personal tastes and desires for great streets and, as such, is appropriate for this public realm improvement project.

Jacobs believes that a major component of what makes a street great has to do with an indescribable 'magic.' This is a special power or sensation which makes each street different and unique and is not reproducible. This magic comes from the actions and desires of the collective community, the individual citizens, the civic officials, and the urban designers and planners who are responsible for overseeing the space. The magic of a great street is what inspires the participation of individual members of a community to protect and maintain the public spaces of a neighborhood.

In addition, there are several specific components Jacobs identifies as responsible for making great streets. "First and foremost, a great street should help make community: should facilitate people acting and interacting to achieve in concert what they might not achieve alone (Jacobs, 8)." Streets provide the setting of peoples lives and as such a great street should be a most desirable place to be, to spend time, to live, to play, to work. Streets encourage participation and provide space for activities that bring people together. The best streets are those that can be remembered. They leave strong, long-continuing positive impressions. "Finally, the truly great street is one that is representative: it is the epitome of a type; it can stand for others; it is the best (Jacobs, 9-11)."

Jacobs states that great streets are attractive, entertaining, joyful, utilitarian, and act as symbols of community and its history and public memory. Great streets are destinations themselves and need to be easy to travel to and find. They are open and accessible to all. As locations of public expression they permit individual recognition, yet they also allow personal anonymity. Great streets are places to act and dream, for escape and romance. They are places where it is possible to see and meet all kinds of people (Jacobs, 11).

Beyond functional purposes of permitting people to get from one place to another and to gain access to property, streets—most assuredly the best streets—can and should help to do other things: bring people together, help build community, cause people to act and interact, to achieve together what they might not alone. As such, streets should encourage socialization and participation of people in the community. (Jacobs, 312)

In addition to community building through public participation, great streets require accessibility, livability, responsibility and the opportunity to bring people together. A major requirement of great streets is physical comfort and safety. Jacobs suggests controlling climate with awnings, wind breakers, and trees. There should not be too many people, but also not be empty. There should be no worry of being struck by a car or truck, or of tripping on the pavement. And there should be lights to see the way and to see others (Jacobs, 8).

An additional requirement of great streets is that building design be complementarity. The heights of buildings, articulation, style, facades, and signs should all create strong definition and a unified image. The streetwall should be well defined with clear transparency between public and private realms. The overall design of the street and its defining elements should contain qualities that engage the eyes (Jacobs, 270-271). Well designed streets tend to be well liked streets.

There are numerous other qualities that contribute to great streets. First among them, identified by Jacobs, is the use of street trees. Although not a specific requirement for all great streets, a uniform tree planting strategy is a strong design element which can transform a street into a great experience simply by providing solid street definition, protection from automobile traffic, shade from the sun and the ability to retain storm water and reduce rain runoff (Jacobs, 293).

Other great street qualities include creating smaller and more frequent buildings, and encouraging higher densities. Special design features and details create a diversity of visual stimulus. The physical parameters of the space, such as length, slope, width, beginnings and endings can influence the greatness of a street. There are other great street qualities such as craftsmanship, workmanship, materials, and maintenance. A great street typically contains local landmarks, spaces where people like to go (Jacobs, 293).

Jacobs believes that streets belong to us all, and that they are not islands of property onto themselves. They are complicated systems of public space which connect our private worlds into a larger collective community. "They serve as locations of public expression. They should be physically comfortable and safe. The best streets create and leave strong, lasting impressions; they catch the eyes and the imagination. They are joyful places to be, and given a chance one wants to return to them. Streets are places for activity, including relaxation. The best streets continue year after year, they are long-lived (Jacobs, 312)."

"Streets more than anything else are what make the public realm. They are the property of the public or are under direct public control. The opportunity to design them in ways that meet public objectives, including the making of community itself, is as exciting as it is challenging. If we do right by our streets we can in large measure do right by the city as a whole—and, therefore and most importantly, by its inhabitants (Jacobs, 314)."

Allan B. Jacobs' thorough observations, concise analysis and detailed drawings of great streets contributed immensely to this project. The research and methods Jacobs utilizes allows me to feel confident in my own abilities to observe and analyze street design based on my education and personal experiences. In addition to being inspired by Jacobs' *Great Streets*, this project was influenced by several relevant books and documents regarding the design of great streets. I have included summaries of key findings from authors Jane Jacobs, David Sucher, Cynthia Girling and Ronald Kellett, and from the policies and plans of Vancouver and Portland. This selection of literature represents much of the current theories and practices in the field of urban design and community planning.

Rules to Preserve & Create Walkable Commercial Areas

from David Sucher's *City Comforts

- Build buildings to the sidewalk, this creates a strong streetwall.
- Make the building front permeable with windows and doors, no blank walls or reflective glass.
- Prohibit parking lots in front of buildings, instead they should be above, below, behind, beside, or on street.



Figure 1.6: Cours Mirabeau, Aix-en-Provence, France, 1993
Credits: Allan B. Jacobs

Livability Goals

***from Portland Metro 2040 Growth Concept & Regional Transportation Plan (Oregon D.O.T.)**

- Provide travel mode choice.
- Support regional multi-modal travel.
- Support the economic vitality of the region.
- Create pedestrian & bicycle accessibility.
- Support public social contact.
- Provide orientation & identity to the region.
- Provide a safe environment.
- Provide for physical comfort.
- Provide spatial definition by orienting buildings to the street.
- Provide high quality of construction and design.
- Maintain the quality of the environment.

PROBLEM STATEMENT



Figure 1.7: Under the Viaducts on Quebec Street, 2006



Figure 1.8: Unfinished Seawall along Quebec Street, 2006



Figure 1.9: Power Station on Quebec Street, 2006

Quebec Street is currently not a great street. The public realm along this corridor between 2nd Avenue and Expo Boulevard in Vancouver, British Columbia faces many challenges. The main problems impeding sustainable development are identified here to inform the creation of a set of specific design recommendations. Quebec Street is a densely populated roadway adjacent to False Creek, an urban waterway surrounded by valuable residential real estate and a generous network of public open spaces. However, a major problem affecting all aspects of urban life along Quebec Street is the lack of a strong sense of place. This area is situated at a major node of activity in Vancouver's urban fabric, yet currently does not act as a major reinforcing element in Vancouver's strong image of sustainability and livability. The private lands around Quebec Street continue to undergo extreme residential redevelopment, quickly increasing the community's population. The current design of Quebec Street is dominated by automobile circulation at the detriment to the pedestrian experience. And, there are several large obstructive physical barriers, such as the SkyTrain and the Georgia Street Viaducts. This public realm improvement project will focus on these problems along Quebec Street and recommend design strategies that will transform Quebec Street into a truly unique and special place, into a great street.

GENERIC SENSE OF PLACE

A crucial problem facing the redesign of Quebec Street is establishing a new sense of place for the area. Currently the street lacks a valuable and perceivable image or character that might provide a strong identity. There are no unique or distinguishing features or characteristics in the existing public realm design which could link the street to the surrounding areas of Vancouver, specifically False Creek. The existing public seawall and system of open spaces has given False Creek a user-oriented identity, unique to Vancouver, but there is no corresponding roadway providing easy vehicular access to all parts of False Creek while still permitting regional traffic to pass through. The existing state of Quebec Street does not live up to the strong sense of place established and represented in Vancouver's overall image.

SUBSTANDARD SUSTAINABILITY AND LIVABILITY

The City of Vancouver is striving to be one of the most sustainable and livable cities on earth. Currently Quebec Street has not realized its potential to reinforce this strong image established for Vancouver as a leader in socially and environmentally responsible urban design and city planning practices. There are few special features which stand out along Quebec Street as specifically sustainable or livable. However, there are several major opportunities for the public realm along Quebec Street to become significantly more sustainable and livable, such as redesigning the underemphasized public transportation nexus located in this area into a major transfer point for the burgeoning choices of mass transit options available to the residents and visitors of Vancouver.

POPULATION GROWTH

Rapid population growth and intensive housing development in this densely populated area has placed strain on the existing open space and transportation infrastructure. Developers may not always provide negotiated amenities prior to housing construction. Sometimes as development projects are completed, public amenities, such as open space access, pedestrian walkways, street improvements and mass transit options are constructed well after their services are needed. Plans for the construction of several high-density housing developments throughout the project site creates a substantive challenge related to the quantity and quality of accessible public open space and transportation options for the many new residents. This new population will need access to services located here and unless these future demands are accounted for the experience along the Quebec Street public realm will continue to suffer.

AUTOMOBILE DOMINANCE

At present, Quebec Street is designed almost exclusively for the efficient movement of automobile traffic. Although alternate high capacity routes are available nearby on Main Street, traffic volume is still high on Quebec Street. Non-automobile users suffer due to the fact that a majority of the right-of-way is designated for vehicular movement. As such, Quebec Street does not have a strong identity as either a local serving street or a regional corridor. The pedestrian experience is overshadowed by the emphasis on automobiles and associated traffic speeds. Existing sidewalks are pedestrian unfriendly often with the walkways located immediately proximate to heavy traffic. Planted areas with large continuous shrubs next to the sidewalk are unusable for passive recreation and act as a barrier to the adjacent parking lot and Creekside Park. In addition, the City of Vancouver has designated Quebec Street as a future streetcar route. The inclusion of this new mode of public transportation to the area requires reexamination of the existing traffic needs and patterns along Quebec Street and provides an excellent opportunity to instigate greater public realm improvements.

PHYSICAL BARRIERS

An additional problem facing the successful implementation of any public realm improvements to Quebec Street is the challenge of incorporating the massively intrusive barriers of the SkyTrain and the Georgia Street Viaducts into the larger urban network. These necessary structures currently impede access to open space and effectively separate the residents of City Gate from Creekside Park, False Creek, the soccer fields, Science World and the skate park. However, since these structures are to remain a fixture along Quebec Street any design intervention will need to incorporate measures to minimize the dividing nature of the viaducts and connect the isolated open spaces to the Quebec Street residential community.



Figure 1.10: Sign of Change on Quebec Street, 2006



Figure 1.11: Cars Everywhere on Quebec Street, 2006



Figure 1.12: Unused Median & Viaducts along Quebec Street, 2006



Figure 1.13: SkyTrain & Georgia St. Viaducts over Quebec Street, 2006

PROJECT STATEMENT



Figure 1.14: Quebec Street and Its Immediate Surroundings, 2006 **Credits:** Google

Goals and Objectives of Vancouver's Downtown Transportation Plan

- Maximize Access
- Minimize Congestion
- Enhance Public Transit
- Maintain Efficient Goods Movement
- Serve Adjacent Land Uses
- Promote Walking and Bicycling
- Increase Pedestrian Comfort
- Manage Parking
- Promote Sustainability

Quebec Street has the potential to become a great street. This project, representing a typical public realm improvement process, is a plan to transform the automobile dominated public realm of Quebec Street into one which exemplifies the qualities of a great street.

Beginning with an introduction on the subject of great streets and a description of the problems facing Quebec Street today, the first chapter explains the methods and intentions of the project itself. The following case study chapter documents the lessons learned from the successes and failures experienced in other cities when they extend or improve streetcar systems, and specifically explores how best to incorporate public realm improvements into streetcar developments. The site analysis chapter provides necessary information to establish the needs and desires of the users of Quebec Street. This leads to the site specific design recommendations chapter, which is a set of site oriented design goals and strategies informed by broad design guidelines and opportunities and constraints identified in the analysis.

The main goal of this project is to imagine Quebec Street as a pedestrian-friendly thoroughfare that will provide the rapidly growing residential neighborhoods nearby with a cohesive integration of public open space and a multimodal transportation network. In addition to other interventions, a crucial aspect of the design recommendations is the proposal to connect Pacific Boulevard to 2nd Avenue along Quebec Street. This encompassing roadway will circle False Creek and link many disconnected landmarks together, such as: the waterfront, seawall, major intersections, gateways, vistas, streetcar stations, buildings, rail and train stations. The proposed extension of the streetcar line to Waterfront Station in downtown Vancouver along Quebec Street further emphasizes the need for comprehensive renewal. This public realm improvement project is a much needed vision to repair the urban fabric of False Creek and Vancouver by creating a streetscape that enhances the pedestrian and cyclist experience while efficiently accommodating vehicular movement.

PURPOSE

This project primarily represents my final requirement for the completion of the Master of Arts Degree in Planning from the University of British Columbia. This document is to confirm abilities and knowledge gained in planning and urban design. The main inspiration for undertaking this public realm improvement project came from embarking on a partnership with Scot Hein, the senior urban designer for the City of Vancouver. As such the main purpose of this project is to create a useful document for the City of Vancouver. Through specific design recommendations, goals and strategies, this project envisions a high-quality public realm with character, vitality, and identity for Quebec Street incorporating information gained from research and analysis of current planning practices and theories. These design goals for Quebec Street would achieve several citywide planning objectives. It would be a highly visible model of Vancouver's commitment to sustainable and livable cities. This project also achieves many objectives of Vancouver's Downtown Transportation Plan. Specifically these design strategies would enhance and expand public transportation choices available to the residents of Vancouver.

CONTEXT

The site, a six block stretch of Quebec Street between 2nd Avenue and Expo Boulevard, is located immediately adjacent to the easternmost banks of False Creek, an arm of the Burrard Inlet, the large waterway that creates Vancouver's northern shoreline. False Creek separates the downtown peninsula from the rest of the City of Vancouver, which sits at the point where the Fraser River empties into the Georgia Strait. Because this area is a protected waterway connecting to open ocean routes, False Creek became the early industrial center for Vancouver. Once flooding to the eastern reaches of False Creek was controlled, many industrial plants and factories located along the shores, taking advantage of the nearby rail-yards. Later, with de-industrialization and the demise of resource extracting industries, waterfront property became desirable and affordable for a new wave of rapidly urbanizing residents who sought out great views and public access to natural landscapes. Developers negotiated with the City to transform False Creek into the highly desirable modern high-rise residential destination it is today.

False Creek offers many amenities to its residents, including the waterfront and seawall, with multiple options for recreation. There are currently places for skateboarding, rollerblading, bicycling, playing field games, running, walking, strolling and others. This area serves as a main outdoor activity center and this element is one of the strongest characteristics defining False Creek's identity. Additional uses include several landmarks from the World's Fair (EXPO '86) such as the Plaza of Nations, Science World, BC Place and the Skytrain. The surrounding neighborhoods include the recently completed North False Creek (Concord Pacific) developments, Chinatown, Mount Pleasant, Strathcona, and the Downtown Eastside. There are also several new neighborhoods and large public spaces being developed which will increase the population of the area. This includes Southeast False Creek for the 2010 Olympics (the city's premier sustainable development project), the False Creek Flats developments (which will redevelop parts of the existing rail yards), and plans for two greenways which will originate near Quebec Street at False Creek (the Carrall Street Greenway and the regional serving Central Valley Greenway).

During the 2010 Olympic Games, Quebec Street will act as a primary connection to downtown Vancouver from the Olympic Village in Southeast False Creek. As athletes, visitors and international media pass through this corridor toward the Olympic Village, improvements to this area will exemplify Vancouver's attractiveness and hospitality as well as strengthen False Creek's lasting image and identity.

Definitions

- **Public Realm:** the non-private space of a municipality, including street rights-of-way, urban landscaping, open spaces, waterways and parks.
- **Street ROW (right-of-way):** the public property that provides access and services to all private land, does not include surrounding public lands.
- **Streetscape:** the physical elements which define a street, such as benches, bollards, and bike racks.
- **Open Space:** city land kept for ornament and recreation, maintained in its natural state as public property.
- **Streetcar:** an electric light rail train which operates on tracks in the roadbed.
- **Charrette:** a collaborative planning and design process including all interested parties to create a plan for community change.
- **Sense of Place:** the idea that a space can possess a specific identity, image or character.
- **Livability:** the essential needs for basic human living, such as safety, health, jobs, justice, and environmental concerns.
- **Sustainability:** a balance of environmental, social and economic responsibility.
- **Sustainable Development:** development that meets the needs of the present without compromising the ability of future generations to meet their own needs.



Design Approach

*from the Urban Design Handbook

1. Find the best things about a place, then protect them and build on them.
2. Find the worst problems and design ways of making them better.
3. Make sure to use the new things to connect the best things in ways that fulfill the dreams of the people we serve.



Figure 1.16: Urban Assembly Kit for Analysis, 2003 **Credits:** Urban Design Handbook

Urban Design Principles

*from the Urban Design Handbook

- Design in a broad-based public process.
- Create neighborhoods diverse in use and population.
- Build communities designed for the pedestrian and transit as well as the car.
- Design cities and towns shaped by physically defined and universally accessible public spaces and community institutions.
- Create urban places framed by architecture and landscape design that celebrate local history, climate, ecology, and building practice.

METHODS

The research and design process undertaken in this public realm improvement project follows the typical techniques utilized by many professional design firms and municipal planning departments. This process is described in The Urban Design Handbook, and is the main inspiration for the process followed in this project. The urban design process typically has three distinct phases and is undertaken by a team of planners, urban designers, and architects with continual input from community members and stakeholders. The three phases are:

- Phase One: Understanding - Figuring Out What's Going On
- Phase Two: Exploring - Trying Out Ideas, Exploring Alternatives
- Phase Three: Deciding What to Do - Developing the Plan

Phase One is where the urban designer establishes a clear understanding of the physical issues of the design. The first step is to meet with the client and specify the scope, goals and expected outcomes of the project. The desired data to be collected is also determined in these initial meetings. Many pieces of the puzzle need to be gathered to help paint the picture of a site's existing conditions. This often includes: base maps (land use, right-of-ways, building footprints, property lines, utility services, natural features, and open space), aerial photographs, zoning ordinances, development plans, demographic data, historical accounts/images, traffic studies, etc. Site photographs (preferably of multiple climate conditions) and on-street measurements are very important for verifying images and data from base maps and documents.

The next step of phase one and often the most time consuming is conducting the site analysis. The main step of this process is to create a set of maps and images which present the existing conditions by isolating main categories of information and highlighting important findings. The goal is to show how streets and spaces are bounded by buildings and structures. It is important to choose relevant topics for analysis based on the needs of the site. Some examples include: regional traffic patterns, residential development patterns, open spaces, land use patterns, street hierarchies, topography, transportation patterns etc. The considerable information contained in the detailed drawings will help build an overall sense of place. This valuable part of the design process is when the existing conditions and contextual relationships of the site are clearly identified. Such a variety of specific information about a site is not often presented in one document, yet is required for the following design phases.

Phase Two is the part of the process devoted to trying out ideas, investigating options, and exploring alternatives. This includes preparing for and conducting both in-house and on-site charrettes. These intense brainstorming workshops produce a preliminary set of urban design principles and initial design recommendations. The goal of this phase is to ensure the design process represents the perceptions and aspirations of the community and all participants.

Phase Three is where the design team takes everything learned from the client, community, and consulting teams to select a single design alternative with the ultimate goal of producing a fully detailed and complete design for the client. A major part of this step includes the development and production of the final presentation materials, reports and documents with the proposed recommendations.

Due to constraints for this academic project, no public participation will be possible and as such, this document will not present a final design. It will instead recommend possible goals and strategies to be considered if a full scale, community driven design process were to take place. Work will be focused on gathering and preparing preliminary information which could be presented to the community and stakeholders for their contribution to the overall process of creating a mutually agreed upon design. Public participation is a critical element to successful neighborhood and community building and cannot be neglected. However, for this project, the reality of personally conducting charrettes, surveys, workshops or focus groups in addition to the research proposed would be too cumbersome and perhaps inappropriate to ask community members to participate in a design project that may never happen.

The initial step of the design process is to meet with the client to select a site and establish the scope of the project. After speaking with Scot Hein from the City of Vancouver and my advisor, Michael Larice on various occasions it was established that this project will focus on improving the public realm along Quebec Street. The site was selected based on a variety of factors including the opportunity for change, need for revitalization and the City's long-term goal to upgrade the transportation options in the area with the extension and modernization of the streetcar line.

Next the desired data about the site will need to be collected in the form of base maps, aerial photographs, city documents, and development plans. This data will be verified by information gained during many site visits where measurements and photographs will be taken of various aspects of the site not represented in the documents and base maps such as heights of structures, light and shadow exposure and different climate conditions. This research will also provide general information needed to conduct the next phases of the design process. This step will include analyzing resources for current theories and practices related to great street design standards, official City of Vancouver policies and proposed development plans in order to inform the creation of a set of design recommendations based on successful street design.

In addition to the site information it will be necessary to conduct specific research into current practices of streetcar design by examining three existing examples of cities who, like Vancouver, are redeveloping streetcar systems as a modern sustainable form of mass transit. This recently popular transportation trend is too new to have a large body of information available and therefore it is necessary to conduct this research to establish the positive and negative experiences of this revived form of rail transit. The goal of this step will be to cull a set of exemplary practices to influence specific design strategies for Quebec Street.

A full analysis of the existing site conditions and context will allow for the creation of a design which responds to specific site requirements and fully realizes the opportunities available while addressing constraints to the design. This section will contain many different layers of information including historical, present and future conditions as well as various aspects of the users, uses and physical structures of the space. This analysis will also contain specific information about the transportation needs along the street and rail right-of-way in order to fully understand the potential transit demand.

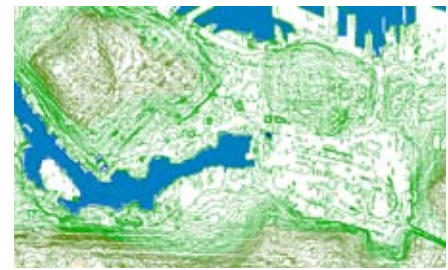


Figure 1.17: Slope Base Map, 2006
Credits: City of Vancouver, VanMap



Figure 1.18: Streets & Blocks, 2006
Credits: City of Vancouver, VanMap

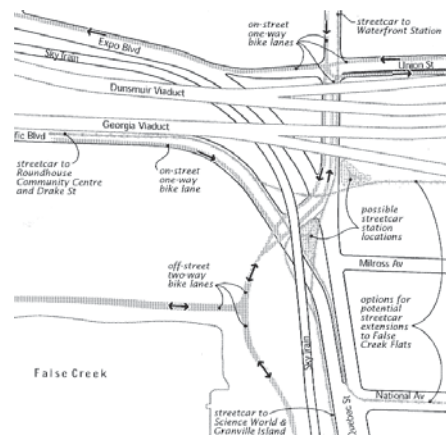


Figure 1.19: Identified Problem Areas, 2002
Credits: Downtown Transportation Plan

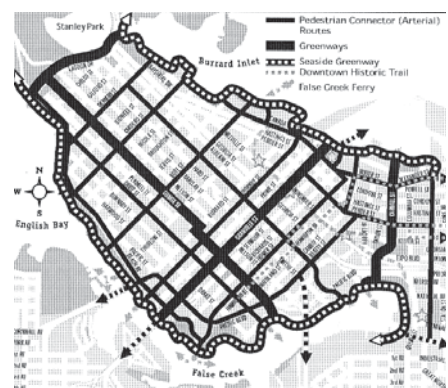


Figure 1.20: Pedestrian Paths & Greenways, 2002
Credits: Downtown Transportation Plan



Figure 1.21: Quebec Street, 2006

Much of the processes and techniques of site analysis come from the ability to experience a space and observe behaviors for clues and hints of how people use the space and even how they might wish to use the space. This observational data collecting comes from spending large amounts of time on the site during different weather conditions and at different times of the day witnessing daily life. It is listening to the sounds of the street and hearing what the physical site is saying. Often times the act of design is simply understanding exactly what a specific space and its inhabitants want it to be. This analysis will be based primarily on my observations of the site, which is informed from my studies, travels and life experiences. The way I see, hear, smell and feel a place is very personal and will most likely be different than other interpretations. However, I believe that overall my analysis will be conducted in a way which will remain objective and impartial to personal biases.

Once the overall opportunities and constraints have been established I will formulate a set of design principles to guide the creation of the specific design recommendations and strategies. These eight different design goals, each supported by two or three specific design strategies, will present an overall design intervention scheme which will address the perceived desires for change and the opportunities and constraints found on Quebec Street. It is intended that these design recommendations (if publicly accepted) could form the basis of a full-scale design plan which would incorporate all aspects of the public realm along Quebec Street.

Urban design is “the design of the city and all its experiential components and qualities. Focusing on the city’s visible parts, urban design considers how buildings and the spaces between them - parks and open spaces, bridges and streets, sidewalks and walkways, historical features, bodies of water, trees and landscaping, lighting and signage, etc. - are integrated and shaped together to create a functional, attractive, memorable, comfortable, animated and safe city.”

City of Vancouver

CHAPTER 2

REFERENCE CASES



Figure 2.1: Portland's Downtown Streetcar, 2002
Credits: Bill Hoffman

One of the main reasons for improving the public realm along Quebec Street is the potential streetcar line extension and upgrades currently being considered by the City of Vancouver. This chapter establishes a set of strategies for the design and layout of a streetcar alignment along Quebec Street based on research from real world transit improvement projects in three North American cities similar to Vancouver. Toronto, Portland and Seattle all have recently approved additions to their streetcar systems and have undertaken different approaches to the design of the streetcar right-of-way, the pedestrian realm, and the transit stations and platforms. These three reference cases represent various ways of designing for modern light rail systems in our city centers. These transit projects are analyzed for lessons on designing successful streetcar streets to best envision design solutions for Quebec Street, which will minimize negative outcomes and maximize the full potential of implementing a streetcar on this corridor.



Figure 2.2: Toronto's King Street Streetcar, 2006
Credits: Sam Javanrouh

Toronto is a much larger city than the others studied and has the most extensive network of streetcars in North America. It is included because it best represents the potential of a truly integrated and established streetcar network. Toronto shows that over time, and with high residential densities, streetcars offer an incredible opportunity to maximize transit potential. A key finding from Toronto indicates that streetcars have become a viable and popular public transit option with streetcar service generating more ridership than equivalent bus service generated in the same corridor. Streetcar projects offer greater public realm improvement opportunities, like safer and more comfortable transit shelters and platforms. Toronto realizes changes made now will represent at least 30 years of service, therefore quality of design is a primary concern for transit improvement projects.



Figure 2.3: Seattle's Waterfront Streetcar, 1999
Credits: Mark Kavanagh

Toronto operates several streetcar lines in a dedicated right-of-way down major arterial streets and believes it is worth the minor traffic inconvenience to improve transit efficiency and reliability. An exclusive right-of-way may not always be appropriate. Portland has experienced great success with its mixed traffic rights-of-way. Perhaps this is because most of Portland's existing and planned streetcar routes operate on one-way couplets with only one set of tracks on each street, minimizing auto/rail conflicts and allowing normal curbside parking and loading. Seattle has modeled its streetcar rights-of-way after Portland; however its new line runs down a major street with streetcars travelling in both directions, potentially causing congestion and slower streetcar service compared to Portland.

Portland and Seattle follow similar paths with their proposed streetcar lines in other ways as well. Both cities cite the economic benefits from increased development potential as a main reason for establishing a streetcar line in a neighborhood. In addition, both systems use the same lightweight, modern streetcar vehicles which require lower construction and operating costs. However, it seems Portland is placing more importance on creating livable neighborhoods through good transit, while Seattle may be attempting to force an economically driven idea which may not be appropriate in this area. If cities choose to develop their streetcar networks, stations and platforms with no other changes, the opportunity to use the transit project to carry out street-wide public realm improvements will be lost.

These three cities offer Vancouver many lessons on how streetcar lines can bring benefits by creating stronger communities and more sustainable cities. The City of Vancouver and volunteers from the Transit Museum Society are currently operating two restored interurban streetcars between Science World and Granville Island with the intention of eventually creating a modern downtown streetcar network. In 2004, Vancouver City Council approved proceeding with plans for the Downtown Streetcar, which includes creating a more detailed layout plan for track location and operation. The first phase of this network includes a proposed streetcar alignment extending existing service along a portion of Quebec Street included in this project. Applying lessons learned from similar projects taking place in other cities would enable Vancouver to effectively plan ahead for future transit infrastructure improvements, achieving a coherent vision.



Figure 2.4: Vancouver's Downtown Historic Railway, 1999 **Credits:** Transit Museum Society

Vancouver's Downtown Historic Railway

- Operated by the City of Vancouver and the Transit Museum Society
- 3.9 kilometers of track
- Operating since 1998
- Runs on weekends and holidays only
- Plans to modernize line and extend service to Waterfront Station and Stanley Park

KEY FINDINGS FROM REFERENCE CASES TO BE APPLIED TO THE DESIGN OF QUEBEC STREET

- Exclusive streetcar right-of-ways provide greater streetcar efficiency, this helps reduce car dependency and makes transit more competitive. (Toronto)
- Streetcars can also operate in mixed traffic lanes without removing on-street parking and loading capabilities. (Portland & Seattle)
- Transit improvements provide a greater opportunity for wider public realm improvements along the corridor. (T)
- Transit shelters should be designed with adequate space and amenities to maximize comfort and safety for all users. (T)
- Streetcars are easily integrated into densely developed, pedestrian-oriented, urban neighborhoods. (S)
- Utilize undesirable space for streetcar functions by placing uses like the streetcar maintenance facility under a highway overpass. (P)
- Infrastructure investments can be minimized by choosing lighter, modern streetcar vehicles which require lower construction and operating costs. (P & S)
- There is a serious need for local transit mode diversity and this should be realized. (P)
- Streetcars, which are perceived to be more permanent and reliable, attract more riders to transit than a similar bus line. (T)
- The stable nature of streetcars attracts private investment, both in funding the initial streetcar construction and also in greater investments to the surrounding neighborhood. (P & S)



TORONTO

ST. CLAIR AVENUE WEST TRANSIT IMPROVEMENT PROJECT

512 St. Clair Ave. Line

- Operated by the Toronto Transit Commission (TTC)
- 6.7 kilometers of track
- 32,000 riders per day
- Operating since 1913
- 4th busiest streetcar in system
- Connects several residential and commercial districts with the greater Toronto transit system



Figure 2.5: St. Clair Streetcar, September, 1938
Credits: City of Toronto

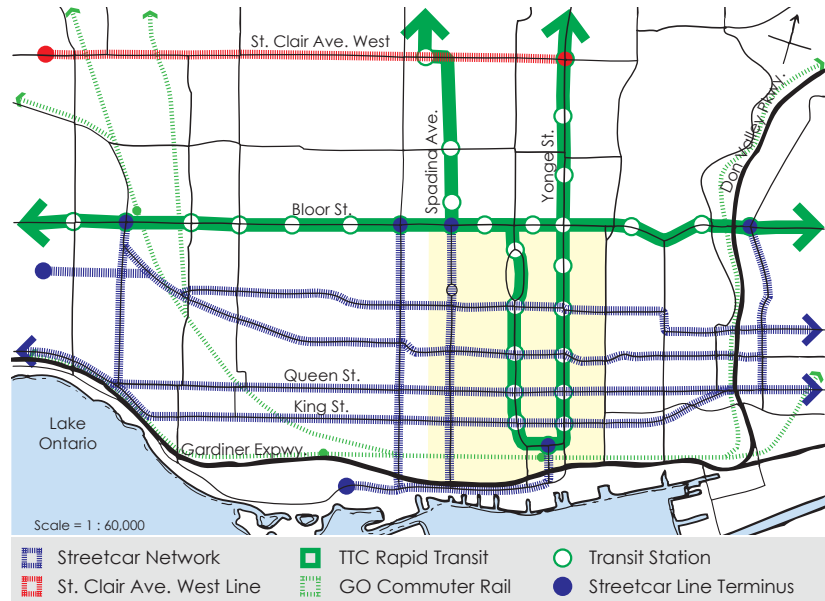


Figure 2.7: Map of Toronto Streetcar System and Connection to Transit

Existing Conditions

- Old tracks and trackbed are in disrepair.
- Streetcar operates in mixed traffic lanes causing delayed and unreliable service.
- Inadequate space and amenities at transit shelters.
- Ambiguous roadways create vehicle/pedestrian conflicts.
- Sidewalk quality and appearance is poor.
- Crosswalks are undefined.
- Landscaping is unmaintained (empty planters, dead trees).



Figure 2.6: Existing Conditions on St. Clair Avenue West, 2004
Credits: City of Toronto

St. Clair Avenue West has been a streetcar street since the early 1900's when its construction encouraged residential and commercial development along the avenue. The St. Clair Line has always been an integral part of the vibrant character found in the neighborhoods there today. Spared the fate of many abandoned streetcar lines in cities all around North America, the service carries about 32,000 passengers a day, ranks second among TTC streetcar routes in terms of passengers per route kilometer, and ranks fourth in passengers per vehicle hour. St. Clair Avenue is also a major arterial roadway with traffic volumes near 30,000 vehicles per day. Roughly half of all passenger trips on St. Clair are made by streetcar. Although St. Clair is the only line not directly connected to the rest of Toronto's streetcar system, many passengers connect directly to the subway lines at Yonge Street and Spadina Avenue.

After years of service the streetcar tracks on St. Clair Avenue West were in poor condition and needed to be replaced. This provided the opportunity to significantly improve not only the streetcar right-of-way and the passenger platforms, but also the entire pedestrian realm and street corridor. Since the track replacement is expected to last up to 30 years and represents an investment of over \$22 million in transit infrastructure, the City of Toronto and the TTC worked hard to ensure community involvement in the design for a long term solution. In addition to establishing community consultation groups to foster public support, a thorough Class Environmental Assessment evaluating the costs and benefits of several design alternatives was also conducted.

St. Clair Avenue West was the first major transit priority project to be approved by Council under the revised City of Toronto Official Plan, which, similar to Vancouver policy, advocates reducing car dependency and increasing the quality and quantity of transit service to make it a more competitive alternative to the private automobile. However, several residents and business owners (unhappy with the proposed segregated right-of-way) created a group which legally challenged the project, claiming the loss of parking and increased auto traffic would be detrimental to businesses along the corridor. The city argued that a transit only right-of-way helps to: increase transit frequency and reliability; eliminate delays from traffic congestion, accidents, and left turns; reduce overcrowding and waiting times; and encourage streetcar use over auto use leading to greater long-term sustainability. The group lost its legal battle and work has resumed with expected completion near the end of 2006.

The preferred design concept addresses the primary issue of streetcar reliability and management of vehicle/streetcar conflicts. It also provides the opportunity to establish a high level of urban design to the St. Clair West Corridor. The design includes:

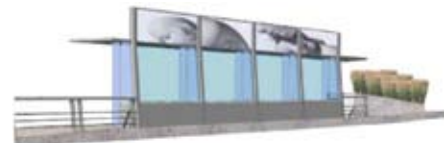
- Two center lanes reserved for exclusive use by streetcars (and emergency vehicles) protected by a mountable trackbed.
- Two general purpose traffic lanes in each direction, retaining existing traffic capacity.
- On street parking provided where possible with no overall loss of parking spaces along the corridor and minimized effect on loading and deliveries to businesses.
- 26 new transit shelters along with increased platform width that will provide adequate space for all transit users and provide a higher degree of comfort, weather protection and safety.
- Locating transit stops at the far side of intersections and allowing signal priority for streetcars to improve transit efficiency.
- Integrating public art into the transit shelters providing each area with a unique character.
- Enhancements to the pedestrian realm and reconstruction of sidewalks will provide the opportunity to replace damaged or dying trees and establish adequate infrastructure for healthy and vibrant tree growth (including trench tree pits, decorative tree grates, high quality soil, and irrigation).
- Public seating, which enhances the comfort of pedestrians and is conducive to social public gathering.



Figure 2.8: Perspective View of St. Clair Avenue West Transit Improvements, 2004
Credits: City of Toronto



Figure 2.9: Cross Section of St. Clair Avenue West Transit Improvements, 2004
Credits: City of Toronto



Figures 2.10 & 2.11: New Shelter Design: St. Clair Avenue West Transit Improvements, 2004
Credits: City of Toronto

KEY FINDINGS FOR QUEBEC STREET (TORONTO)

- Exclusive streetcar rights-of-way help reduce car dependency and make transit more competitive.
- Transit shelters should be designed with adequate space and amenities to maximize comfort and safety for all users.
- Transit improvements provide a great opportunity for wider public realm improvements along the corridor.



PORTLAND

EASTSIDE TRANSIT ALTERNATIVES PROJECT

Portland Streetcar

- Operated by Tri-County Metropolitan Transportation District of Oregon (TriMet)
- 9.6 kilometers of track
- 7,800 riders per day
- Operating since July, 2001
- First modern streetcar system in North America
- Plans for Eastside Loop along MLK Jr. Blvd. and Grand Ave.



Figure 2.12: Portland Streetcar in Residential Neighborhood, 2006 **Credits:** Peter Ehrlich



Figure 2.13: Portland Streetcar in Portland State Neighborhood, 2006 **Credits:** Peter Ehrlich



Figure 2.14: Portland Streetcar Barn under I-405 Viaducts, 2006 **Credits:** Peter Ehrlich

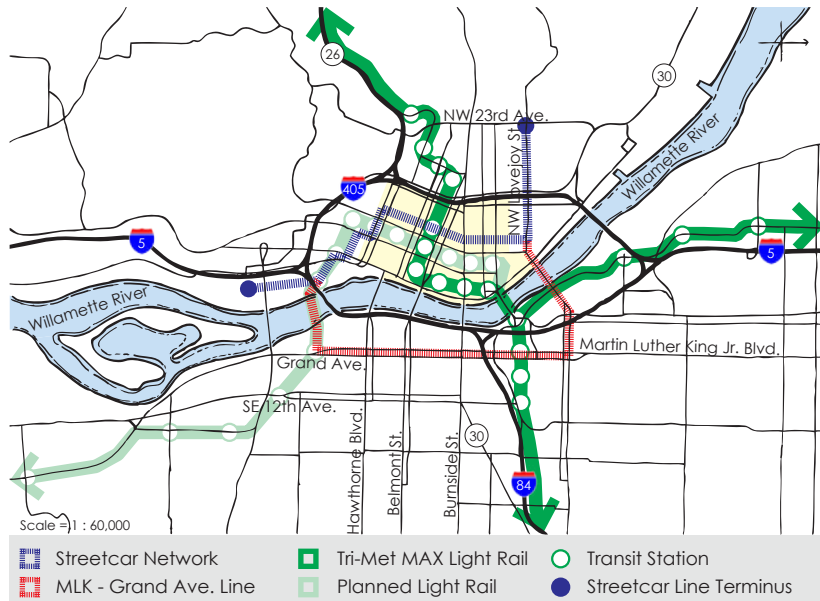


Figure 2.15: Map of Portland Streetcar System and Connection to Transit

The Portland Streetcar System is owned and operated by Portland's regional transportation authority, the Tri-County Metropolitan Transportation District of Oregon (TriMet) with the oversight of the non-profit Portland Streetcar Company. Streetcar operation and construction are funded by fares, an annual contribution from TriMet, a special taxation zone along the route, car and station sponsorship, and parking meter revenues. The special taxation district was created by business owners along the route whom actually volunteered and petitioned to be taxed. The Portland Streetcar has been a powerful development catalyst for the Pearl District and Downtown's West End. The quantity and quality of development realized in these areas would not have been possible without public transit infrastructure investments, this shows a direct link between the presence of the streetcar and the willingness of private developers to invest in these areas.

The Portland Streetcar was designed to fit the scale and traffic patterns of the neighborhoods through which it travels. Streetcars run almost entirely along paved tracks in mixed traffic on city streets and, except at platform stops, accommodate existing curbside parking and loading. A unique, shallow 12 inch deep track slab design reduces the construction time and utility relocations. Maneuverability of the shorter and narrower Skoda vehicles has allowed the 8 foot wide track slab to be fitted to existing grades, limiting the scope of street and sidewalk reconstruction. Although public realm improvements are not directly included with this type of transit project, good street design is crucial for success.

One interesting design solution is the use of the space underneath Interstate 405 between Northrup and Lovejoy Streets as the Portland Streetcar's operation and maintenance facility. The maintenance building's bays allow work to be done on two vehicles simultaneously with complete access to both the undercarriage and roof areas. The building houses management offices on the second floor.

Portland has identified a need for an additional streetcar line. The central city is served by many transit lines that radiate from downtown but there are few opportunities to circulate easily between the districts of the Central City. This need was documented in 1988 when the city of Portland published the Central City Plan, noting that an inner city transit loop is essential to improving the vitality and attractiveness of Portland's central eastside.

The Eastside Transit Alternatives Analysis analyzed potential transit alternatives to improve circulation between the Eastside, Lloyd, Pearl, Downtown and South Waterfront districts that make up the Central City. On July 20, 2006 after hearing public testimony and further discussion and deliberations, the Metro Council approved a Locally Preferred Alternative for the Eastside Transit Alternatives Analysis. The Metro Council approval follows a unanimous recommendation by the community-based Project Advisory Committee and unanimous approval from the other project partners: Portland Streetcar Board of Directors, TriMet, City of Portland Planning Commission, Portland Development Commission, Multnomah County and the Portland City Council. Community members look forward to a new transit option and the bike and pedestrian improvements that are expected to accompany it.

As the project proceeds to environmental analysis, the Metro Council added several considerations to require coordination with ongoing planning efforts, continued work on user benefit measures, capital costs, funding and operating revenue sources as well as refinement of traffic and streetcar operations. Although no federal funds were directly used in past Portland Streetcar projects, future projects, such as this, may be able to obtain direct federal funding. There are efforts in the US Congress to create federal matching fund programs for small-scale rail systems like the Portland Streetcar.

The alternative would extend the Portland streetcar from NW 10th Avenue and Lovejoy Street in the Pearl District, across the Broadway Bridge and south along the Martin Luther King Jr. Blvd./Grand Avenue couplet, initially terminating at the Oregon Museum of Science and Industry. The ultimate goal is to create a loop back across the Willamette River to the Westside near River Place. This connection will help to create a strong transit oriented loop connecting all of the districts in the Central City. Design options have not been finalized, yet it seems design will be similar to that of the existing streetcar line.

Need for Eastside Streetcar

- Central City growth requires better internal circulation and transit access.
- Private development may be leveraged through public transit infrastructure.
- Transit providing circulation between the east and west sides of Central City would reduce the peak burden on light rail and bus lines.



Figure 2.16: Streetcar in Downtown Portland with Station and Parking, 2004
Credits: Peter Ehrlich



Figure 2.17: Drawing of Skoda Streetcar, 2003
Credits: Portland Streetcar Company

Goals for Eastside Streetcar

- Reduce reliance on the automobile for trips to and within the Central City.
- Improve transit circulation, capacity, connectivity and local access.
- Support existing and future streetcar and light rail investments in the region.
- Fit streetcar to the scale and traffic patterns of existing neighborhoods.

KEY FINDINGS FOR QUEBEC STREET (PORTLAND)

- Streetcars can operate in mixed traffic lanes without removing on street parking and loading.
- Infrastructure investments can be minimized by choosing lighter, modern streetcar vehicles.
- There is a serious need for local transit mode alternatives and these should be realized.
- Utilize unconventional industrial spaces for streetcar functions by locating the Streetcar Barn under a highway overpass.



SEATTLE

SOUTH LAKE UNION STREETCAR PROJECT

Seattle Streetcar

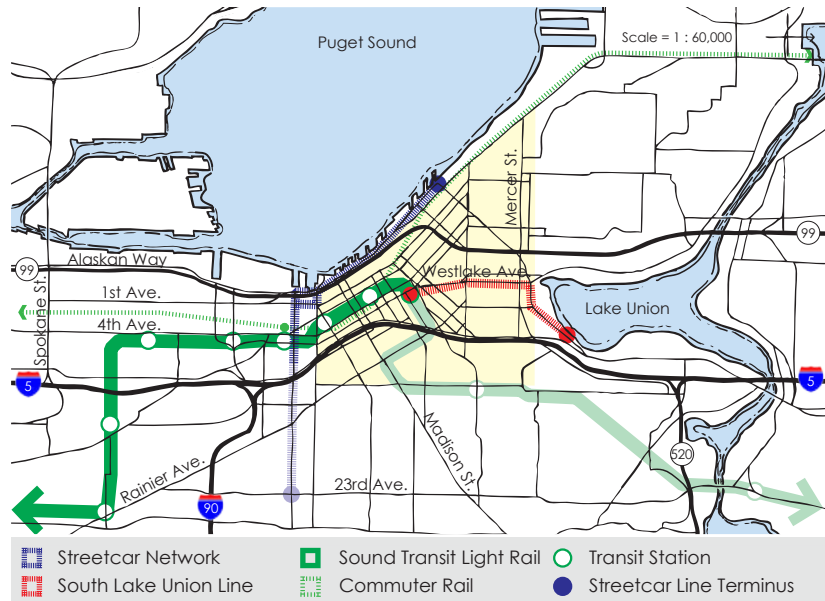
- Operated by Metro Transit of King County
- 2.6 kilometers of track
- 1,200 riders per day
- Operating since 1982
- Connects to light rail, regional buses and monorail
- Construction is underway for South Lake Union Line connecting at Westlake Ave.



Figures 2.18 & 2.19: Before and After Images of South Lake Union Transit Improvements, 2006
Credits: Seattle Department of Transportation

Streetcar Goals

- Provide local transit (connect people to jobs, housing, the new waterfront park, and downtown retail core).
- Connect streetcar to the regional transit system.
- Encourage economic development.
- Help create vibrant neighborhoods.



Modeled after the success of Portland's system, Seattle is aiming to instigate urban redevelopment through the implementation of the streetcar into the South Lake Union neighborhood. Currently redevelopment of the entire area is underway; the streetcar line is one of many improvements in preparation for what is anticipated as major residential and commercial growth. This line will provide local transit service, connect to the regional transit system, accommodate economic development, and contribute to neighborhood vitality. Some elected leaders are hoping streetcars will eventually spread to the Chinatown International District, First Hill, and the University of Washington. By Seattle standards, the project was politically easy to launch, with landowners near the tracks paying half of the estimated \$47.5 million cost through a neighborhood property tax. For Seattle, the streetcar primarily represents economic opportunity and development potential.

Several concerns have been raised about the appropriateness of this new line in relation to Seattle's greater transportation needs. Although most of the planning and preparation has been undertaken by the City of Seattle's Department of Transportation once the line is complete they will hand over operation to Metro Transit which currently operates the Waterfront Streetcar Line and Seattle's bus system, but no other rail projects. Both the light rail and the commuter rail are operated by Sound Transit, which currently is not involved in the streetcar project. This lack of participation of all stakeholders in the planning process seems to be a major problem, for this project and in Seattle transportation planning in general, as indicated by the lack of a single cohesive transit system.

Construction for the new streetcar line began on July 7, 2006. Using the typical construction method for the streetcar track system, the top 12 to 18 inches of pavement will be removed and replaced with rail-embedded reinforced concrete slabs within a trench approximately 8 feet wide. This project will also involve upgrading the stormwater detention system, relocation of utilities, and installation of power substations. A 100 x 70 feet maintenance facility is also planned as part of this project. Preliminary renderings show the facility and how it may conflict with surrounding uses including general traffic patterns.

The project calls for only minimal public realm improvements, which are focused primarily on the area of the passenger-boarding platform. A typical platform will include a canopy for weather protection, a trash receptacle, an information pylon and landscaping in the form of planters or street trees. Special pavement treatment will be used to differentiate where to expect streetcars on the street. Not only are the planners not taking advantage of the opportunity to conduct streetwide improvements but they are also reducing the design of the transit shelters and platforms to minimal requirements. A shelter with only a 112 square feet coverage and no walls does not seem appropriate for weather protection in one of the rainiest environments. There are also no seating options for travelers; leaving much regarding rider comfort and safety to be desired. This underscores that the main goal for the Seattle streetcar appears to be land development and not improvement to transit networks, community enhancement or public realm improvements.

Seattle is following Portland's example and integrating the streetcar into mixed traffic lanes instead of establishing an exclusive right-of-way like Toronto. Seattle argues that streetcars are able to operate with other vehicles with less disruption to on-street parking. However, unlike Portland, the streetcar will run in two directions on one street increasing potential for streetcar/automobile conflicts and reducing transit reliability and efficiency. "You could practically walk the entire route more quickly than it will take to get from one end of the route to another," said opponent John Fox, coordinator of the Seattle Displacement Coalition, who believes South Lake Union development is pushing out affordable apartments and small businesses. Mayor Nickels is satisfied mixing trains with auto traffic, as in Portland, saying, "It's much quicker to build, much less disruption to the surrounding community, and obviously it's much less expensive as well."

One of only two opposing votes for the project, City Council member, Peter Steinbrueck said he is concerned about potential risks. He worries that the cost will be higher than expected and that it will use general fund money that could be put toward sidewalks, bike paths and other basic street improvements in the neighborhood, which are needed. "I love streetcars," Steinbrueck said. "But in this case, it is a luxury. I am not sure that we have seen the final price tag."



Figure 2.21: Proposed Maintenance Facility, 2006. **Credits:** Seattle Department of Transportation



Figure 2.22: Cross Section of Proposed Center Lane Transit Platform, 2006 **Credits:** Seattle Department of Transportation



Figure 2.23: Plan of Proposed Parking Lane Transit Platform, 2006 **Credits:** Seattle Department of Transportation

Design Solutions

- Operate streetcars within existing right-of-way.
- Maintain existing on-street parking.
- Load passengers from bulb-out stations within the parking lane at far side of intersection.
- Raise curb to 10" at center of station for wheelchair access.
- Update stormwater detention system.

KEY FINDINGS FOR QUEBEC STREET (SEATTLE)

- Streetcars are easily integrated into densely developed, pedestrian-oriented, urban neighborhoods.
- Streetcars attract private investors who can be valuable contributors and will benefit in return as development potential is realized.
- Streetcars attract more riders to transit than a similar bus line.
- Streetcar construction and operation is low impact with minimal disruption.

CHAPTER 3



SITE ANALYSIS



Figure 3.1: Regional Context, Vancouver and Its Neighbors

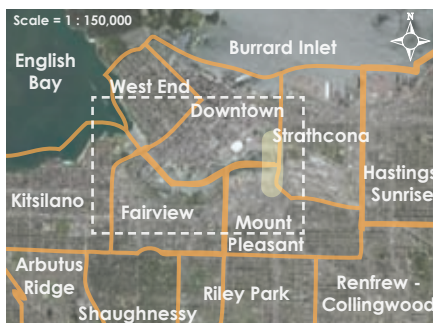


Figure 3.2: Quebec Street Site Context, Near By Neighborhoods



Figure 3.3: False Creek Context, Major Connections and Seawall

This chapter introduces the Quebec Street site, establishes its location and orientation in Vancouver, explores its historical context, presents its existing conditions, and imagines the site in the near future when current construction is complete. The goal is to present an analysis process which examines the site through the use of a set of maps and images defining the various strengths and weaknesses of Quebec Street. When taken together with all the other information presented, an image of this place will be created. The chapter ends with an overall summary of the main opportunities and constraints to the successful design of an improved public realm along Quebec Street.

The site is located at Quebec Street between 2nd Avenue and Expo Boulevard including the area immediately surrounding the street corridor (highlighted in yellow in the context maps to the left). The site rests at the far east side of False Creek and provides the visual terminus for several view corridors across the waterway. Along with Main Street, Quebec Street runs north-south and lies between False Creek and the False Creek Flats rail yards (both areas act as large breaks in the street pattern). This means the site is critical for regional movements. In addition the site is locally isolated, and residents of the area often travel to other parts of the city for goods and services.

The study area is oriented at a major transition zone in Vancouver and serves as a fourth bridge, connecting the Downtown Peninsula to areas south of False Creek. Quebec Street acts as an important link in the greater urban fabric and street network, ensuring efficient movement to and around False Creek. A secondary link is provided by the public seawall, which circles False Creek, extending in one direction to Kitsilano and in the other to Stanley Park. This provides citywide pedestrian and bicycle circulation and connects nearby areas with many public amenities located along the seawall and waterfront. The site also connects several neighborhoods, including Chinatown, Strathcona, Downtown and Mount Pleasant. At the juncture of these distinct and segregated neighborhoods, the area currently lacks a clear identity of its own.

The Quebec Street site lends itself well to a public realm improvement study, and was chosen because it represents a typical design process. Specifically, the site was identified as an area of the city which is slated for change. There is a great opportunity to create a special place here. There is major development happening all around the site, bringing many new residents to the area. There are also intensive

preparations and development plans for the 2010 Olympic Games, which will attract countless numbers of visitors and media outlets. In addition, the street corridor has been identified as the location for the new, modern streetcar line which is planned to connect Granville Island to Waterfront Station and eventually continue to Stanley Park, creating a stronger transportation network.

In addition, Quebec Street has the potential to fulfill the 1928 Bartholomew Plan's vision of creating a unified parkway around False Creek by connecting Pacific Boulevard to the north and 2nd Avenue to the south. Both major arterials have proposals for public realm improvements and are envisioned as grand, tree-lined boulevards, that will complement the impressive public seawall and string of parks along the waterfront. This important recreation zone would be greatly enhanced by these improvements and would strengthen False Creek's highly identifiable sense of place.

The redesign of Quebec Street imagined in this improvement project offers a great opportunity to solidify the image and character of False Creek and the City of Vancouver. As during Expo '86, the world's attention will soon be temporarily focused on Vancouver and its accomplishments. Ensuring a legacy of success to the future of the city will rely on what image is presented to the world at the Olympic Games. This image will either solidify Vancouver's claim as the most livable city in the world or create an unrealized dream by failing to live up to its potential and promise. False Creek was a major player in the historical development of the city and region. It is currently a vibrant hub of activity with opportunities and constraints. The future will bring dynamic change to an area situated amongst some of the most active and intense waterfront redevelopment in the world.



Figure 3.4: Aerial Photo of Quebec Street & False Creek, 2006 **Credits:** Waite Air Photo



Figure 3.5: City Gate & False Creek, 2006 **Credits:** Les Twarog



Figure 3.6: SkyTrain, City Gate & False Creek, 2006 **Credits:** Maurice Jassak

MAIN OPPORTUNITIES AND CONSTRAINTS FOR THE DESIGN OF QUEBEC STREET

Opportunities

- Integrate New Residential Developments
- Create False Creek Ring Road Connecting Pacific to 2nd Ave.
- Expand False Creek Open Space Network
- Emphasize Important Landmarks
- Increase Transit Connections
- Extend Existing Streetcar Network
- Realize Potential with Southeast False Creek Developments

Constraints

- Placelessness: Lack of Character and Identity
- Negative Impact of Overhead Viaducts
- Lack of Clear Connections at Intersections
- Negative Impact of Parking Lot Adjacent to Street
- General Site Isolation
- Congested Intersection
- Large Blocks Incompatible with Residential Land Uses
- Diminished Right-Of-Way

SITE HISTORY

THE STORY OF QUEBEC STREET



Figure 3.7: Former Extent of False Creek in 1898,
Credits: Sean Sebastian Smith, 1995



Figure 3.8: Concrete stacks of the
Vancouver Steam Plant, 1914
Credits: City of Vancouver Archives



Figure 3.9: Leamy and Kyle Sawmill, 1890,
Credits: City of Vancouver Archives

Before European settlers transformed Vancouver, False Creek was an estuarine wetland home to several thriving Coast Salish communities, who survived off the richness of life on the land and in the water for hundreds of years. The City of Vancouver's historical account tells of local elders who like to say "that when the tide was out, the table was set." However, much of this way of life was limited when, in 1839, the Kitsilano reserve was created, only to be acquired by the provincial government years later. Along the dramatically altered coast of False Creek little remains today of the experience of life for these people, who once called this land home.

At the start of the 20th Century when the city was just beginning to develop, most of the Quebec Street site was part of the False Creek tidal flats, a vast area of low lying mud flats, which filled with water with the rising tides. Over time, industrial uses began to slowly reshape the shoreline as sawmills, foundries, ship yards and rail yards slowly reclaimed land from False Creek. In the 1910's a concrete factory and steam power plant located on the northern portion of the site provided materials and electricity for the construction of the original Georgia Street viaducts which spanned part of the former extent of False Creek. This battle to dominate and control False Creek's wild nature has seen many major interventions. Around 1917 work began on constructing a seawall to restrict the waters of False Creek to the west side of Main Street. After which the False Creek Flats were filled in to provide space for a new rail yard and terminal buildings for the Canadian Northern Pacific and the Great Northern Railways.

This area was once serviced by several streetcar lines which connected downtown with new suburban developments and outlying towns. Starting in 1887 with the creation of the British Columbia Electric Railway and, as shown here during the 1920's, the streetcar that ran down what is today Quebec Street, followed a causeway across the tidal flats to service the Mount Pleasant area. However, in the 1950's the streetcars were converted to trolley buses.

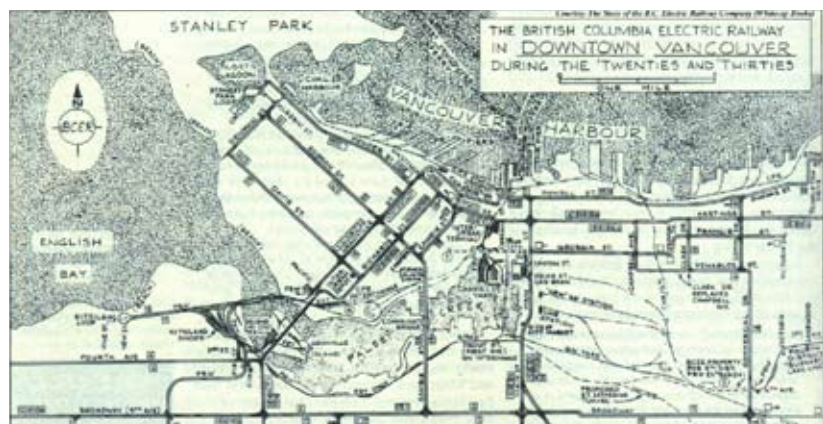


Figure 3.10: Vancouver Streetcar System 1920's **Credits:** British Columbia Electric Railway



Figure 3.11: Map of False Creek during Expo '86 **Credits:** Bobbea.com

False Creek continued as home to a changing industrial base for Vancouver until the late 1950's when the area experienced an economic decline. New industries were not moving in, while old industries were fading away, leaving the area empty and contaminated with the pollution of years of heavy use on the shores and in the water. During the 1970's portions of south False Creek began to redevelop into residential oriented uses, cleaning up the waterway and starting the foundation for the recreational seawall. The Georgia Viaduct was replaced with the new Georgia Street and Dunsmuir Street Viaducts which were originally envisioned as part of a grand freeway system which, had it been constructed, would have further isolated eastern Vancouver.

Recent history starts when Vancouver hosted the 1986 World's Fair. What had remained of the many industries and rail yards on False Creek's north shore moved out permanently for the temporary structures to be built for Expo '86, which lasted 6 months and hosted over 22 million visitors. In addition to regularizing False Creek's shoreline, some of the temporary structures have remained and are now a permanent legacy of the Fair. One of these buildings is the iconic Science World, Quebec Street's most recognizable landmark.

The Fair also helped to spark Vancouver's recent 20 year construction and development boom. After Expo closed, the lands were sold by former BC Premier Bill VanderZalm to Hong Kong billionaire, Li Ka-shing, without properly consulting the City of Vancouver in the process. However controversial the land deal was, the city Planning Department was able to work with the developers, Concord Pacific, to ensure that the development was a successful example of community planning and urban design. False Creek North is one of the largest urban redevelopment projects in North America and has created a diversity of new urban experiences. This major redevelopment of a large section of continuous city lands has changed Vancouver's skyline and established its waterfront as a vital and cherished public realm providing a variety recreational opportunities to its residents.

Quebec Street Time Line

- 1913-1915: Original Georgia Street Viaducts constructed.
- 1917: Seawall constructed to contain False Creek.
- 1918: False Creek Flats filled; CNR and CNPR stations and rail yards constructed.
- 1962: BC Electric Railway Company sold to Province; streetcar system terminated.
- 1972: Georgia & Dunsmuir Viaducts constructed.
- 1986: Expo '86 transforms North and East False Creek; Skytrain opens.
- 1994: City Gate development begins.



Figure 3.12: City Gate Under Construction, 2005 **Credits:** Maurice Jassak

QUEBEC STREET TODAY

EXISTING CONDITIONS

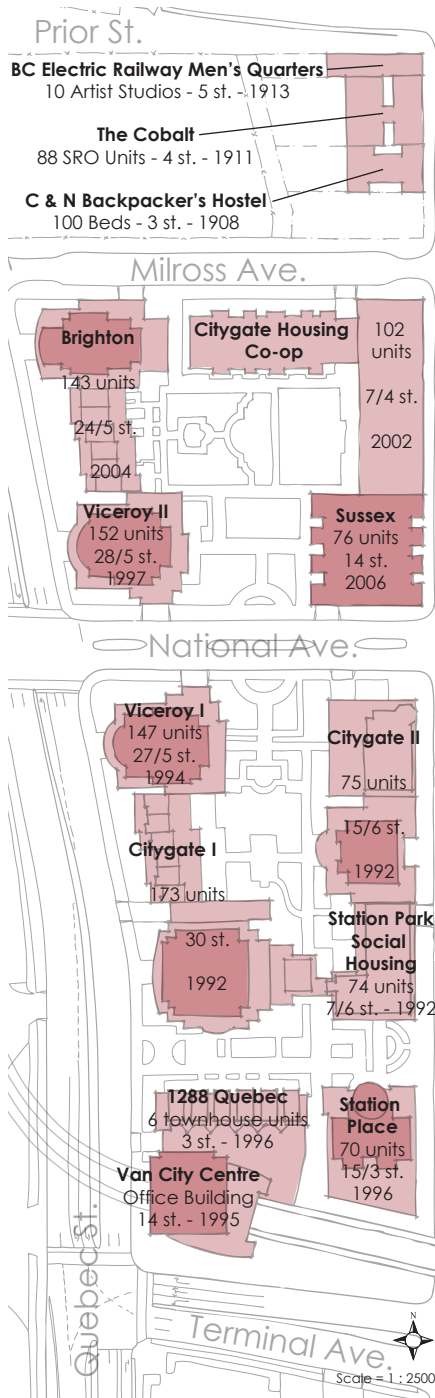


Figure 3.13: Residential Developments on Quebec Street, Names, Heights, Units, Dates

Quebec Street today is a part of Vancouver where many people live, yet lacks a clearly identifiable sense of place. The developments of City Gate brought an entirely new population as well as an entirely new urban form to this area. For this site, the development has been primarily high-density residential buildings limited to a three block section along the east side of Quebec Street. Along with the lower and mid-rise buildings, these developments house 1000 units and 1500 residents with 20% of the units designated as non-market. There is a mix of housing types with primarily one, two, and three bedroom condominiums and townhomes, creating a diversity of households. Currently, this area lacks a strong and vibrant commercial core, there are only a few small corner stores and chain coffee stores to serve this growing neighborhood. Many residents must leave the area to go shopping and access services.

The physical shape and design of the space as one experiences it on a human scale, is not cohesive. The street feels vast and expansive. The towers of City Gate with the dome of Science World, form an iconic yet fragmented image of East False Creek, framing only one side of the street. City Gate has created a great public realm, but it only extends within the development. There are many amenities, beautiful parks, and access to the water, yet this area is strangled by a continuous ring of pavement. There are cars everywhere, in parking lots and on the roadways, which carry large volumes of automobile traffic, yet this is also one of Vancouver's most active public transit hubs with many options for local and regional transportation. These contrasting conditions define Quebec Street.

In general, what seems to be missing from all the new "tower in the park" neighborhoods, is any real connection between the residents and the sense of place as a whole. Taken out of context, the buildings (which strongly define the space) are generic. They are in no way distinctly recognizable as belonging to or representing either Vancouver or False Creek, both of which are richly saturated in an identifiably strong experience of character and place.

Overall, only minimal public realm improvements have been made along the portions of Quebec Street which have not experienced recent development. Quebec Street has many celebrated destinations, which are important to the entire city and present a great opportunity to be highlighted as a source of inspiration for future public realm improvements. This place needs an over-arching vision to unify and solidify a strong public image. This vision should come from the people who live and pass through this space everyday. There are many people who would not only benefit from area improvements, but would also be interested in contributing to the process. Quebec Street today is defined by the people who use this space, the place as it physically exists, and the things, structures and landmarks which provide identity and character. A redesign of this corridor should account for all positive and negative qualities, creating a plan which solidifies Quebec Street as a truly unique and special place.

10,000 WORDS



Figure 3.14: City Gate and Science World Across Parking Lot



Figure 3.15: Skytrain Over Intersection At Quebec St. and Pacific Blvd.



Figure 3.16: Parking Lot Separating Quebec Street and Creekside Park



Figure 3.17: Science World & False Creek Concord Pacific In Background



Figure 3.18: Quebec Street, Vacant Lot and Streetcar Station

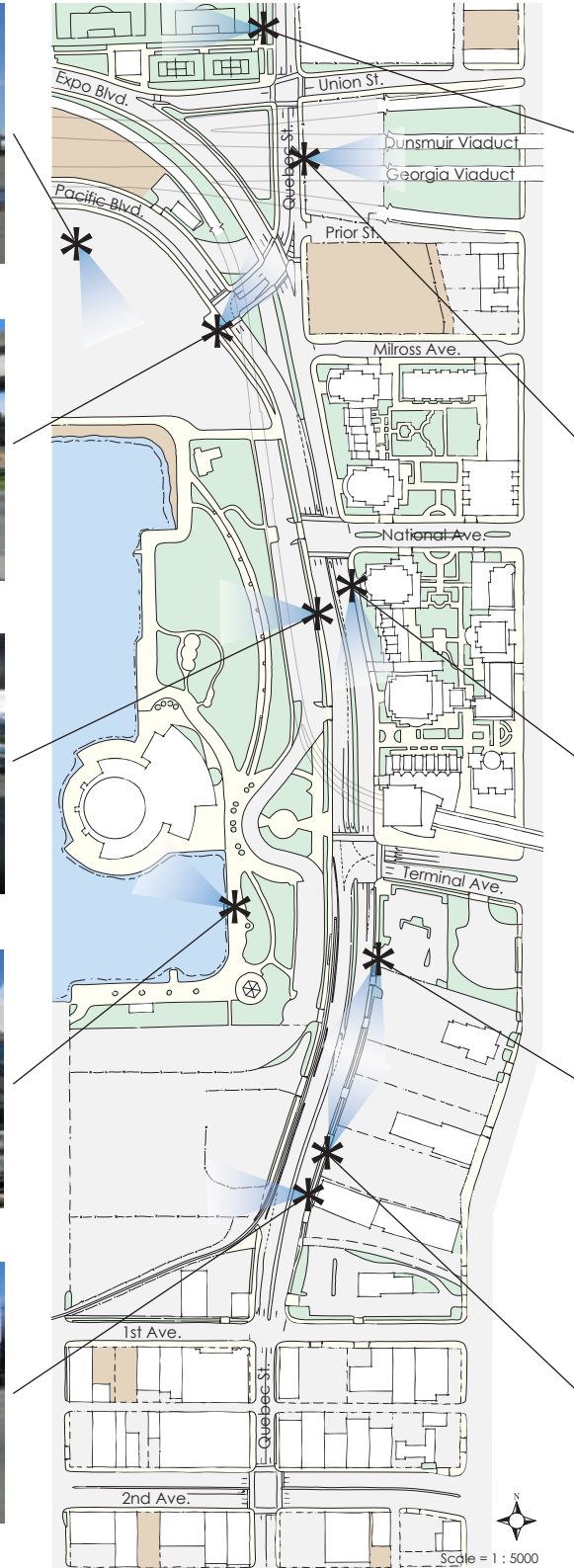


Figure 3.19: New Neighbors, Construction Beyond Park



Figure 3.20: Under the Viaducts, Vehicle Storage in Vacant Lot



Figure 3.21: Sidewalk Treatment Along City Gate



Figure 3.22: East Side Sidewalk Looking South to Mt. Pleasant



Figure 3.23: East Side Sidewalk Next to Auto Dealership Looking at City Gate



CITY-WIDE ANALYSIS

QUEBEC STREET IS A KEY LINK IN VANCOUVER'S REGIONAL NETWORK

Major Transit Connections Near Quebec Street

- Main Street SkyTrain Station (Millennium & Expo Lines)
- Pacific Central Station (VIA Rail, Amtrak, & Greyhound)
- Bus Routes (#3 Main, #8 Fraser, & #19 Metrotown)
- Downtown Historic Railway Terminus at Science World
- Aquabus Science World Stop (False Creek Ferry)
- Adanac & Ontario Bike Routes
- Seawall (Bikes & Pedestrians)
- Regional Arterials (Main St. & Georgia/Dunsmuir Viaducts)
- Secondary Arterials (Quebec St., Terminal Ave., 2nd Ave., Pacific & Expo Blvds.)

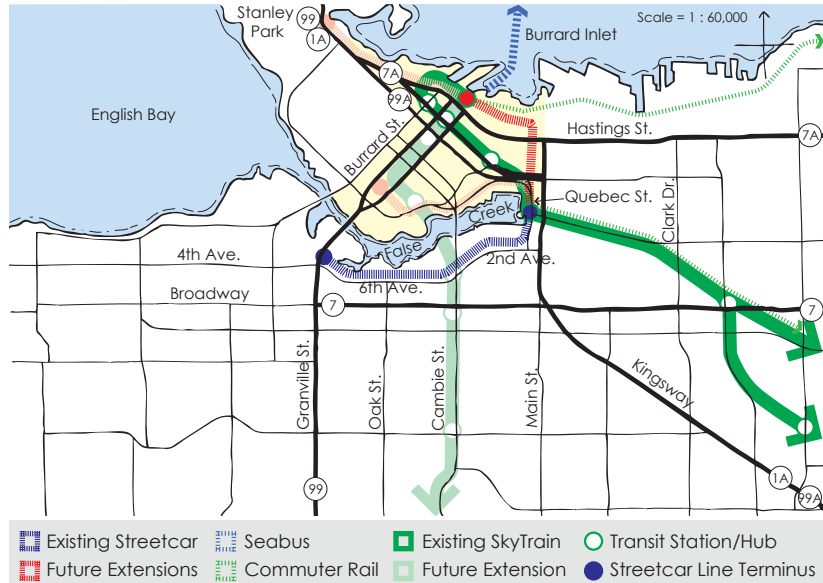


Figure 3.26: Map of Vancouver Streetcar System and Connection to Regional Transit

Quebec Street, in terms of its regional context and how it relates and contributes to the greater circulation networks of Vancouver, links many different areas together and anchors the downtown peninsula to the regional district. However, looking at the city-wide development patterns and land uses, it is clear this is an isolated and fragmented community which is not only locally disconnected from other residential areas but also sits as an island surrounded by incompatible land uses and activities. Quebec Street is currently a place where many people pass through but rarely stop to experience.

The Main St. SkyTrain Station connects rapid transit commuters to national bus and rail service at Pacific Central Station, local bus routes on Main St. and the False Creek Ferries at Science World. Located there is the current terminus of the only streetcar line in Vancouver, which connects riders around False Creek. This area is also critical for commuter bike riders, linking the Adanac, Ontario and future Central Valley Greenway bike routes. The seawall circling False Creek is a continuous pedestrian and bicycle corridor on the waterfront.

Vancouver is one of the few North American cities that did not construct a major freeway system through its downtown core. It utilizes a network of high-volume traffic arterials on the existing streets. The Georgia & Dunsmuir Viaducts connect commuter and truck traffic travelling along Kingsway and Main Street to Downtown and North Vancouver across the Lion's Gate Bridge. A second level of arterials includes Quebec St., Terminal Ave., 2nd Ave., Pacific and Expo Blvds., encompassing almost all of the site in heavy traffic. Quebec Street is also a major link between North and South False Creek. With Pacific Boulevard and 2nd Avenue they create a street system which circles



Figure 3.24: The Towers of City Gate from the SkyTrain, 2006



Figure 3.25: SkyTrain, Bikes, Pedestrians, and Cars, Typical Transit on Quebec Street, 2006

False Creek. However this connection is currently not well established and misses the opportunity to define and solidify the image of these individual developments into a larger False Creek Community.

The regional land use patterns along Quebec Street is still dominated by industrial uses. The City Gate developments are currently an isolated island of residential development in a vast expanse of industrial uses, forming a continuous collar from Burrard Inlet to False Creek (cutting off Downtown Vancouver and the residential neighborhoods to the south and east). Chinatown and Strathcona are the closest neighbors to City Gate and are further isolated by the viaducts which strongly define the space into distinct places and experiences to either side. The viaducts also prevent a solid connection between the several large parks, landmarks, and other destinations in the area.

The future of this area will be marked by drastic changes. Work has already begun on transforming the Southeast False Creek lands (SEFC) for the 2010 Olympic Games, bringing a large amount of residential intensification to the area, strengthening the lonely City Gate community. The False Creek Flats are currently undergoing a similar revisioning process with the potential of also bringing new residents, jobs and businesses to the area. A redesigned Quebec Street could help create missing connections between the existing neighborhoods and link its identity to those areas which are already rich in a sense of place, such as False Creek. Quebec Street has the opportunity to create a unified and coherent link to Pacific and 2nd, establishing an immediately recognizable and unique sense of place for all of False Creek.



Figure 3.27: Dunsmuir Viaducts looking south from Quebec St. and Union St., 2006



Figure 3.28: Intersection of Pacific, Expo, Milross, Prior and Quebec Streets, 2006



Figure 3.29: SkyTrain Guideway ducks below the Georgia Viaducts, 2006

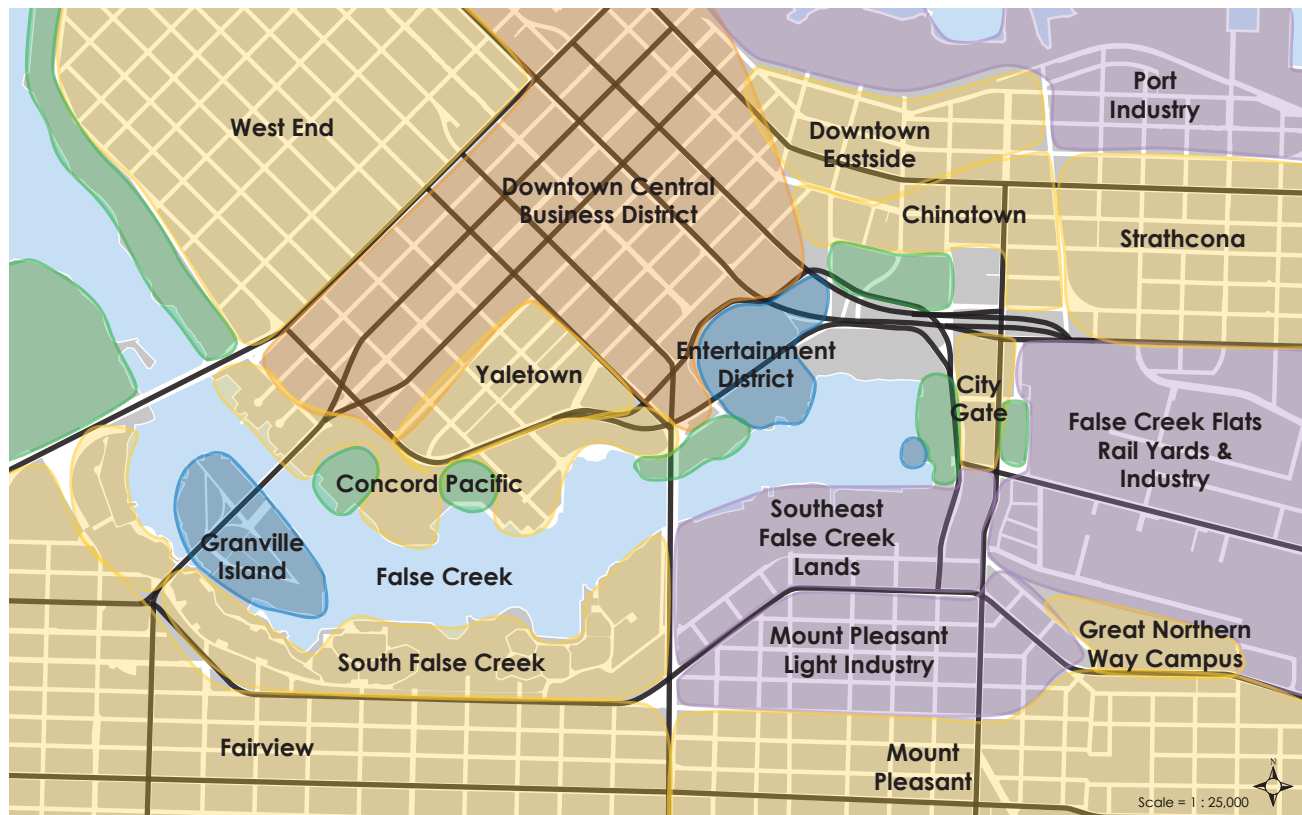


Figure 3.30: Map of Downtown Vancouver Residential Neighborhoods and Generalized Land Use Districts



LOCAL ANALYSIS

QUEBEC STREET: TOWERS, PARKS, & PAVEMENT

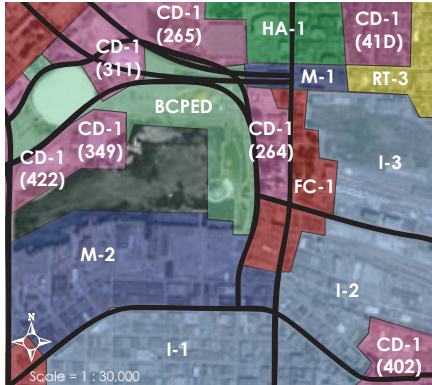


Figure 3.31: Zoning Districts around Quebec St.

Mixed Use Zones:

- **CD-1:** Comprehensive Development District: A separate bylaw exists for each site, tailor-made to the intended form of development.
- **BCPED:** False Creek North: The intent is for a high standard of design and development of residential neighborhoods, parks, public facilities and commercial areas.
- **HA-1:** Chinatown Historic District: encourage the preservation and rehabilitation of significant buildings, accommodate evolving activities.
- **FC-1:** East False Creek Commercial District: permit the development of a high density, mixed commercial use neighbourhood, including residential and compatible industrial uses.

Industrial Zones:

- **M-2:** Heavy Industrial District: permit industrial and other uses that are incompatible or dangerous when situated near residential districts.
- **I-1:** Light Industrial District: permit light industrial uses that are compatible with adjoining residential or commercial districts. Service commercial uses compatible with light industrial uses are permitted but not offices or retail stores.

Through the use of zoning bylaws, the City of Vancouver is able to legally require private landowners to conform to a list of allowable uses, activities, and building forms specified for each zone. Vancouver has succeeded in negotiating development rights through site specific rezoning applications in exchange for public amenities and contributions. The developer seeks to profit from increased land values created by rezoning a parcel, and the city seeks to minimize negative impacts on the community and city caused by the added strain the development places on city infrastructure and services. This has resulted in a high level of growth and development which contributes as much as possible back to the communities they transform; creating whole, complete communities without burdening the city with providing new schools, parks and amenities.

The approach, dubbed the “Vancouver Achievement,” is a form of discretionary zoning, where, instead of establishing broad regulations for an area, developers must apply for rezoning to what is called a Comprehensive Development District, or CD-1. This has allowed for greater control over specific developments, especially for the megaprojects found around False Creek. However, this approach also means that some districts are not rezoned as a whole and instead must wait for each property owner to apply for rezoning. For Quebec Street, this has resulted in a large section of the site sitting on land zoned for industrial or commercial uses, yet visioned for large-scale residential uses. This disjoint in what is planned and what is allowable is one of the biggest constraints facing Quebec Street. It is perpetuated by a zoning process which is not necessarily predictable or guaranteed, potentially changing with each City Council. Several landowners are unsure about making changes now, fearing that their current zoning status will change and they may lose out when their land is inevitably rezoned later.

The future of zoning in this area will be heavily determined by what rezoning takes place in conjunction with the Southeast False Creek developments. Currently, several properties have already been granted rezoning from M-1 Industrial to CD-1 for mixed use residential and commercial developments. Another five parcels are in the process of applying for rezoning with the expectation that many more will follow. Development will be controlled through the SEFC Official Development Plan and rezoning applications will be approved based on conformity to that plan. SEFC offers a unique opportunity to incorporate all of the City's values and policies into a showcase project that, during the 2010 Olympic Games, will show the world how important creating sustainable, livable, whole communities is to the City and its planners. The City also hopes to use comprehensive zoning packages to create opportunities for private land owners in the area to capture some of the economic benefits that redeveloping this large waterfront site will generate by reinvesting back into the site, supporting public realm improvements, social housing and services.

LAND USE

Quebec Street contains a variety of zoning districts with a wide range of allowable uses, which are separated into well defined sections. First, there are residential-oriented developments like City Gate and Creekside Park. Second, there are large sections of vacant land and parking, and finally, there are the inhospitable industrial and auto-oriented uses of the False Creek Flats and Mount Pleasant Industrial Areas.

City Gate is a residential island of over 1500 people with few other residential or commercial developments nearby. A small retail core serves the residents along the ground floor of the Main Street side of the development. However, there are only a few corner stores, restaurants and coffee shops and no major grocery stores, bank branches, or entertainment options. Residents must travel elsewhere for these activities. City Gate is even isolated from its main open space, Creekside Park, by the well-used surface parking lot serving Science World.

The industrial areas are also dominated by vast expanses of surface pavement for parking and car storage. Even in the fine grained development patterns found at the southern portion of the site, there are many vacant parcels and land devoted to parking and other automobile uses. Officially, these areas are zoned for industrial uses, however the actual activities that developed here are slightly different than intended and represent the areas changing character. For instance, there aren't many purely industrial activities here. Most of the uses are primarily retail in nature yet serve a purpose which is better suited to industrial lands. This includes auto-oriented uses such as car dealerships, gas stations/garages, technology businesses (design and print shops, internet and computer companies) and specialty boutiques.

The northern extent of Quebec Street is isolated from the residential core by the Georgia and Dunsmuir Viaducts, which visually and physically alienate Andy Livingstone Park and the Downtown Skate Park. Along with the BChydro substation at Quebec and Union, the viaducts act as a major barrier separating the historically significant and well established communities of Chinatown and Strathcona from City Gate and the future residents of this area. Currently, these areas are further isolated by a large section of vacant land which waits to be transformed into a much-needed extension of Creekside Park bridging the parks to the north to City Gate.

Legend

High Density Residential	Programmed Park Space	Car Lot
Medium Density Residential	Park Structure	Surface Parking
Office	Science Museum	Paved Ground Cover
Retail	SkyTrain Station	Unpaved Ground Cover
Auto - Oriented Retail	Industrial	Vacant / Under Construction

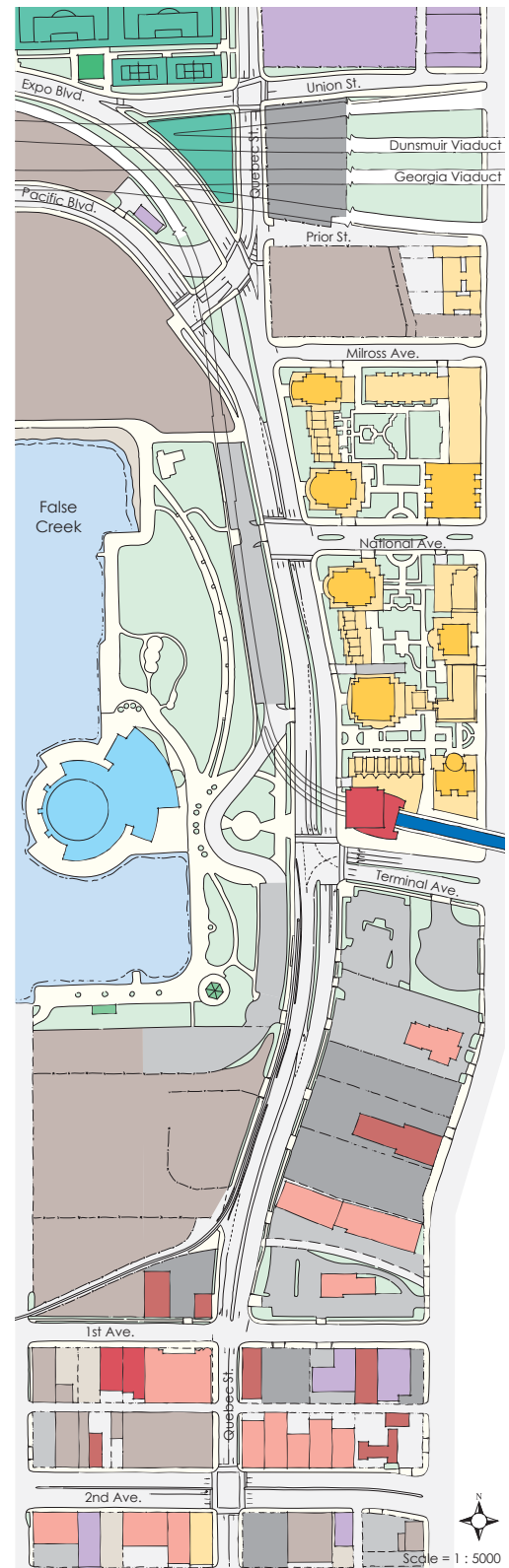


FIGURE GROUND - BLOCK PATTERNS



This figure ground represents the block patterns at the ground plane along Quebec Street. It does not show the viaducts or the SkyTrain and instead focuses on the automobile space defined by the street pattern. The overall structure is not uniform and shows the result of various changes over time. The blocks at the extreme southern portion of the site are typical of most of Vancouver and are generally 120 meters long and 80 meters wide with a 6 meter laneway dividing each block with a service corridor for all parcels.

This street grid pattern, which continues both to the northern and southern areas of the city, breaks down at the section of Quebec Street between the viaducts and 1st Avenue. The blocks here are much larger and are not serviced by a laneway. This creates large sections of the street which are disconnected to the greater street network. A strong, well-connected grid pattern creates spaces which are human scaled and fine-grained where as the megablocks tend to produce much larger scaled developments. The plans for SEFC include creating new connections in the two large blocks north of 1st Avenue which would link Main Street to False Creek and help minimize the negative impact of large unbroken blocks.

This figure ground also shows general circulation patterns and clearly highlights many of the issues facing Quebec Street. The corridor is very wide in the middle section with a 36 meter right-of-way of which 28 meters is for automobile traffic. Compared to Main Street which is just to the east off this map and is designated as main arterial with higher traffic volumes than Quebec has only 24 meters for traffic in a 33 meter right-of-way, this represents a ratio of 73% road to sidewalk space vs. 78% on Quebec Street (for comparison, 1st Avenue has a 60% ratio).

In addition to being expansive, there are also several awkward transitions along the corridor. Quebec St. at the intersections of Pacific & Expo Blvds., Milross Ave. and Prior St. are major transition zones where most traffic travels along the Pacific/Expo couplets while Quebec continues further to north but at a much reduced capacity (with a 20 meter right-of-way). Both Milross and Prior feel disconnected to the intersection and travel is discouraged down both streets. This confusing intersection has the potential to create a strong connection for Quebec Street to the western portions of False Creek along Pacific Boulevard, just as there is potential to connect 2nd Avenue (and the southern portions of False Creek) through a unifying street design at both intersections.

Quebec Street currently bottlenecks at 1st Avenue and creates traffic problems as the right-of-way shrinks from 33 meters to just 20 meters as it crosses the street, offering a real challenge for efficient circulation for not only for automobiles but also pedestrians and bike riders. These right-of-way variations separate Quebec into distinct sections, and create a wide variety of automobile and pedestrian experiences.

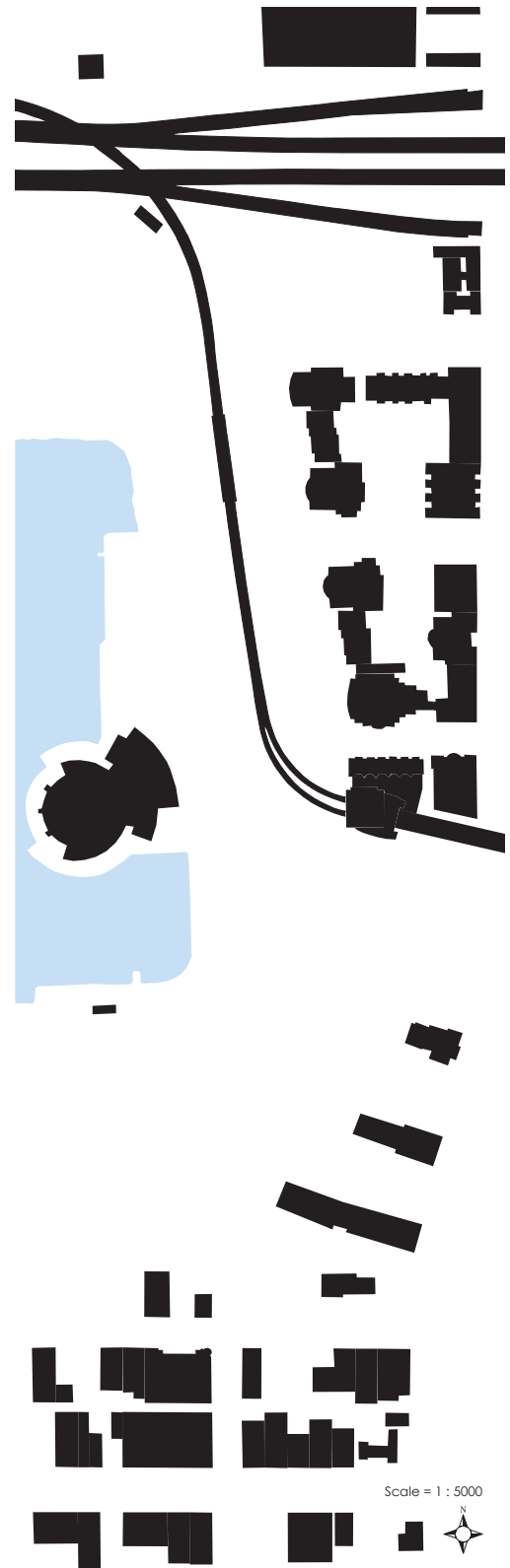
FIGURE GROUND - STRUCTURES

This figure ground displays the built form along Quebec Street by showing only the physical structures which define the space, specifically the buildings and the overpasses. This diagram, like the one before, also clearly shows the three different experiences found along the corridor. The Georgia and Dunsmuir Viaducts divide the site at its northern edge and isolates Chinatown and Andy Livingstone Park from the City Gate residential developments. These structures dominate the physical space here and offer both an opportunity for unique uses such as the Skate Park and also a major constraint to creating a well-connected public realm along this corridor.

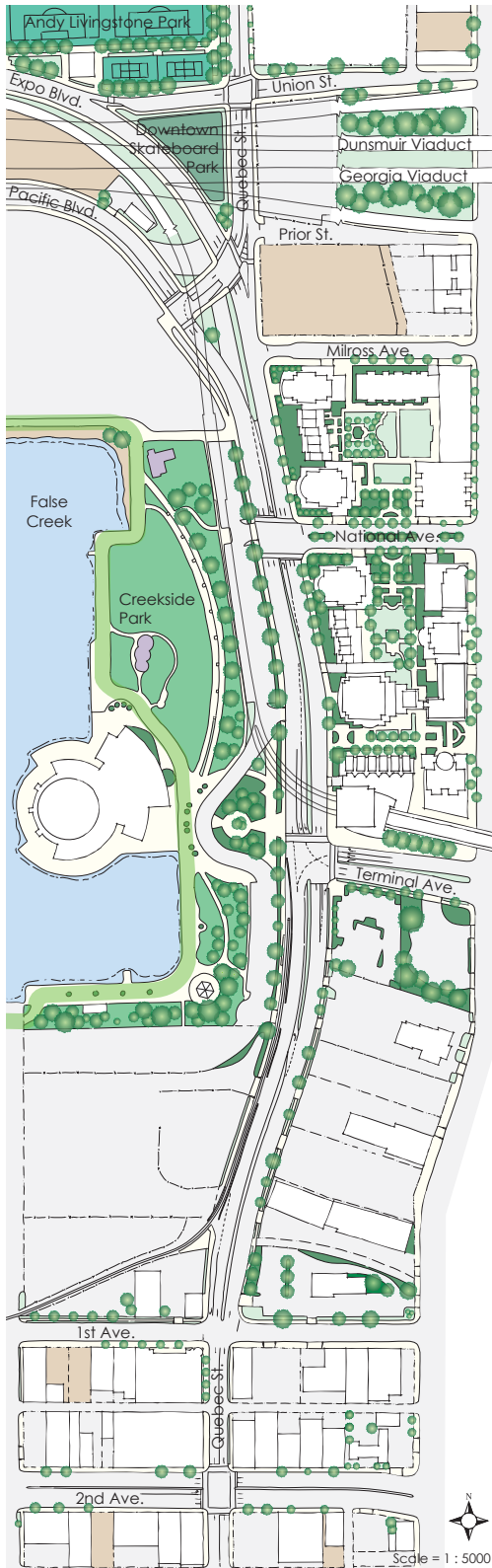
The southern section of the site is not isolated by a dominating structure, but instead is separated from City Gate by a large expanse of surface parking and fenced off car lots. The transition between these two areas is large and offers little observable linkages between the vastly different spaces. South of 1st Avenue, the building pattern strongly defines the street corridor and its fine-grained developments offer a wide variety of potential activities connected to each other and the surrounding areas by a network of streets and laneways. Most of the buildings here are built with no setback from the property line, usually between two to five stories tall, and are typically one or two 15 meter parcels wide.

The pattern of development along the City Gate section of Quebec Street is of a much different scale and form than that found south of 1st Ave, even though in both areas structures cover about 55% of the total block space. Due to the heights of the City Gate buildings, which are at least 3 to 7 stories tall along the street with four 25 to 30 story tall residential towers set within, this area has a well defined street wall. However, it is contained only to the two blocks along the eastern side of the street with the rest of the corridor poorly defined. The City Gate developments have an inward-looking definition of space, which focuses pedestrian activity away from Quebec Street.

City Gate is outlined on three sides by the large concrete spans of the viaducts and SkyTrain. Currently these structures act as barriers, and define one side from the other. Specifically the SkyTrain and the linear surface parking lot beneath, cut City Gate off from Creekside Park and Science World, which are unanchored to the rest of the urban fabric. Science World is a main visual terminus from many different vantage points throughout Vancouver, including from across False Creek down Georgia Street, from the False Creek bridges, and along Terminal Avenue. However, Science World is barely visible from the street level along City Gate. The SkyTrain completely blocks this local landmark. The SkyTrain guideway is a permanent fixture along this corridor and, as the main element defining the western edge of this space, it has a major opportunity to help minimize the expansiveness of Quebec Street by connecting the park and Science World to the residential developments of City Gate and also to help establish a unique character and identity for this street.



URBAN NATURE



The public open space is currently divided into three sections, the north section including Andy Livingstone Park, the False Creek Basin encompassing Creekside Park, and the interior courtyards of City Gate. These three areas are all actively used by both City Gate residents and visitors, however they are very much isolated, separate spaces with no major linkages connecting them into a larger system or network.

Andy Livingstone Park has two full-sized artificial soccer fields which are lit for night-time games. These fields are in great demand and are weather appropriate since the Astroturf never gets muddy during Vancouver's rainy season. Immediately south and directly underneath the Georgia Viaducts is one of the most actively used spaces along Quebec Street, the Downtown Skateboard Park, which helps connect the two sides of the overpasses. Without the completion of the planned extension of Creekside Park to the south these parks remain incredibly disconnected from the open spaces to the south.

The Seawall at Creekside Park is part of a continuous corridor for pedestrians and bicyclists along Vancouver's waterfront, connecting many seaside parks. In addition, Creekside Park has two playgrounds which are very well used by the families of City Gate. During warm weather the grassy hill is dotted with people of all ages. The park is further enhanced by Science World, which anchors the space and brings many visitors to the area. However, Creekside Park is almost entirely surrounded by pavement and parking. The eastern edge is lined with a linear parking lot, fully separating the park and Quebec Street. National Avenue currently dead ends at one of the entrances to this parking lot. There is missed opportunity to extend the public realm treatment across Quebec Street to create a strong connection between Creekside Park, the open space within City Gate (which spans National at its midpoint) and Thorton Park on the east side of Main Street.

The street trees along Quebec Street are not uniformly planted and of various ages and sizes. There are very few trees along Pacific and Expo Blvds. intensifying the expansiveness of that space and highlighting, instead of masking, the impact of the overpasses. There has been a concerted effort to hide the Science World Parking Lot behind a row of trees. However, it is surrounded by a continuous line of impermeable shrubs. These define space by prohibiting movements between the parking lot and the street. There is a great opportunity for a unified street tree strategy to redefine space along Quebec, and to strongly identify the currently ambiguous connections between Pacific Boulevard and 2nd Avenue.

Legend

	Tree		Artificial Grass		Paved Park Space
	Shrub		Sea Wall Pathway		Unpaved Ground Cover
	Park Grass		Playground		Paved Ground Cover

IMPERVIOUS GROUND COVER



Figure 3.32: SkyTrain, Parking Lot & Quebec Street

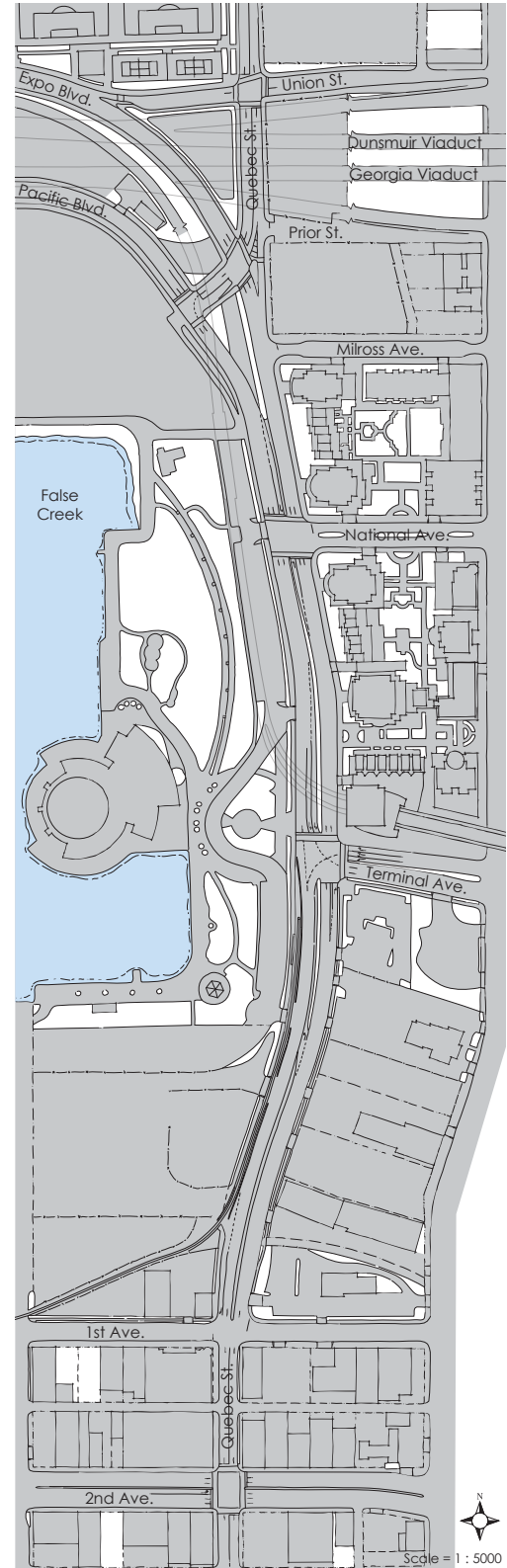
Much of the land around Quebec Street is dominated by pavement, concrete and other impervious ground cover. This type of ground cover is simply anything covering the ground which is not dirt or landscaping. Permeable surfaces act as sponges soaking up rainwater and retaining it on site instead of flushing the water into the storm and sewer systems, which deposit the water, and any toxic or otherwise harmful substances it has collected along the way, into the nearest body of water or treatment plant. Much of the stormwater collecting around Quebec Street comes from surface parking lots and industrial lands and finds its way into False Creek. The more impervious ground cover in an area, the more runoff will be collected, requiring intensive infrastructure investments.

Currently only 15% of the site is impervious with most of this water-absorbable land found in Creekside Park and near the viaduct overpasses. These green spaces soak up water on site and slowly release it into the ground and atmosphere over time instead of dumping it into the nearest body of water. The second largest piece of green space is contained within the City Gate developments, however these miniparks are built over structured parking and serve an important but somewhat reduced roll in on site water absorption. Even the soccer fields and tennis courts in Andy Livingstone Park are made of impermeable turf and water actually drains off of the site and is collected and distributed into the larger sewer system. Barely visible, but important none the less, are the planting strips along the street corridor. These spaces present a great opportunity to construct systems which can manage road runoff and, with the help of certain plant species, can filter out some of the harmful substances collected on the roadway.

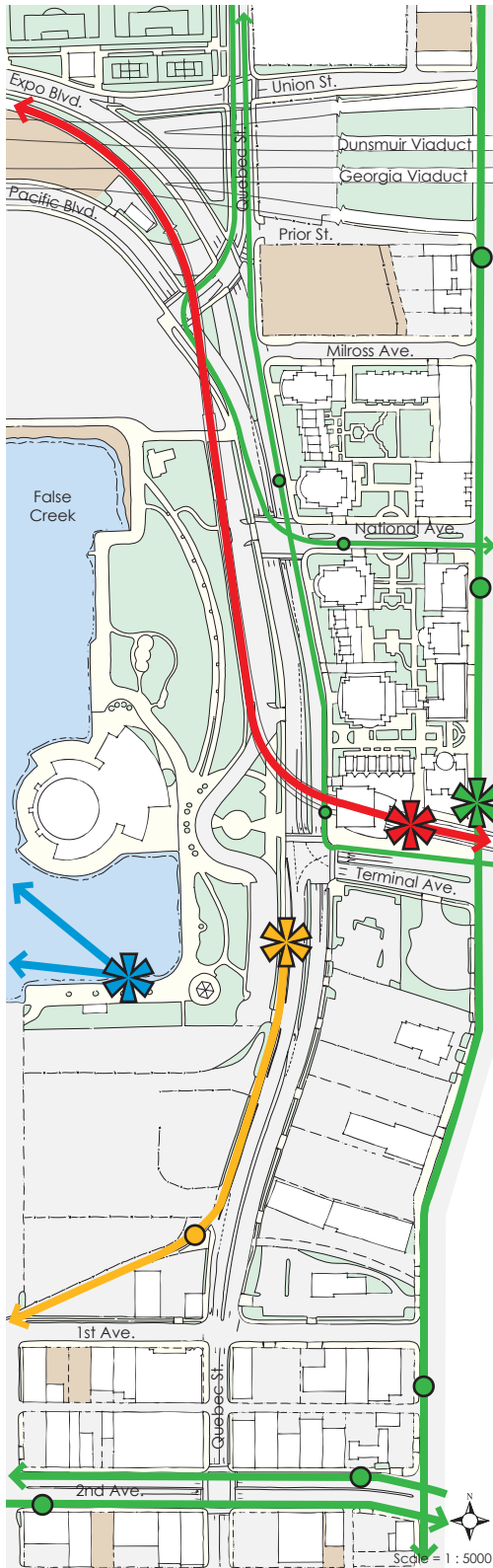
Especially in a rainy climate like Vancouver, some runoff is natural, and there have always been rivers and ponds where water naturally collects and pools. It is important to recognize and respect these natural systems which are at work, and are a serious consideration, even in the very core of our most dense cities. The planned future developments and extension of Creekside Park offer many great opportunities for a more sustainable on-site stormwater management system. This could incorporate such design elements as infiltration pavers or even green roofs to create more space which retains and stores water instead of distributing it into the drainage systems.

Legend

■ Impervious Ground Cover □ Permeable Surface



LOCAL PUBLIC TRANSPORTATION



There are currently many public transportation options on and around Quebec Street connecting many different areas of the city and region together. One of the historical relics of False Creek is the Pacific Central Station at Terminal, just off the map to the east. This station is the main terminus for VIA Rail and Amtrak connecting to Toronto and Seattle, as well as the main Greyhound station for Vancouver. Many travellers come through this station and from here connect to other forms of transit to continue to their final destination. However, currently these connections are poorly addressed and do not work together to create a strong transit hub.

The Main Street - Science World SkyTrain Station at Terminal Avenue between Main and Quebec Streets is a major center of activity and connects the area to Downtown Vancouver, Burnaby, New Westminster, Surrey, and soon Richmond and Vancouver International Airport. This is the location of a major bus stop with three main bus lines, the #3-Main, #8-Fraser, and the #19-Kingsway. Many commuters travel from downtown on the SkyTrain and then connect to one of the buses serving local stops to areas in South Vancouver and beyond. Currently this transition is awkward since the buses stop far from the transit shelters due to the SkyTrain Station and overpasses. The waiting area is often overcrowded, while the bus shelters sit empty 10 meters away. There is also a new community bus route, the C21, which runs along Quebec Street and loops around the Pacific Central Station before connecting to Downtown, Yaletown and the West End, providing a localized transportation option.

The Downtown Historical Railway currently terminates at Science World and connects to Granville Island along 1st Ave. There are plans in place to extend the line to Waterfront Station further connecting the public transportation options in this area to the regional transportation system. The line would continue up Quebec Street and eventually would travel to Stanley Park with future lines planned along Pacific Boulevard and into the False Creek Flats area. In addition to the Streetcar, the False Creek Ferries offer local transportation to sites around False Creek. These small aquabuses shuttle travellers from one side of the waterway to the other, connect many local landmarks and destinations, and provide activity centered on the water.

Much of the pedestrian traffic in this area occurs between the transit modes and major destinations. With all these transit options within such a relatively small space (only 300 meters from Science World to Pacific Central Station), there is a great opportunity to create a strong transportation hub here, where the variety of choice is an identifiable feature of this place.

Legend

- | | | |
|---------------------|----------------------|-----------------------|
| SkyTrain | Major Bus Routes | Major Transit Station |
| Streetcar | Community Bus Routes | Local Stop |
| False Creek Ferries | | |

LOCAL BICYCLE & PEDESTRIAN MOVEMENTS







In addition to the major pedestrian zone surrounding the transit hub, there is also heavy pedestrian activity along the Seawall. This major landmark is one of Vancouver's most prized public amenities. It travels at water's edge from Canada Place to Kitsilano Beach with separate pathways for pedestrians and for bikes and rollerblades. This well-used continuous corridor connects many of the seaside parks and neighborhoods along the route, acting as a single defining element for False Creek. However, currently the north and southwestern sections of the Seawall travel through large expanses of surface parking and vacant lands. This is uninviting and awkward to travel through and acts as a major break in the otherwise unified Seawall.

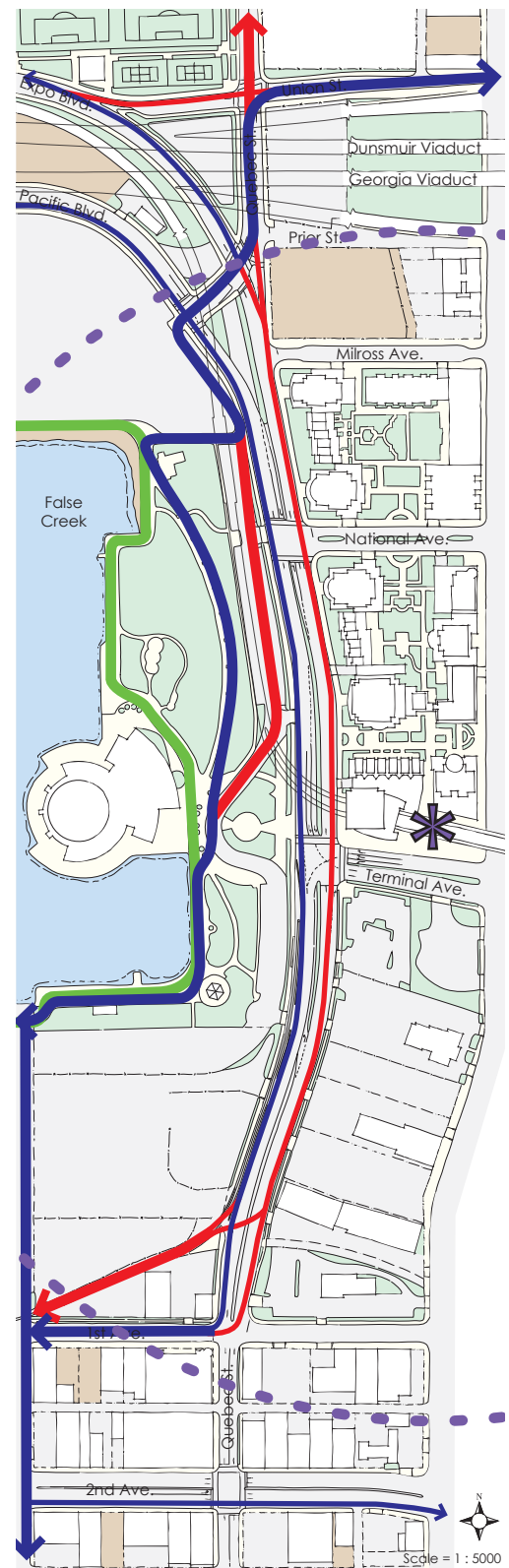
For commuter bicycle options, the City of Vancouver has established a strong network of bike priority streets and corridors linking the outlying neighborhoods to the downtown core. However, currently this network is weakened by the poor connections along Quebec, which sits at the convergence of several routes. Specifically there is a major breakdown in the network where the Adanac/Union bike route connects to the Pender route to the north, the Pacific/Expo route to the west, and the Ontario, 7th Ave, and Central Valley Greenway routes to the south. As shown, the official routes (in blue) are unclear and many bikers, finding the zigzagging paths hard to navigate, follow more intuitive routes (in red). This can lead to dangerous activities, such as bike riders travelling on the sidewalks.

This observed problem is verified in the traffic counts obtained from The City of Vancouver. For instance, at Quebec and National during the morning peak hour there were 22 bikes travelling south along the designated bike path and 55 travelling north in the shared parking lane on the east side of the street. This would seem typical during the morning rush heading into downtown, however, during the evening rush the numbers are similar with 30 travelling south and 37 north. This situation is found at other places as well, with the intersection of Quebec and Union being the most active in the study area.

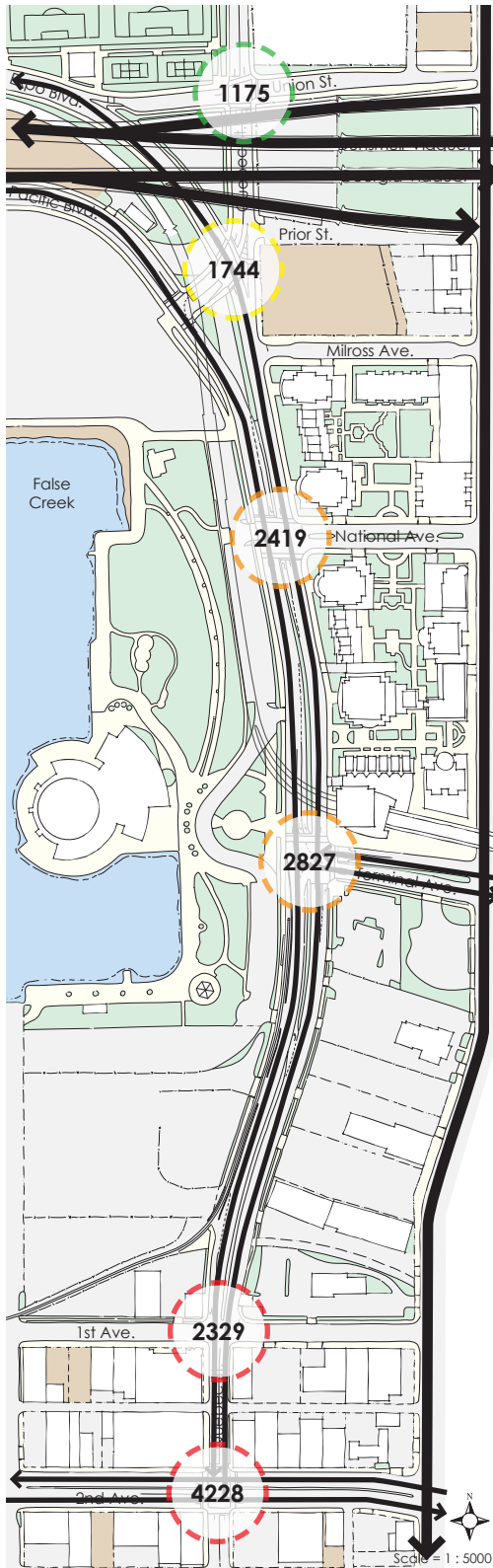
In general, along Quebec Street, there is heavier pedestrian activity near the City Gate developments, Science World and around the parks, and there is lighter activity further south in the industrial district. Almost the entire site sits within a short five-minute walk of the Main Street SkyTrain Station, and it takes roughly 12-15 minutes to walk the entire site north to south. Greater public realm improvements must be focused at the human scale and should take into account both pedestrians and bicyclists when redesigning the corridor.

Legend

- | | |
|---|--|
|  Two-Way Official City Bicycle Route |  Two-Way Observed Bicycle Route |
|  One-Way Official City Bicycle Route |  One-Way Observed Bicycle Route |
|  Two-Way Sea Wall Pathway |  400-meter Radius (5-minute Walk) |



LOCAL VEHICULAR CIRCULATION



This map shows the crucial role this area plays in the traffic circulation patterns of Vancouver. Primary arterials outline the site while much of the remaining road space is filled with frequent and fast moving traffic. Quebec Street is a secondary arterial carrying both heavy truck traffic and passenger cars, and at a few intersections is approaching overcapacity for the current design. It is not unusual to see long car lines at stop lights.

In the Southeast False Creek Transportation Study conducted by the IBI Group, it was found that the intersections of Quebec and 1st and Quebec and 2nd operate at a level of service of D or worse during the PM rush hours, which is the peak period of travel. This level of service means that traffic experiences significant delays during rush hours and motorists often have to wait through signals. This is attributed to several factors including the narrowing of the right-of-way and few opportunities for motorists to enter or cross heavy arterial traffic due to the large unbroken block pattern in the area. More connections would decrease congestion and help alleviate some of the traffic problems currently experienced in the area. The intersection at Terminal Avenue received a C for PM rush hour, operating near capacity with acceptable delays only during the highest traffic flows, yet with room for improvement.

The level of service study was verified by the City of Vancouver's traffic counts, which told a similar story. The figures in the diagram show the total number of vehicles traveling through the intersection during the peak travel period (not the Quebec-only traffic figures). These numbers indicate a very strong pattern, traffic seems to increase towards 2nd Avenue, which is dominated by roughly 3000 vehicles traveling along the corridor during the peak period. There is more traffic located here than at any other intersection, and it is the smallest right-of-way on site. This requires major consideration and is a significant constraint since there is not more space available to give to cars between the already pinched 1st and 2nd Avenue section. The design strategy will have to address ways of alleviating some of the traffic from this area.



Figure 3.33: Traffic at Quebec & National



Figure 3.34: Traffic at Quebec & Terminal

Legend

- Major High-Volume Traffic Arterial
- Secondary Traffic Arterial
- Total Peak-Hour Traffic Count in All Directions

AUTOMOBILE/PEDESTRIAN CONFLICTS

There are many areas where the continuous pedestrian realm is compromised by automobile uses along Quebec Street due to missing crosswalks, frequent curb cuts, and poor buffers. The numbers in the diagram represent pedestrians crossing at intersections. A green line indicates that there is an official, painted crosswalk for pedestrians, a red line shows where people were observed crossing. Overall, this diagram shows that most pedestrian activity is isolated to City Gate and Science World, which is a major center of activity (over 350 people crossing during the peak PM hour).

For most of the major crosswalks there are painted stripes indicating where it is safe to cross. However, at 1st Avenue which is the second busiest intersection, there are a significant number of pedestrians crossing where there is not a single designated crosswalk. At Terminal, the busiest intersection, there currently is no special treatment to address the high-volume of pedestrian activity which takes place here. This is a lost opportunity to acknowledge this major gateway to Science World. There is also an opportunity to minimize the larger crosswalks where Quebec is very wide by incorporating a median, which can act as a pedestrian refuge. This would also help with the problem of jaywalking (there were two places where people were observed crossing in the middle of blocks).

Since much of this area does not have laneways to service the parcels, there are many curb cuts located along the street corridor. This increases the potential for auto/pedestrian conflicts where cars cross the pedestrian right-of-way and wait for traffic to clear while preventing pedestrian movements. This occurs quite often at the entrances and exits to the Science World parking lot. This parking lot also acts as a major barrier to pedestrian movements to Creekside Park. The shrubs, broken in several places, do a poor job of disguising the parking lot from the street. In addition since there is no on-street parking along this entire side of Quebec Street near the parking lot, the sidewalk is squeezed between two auto-oriented spaces with no real buffers from high-speed traffic.



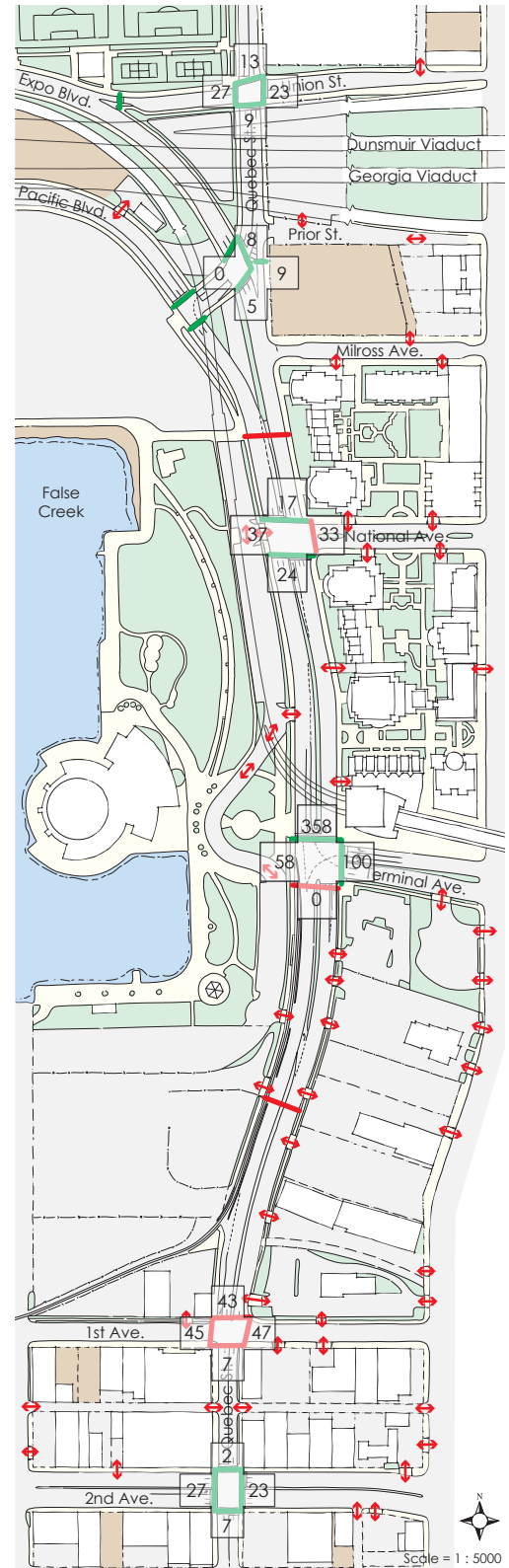
Figure 3.35: Parking Lot Entrance at National



Figure 3.36: SkyTrain & Parking Lot

Legend

- ↔ Potential Conflict Spot
- Existing Crosswalk
- Observed Crossings



FUTURE PLANS

QUEBEC STREET UNDER CHANGE



Figure 3.37: Proposed Pacific Boulevard, 2005
Credits: City of Vancouver



Figure 3.38: Proposed SEFC Streetcar, 2005
Credits: City of Vancouver



Figure 3.39: Proposed SEFC Commercial Core, 2005
Credits: City of Vancouver



Figure 3.40: Proposed SEFC Neighborhood, 2005
Credits: City of Vancouver

The Quebec Street experience is influenced not only by its historical context and existing conditions, but also by changes which are currently in various stages of planning and construction. The proposed developments and public realm improvements for Quebec Street will drastically transform this space into a vibrant new community, realizing many of the opportunities and addressing some of the constraints previously identified along this corridor. The 2010 Olympic Games will bring a whole new host of visitors and international attention to False Creek and, like The World's Fair in 1986, these events have the potential of leaving a permanent and lasting legacy on the image of False Creek and the entire City of Vancouver.

After the Olympic Games, this area will be a new neighborhood for thousands of residents, representing the diversity of which Vancouver is so proud. In addition, there are many new public amenities associated with this mostly residential development including new schools, community centers and a system of well-connected park space. This development will create an extremely vibrant hub of urban activity with various forms of public transportation options, including the convergence of high-profile greenways, parkways and waterways, which will enrich the character and establish a strong sense of place. Many people (residents, commuters and tourists) will benefit greatly from improvements made here. However, the one thing missing from all of these proposals is a single unifying image and streetscape strategy for Quebec Street itself. The street corridor has a major opportunity to act as the tie that binds all of Vancouver's many special places together into a solid unified whole. Much of this development is happening on its own by different agencies. This process would benefit by including all involved parties in a discussion addressing the major issues and critical factors for the success and livability of the entire False Creek Community.

The most prominent planned redevelopment is the section of the site which is included in the Southeast False Creek Development Plan. The areas between Ontario and Main Streets (running from 2nd to National Avenue) is referred to as the Railyard Neighborhood. It consists of a section which is under the control of the City, a section belonging to TransLink and a large section of private lands. The major focus of this neighborhood will be a large waterfront park that is to extend south to 1st and the Ontario Street Bikeway and east to the Central Valley Greenway connecting both commuter routes to the seawall at a major bike hub. The mixed commercial and residential district between Main and Quebec Streets would provide a transition between SEFC and the higher building forms of City Gate. Including a tower immediately south of the Van City Building would create a landmark terminus to Terminal Ave and a frame to Science World (building heights will step down from there to SEFC). Retail stores along the ground floor of Main Street will solidify that area as a commercial corridor. One of the main elements of the plan for this area is to introduce several roadways back into the street and block network, which would greatly help reconnect many isolated areas.

PROPOSED DEVELOPMENT

In connection with the redevelopment of the SEFC lands, the City of Vancouver has proposed a modern streetcar system which would originate along Quebec Street and link many important destinations and transit options together through a sustainable and efficient mode of travel. There is great opportunity to extend the improvements made when the streetcar is designed into the larger public realm on Quebec Street. This means there is potential to redesign the two intersections which will have a transit station. At National Ave the intersection is currently designed without any special recognition given to its crucial historical role in the identity of the community. At Pacific there is a need to regularize the intersection in order to create more efficient and legible traffic, bicycle and pedestrian movements. The streetcar would run in a segregated track for most of its route and may continue down Pacific Boulevard to Yaletown. The streetcar offers the opportunity to connect the street treatments at the north of the site to those at the south, especially with the grand boulevards planned for Pacific and 2nd Avenue.

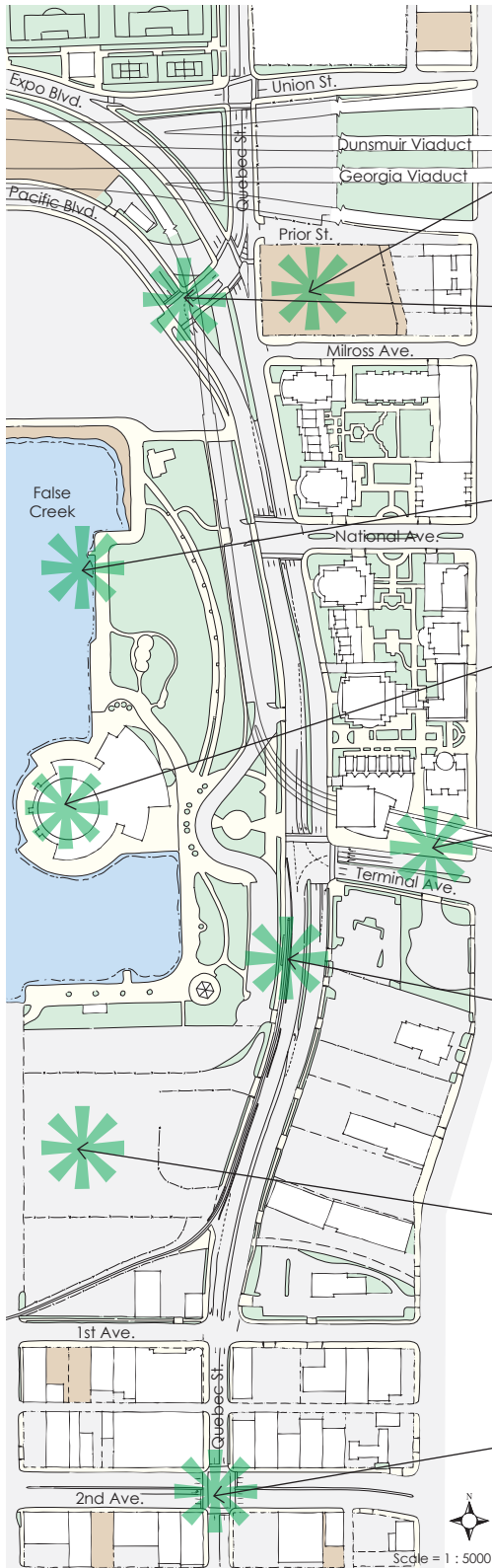
Both 2nd Avenue and Pacific Boulevard have proposed plans for massive public realm improvements, which include creating a tree-lined boulevard with a planted median separating the travel lanes which ensures efficient automobile circulation in a design scheme oriented towards the human users of the space. In addition, there would be separate bike routes and streetcar tracks along Pacific Boulevard. The plans shown here indicate two different options for treating the intersection of Quebec Street and 1st & 2nd Avenues. The two options address the constraint identified where the right-of-way significantly decreases yet traffic through this section increases, causing delays and congestion.

Another unifying element proposed on this diagram is the Creekside Park Extension to the northern vacant sites and underneath the Georgia and Dunsmuir Viaducts. This park is part of the Concord Pacific public amenity contributions and will act as a focal point of False Creek's open space network. The park will help create strong local and regional bike connections, linking the routes to the south to the Adanac/Union bike route to the north. A BMX park and basketball courts are envisioned for underneath the overpasses, acting as an active use which socially connects the parks spaces to either side. The plans also include an amphitheater for concerts and festivals, a forested area, boat facilities, docks and a beach. In addition, there are plans for more parking continuing from the existing lot near Science World. The over-arching goal is to create easy and enjoyable access to the water for all.

The final City Gate development is scheduled to be finished at the end of 2007 and will be the 6th tower. The master plans include a potential realignment of Quebec and Expo and also a new 'street' which would connect Prior to Milross. Once completed, this development will help minimize the isolating effect of the viaducts. There will be 165 new condominium and townhome units in a 23 story tower.



OPPORTUNITIES



There are many opportunities for design improvements to the public realm of Quebec Street. The information gained in the site analysis will be used to propose solutions that respond to these perceived strengths.

● Integrate New Residential Developments

Many people will benefit from public realm improvements along Quebec Street and there is an opportunity to integrate the new residents into the existing community.

● Create False Creek Ring Road Connecting Pacific to 2nd Ave.

At Pacific Boulevard, there is an opportunity to create a unified ring road encircling False Creek (connecting the many communities and public amenities along the waterfront to Quebec Street).

● Expand False Creek Open Space Network

False Creek is a major amenity for the residents of Vancouver offering opportunities for recreation and connection to natural systems by focusing activity towards the water.

● Emphasize Important Landmarks

Quebec Street currently has many locally and regionally recognized landmarks and a few remaining historical structures. There is an opportunity to emphasize these special places by linking them to a larger public realm.

● Increase Transit Connections

The existing transportation options in this area are an opportunity for establishing a well connected transportation hub at Quebec Street, which would accentuate the importance of public transit in this area.

● Extend Existing Streetcar Network

The streetcar offers an opportunity to establish a sustainable mode of transportation which serves the local communities along False Creek and throughout Downtown Vancouver, as well as for creating a new streetscape and public realm along Quebec Street.

● Realize Potential with Southeast False Creek Developments

The major developments and sustainable communities planned for this last undeveloped area along False Creek offer an opportunity to link this new high-profile neighborhood to the existing residential developments of City Gate (increasing connectivity).

● Create False Creek Ring Road Connecting Pacific to 2nd Ave.

Along 2nd Avenue, there is an opportunity to create a unified ring road encircling False Creek (connecting the many communities and public amenities along the waterfront to this section of Quebec Street).

CONSTRAINTS

There are many constraints restricting design improvements to the public realm of Quebec Street. The information gained in the site analysis will be used to propose solutions that respond to these perceived weaknesses.

Placelessness: Lack of Character and Identity

This site has many isolated areas which are vibrant and active, yet there currently is no shared image of a single place linking all of the unique spaces together with a solid sense of character and special identity.

Negative Impact of Overhead Viaducts

The viaducts, a vital component to Vancouver's regional traffic circulation patterns, are a major physical barrier separating the space into distinct experiences, the noise, smell and sight of these auto-oriented uses is offensive.

Lack of Clear Connections at Intersections

The intersection at Quebec Street where Pacific and Expo Boulevards meet is confusing, awkward, and ugly. This crucial juncture in the street system is marked by visible scars from previous failed alignments and inhibits efficient circulations.

Negative Impact of Parking Lot Adjacent to Street

The parking lot which runs the length of Creekside Park acts as a major barrier disconnecting the residents of City Gate with the park and False Creek. The parking lot's close proximity to the pedestrian realm diminishes the public realm.

General Site Isolation

The site is currently isolated from many of the surrounding activities and neighborhoods. There is little on site to service the needs of the residents of City Gate, which sits physically encompassed by extreme expanses of surface pavement.

Congested Intersection

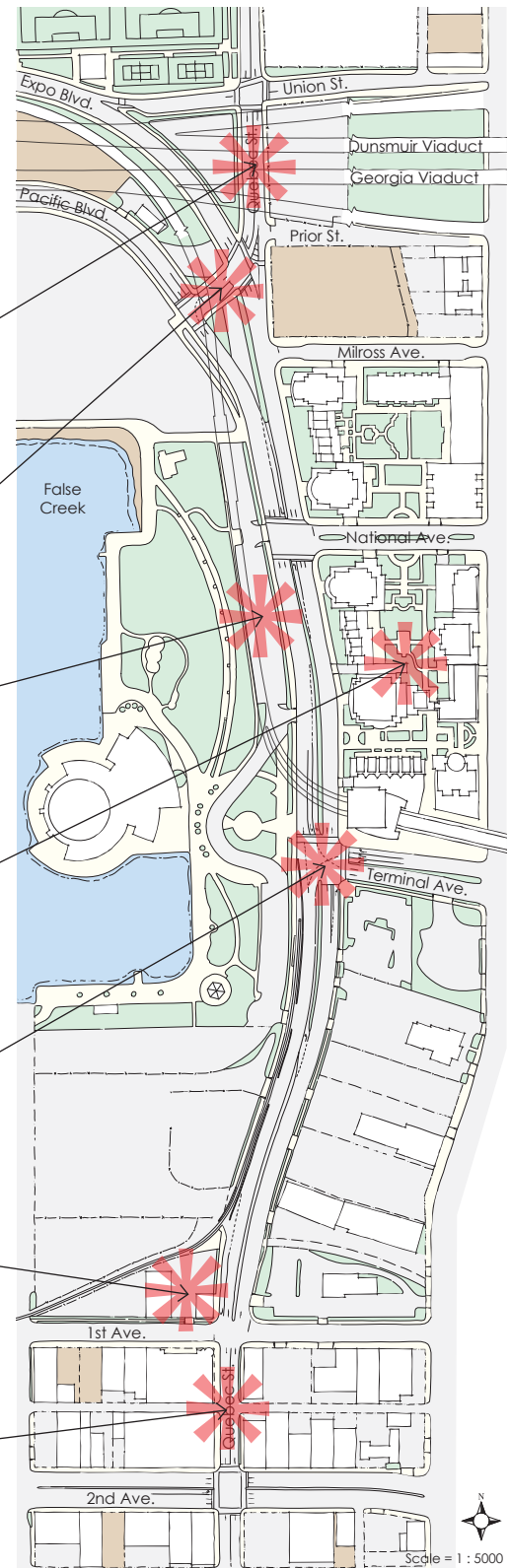
The intersection of Quebec and Terminal is very busy with automobile, pedestrian and bike traffic. There are few interlinking public amenities here to serve the huge crowds of people who travel through this space every day.

Large Blocks Incompatible with Residential Land Uses

There are large areas which are occupied by modern industrial uses. These uses resulted in coarse, underdeveloped block patterns, and are inhospitable when situated next to high-density residential developments.

Diminished Right-Of-Way

At First Avenue, the right-of-way of Quebec Street drastically narrows, as a result the traffic bottlenecks and congestion occurs, reducing the efficiency of all modes of travel. A new plan could help to link the areas around the site together.



CHAPTER 4



DESIGN RECOMMENDATIONS

URBAN DESIGN PRINCIPLES

• **Identifiable Sense of Place:** contribute to the creation of a coherent, well-defined, unique community identity that celebrates the natural, social and historical context of the space.

• **High-Quality Public Realm:** build well-functioning, comfortable and attractive places within the space created by the street, sidewalk, and building wall.

• **Livable Communities:** create places which contribute to the overall quality of life and well being of its inhabitants.

• **Integrated Transit Options:** legibly link different movement systems together with seamless connections.

• **Legible Street Hierarchy:** establish a clearly understandable street network which provides access and allows for efficient circulation.

• **Connected Open Spaces:** feature parks and open spaces as a central organizing element connecting adjacent areas together to create a walkable and cycling friendly neighborhood.

• **Active Waterfront:** dedicate water's edge to the public for recreational use linking the seawall to greater open space systems and communities.

• **Demonstrated Sustainability:** plan for improvements in a way that results in both the process and the product respecting social, economic and environmental concerns.

This chapter will recommend design goals and strategies for improving the public realm along Quebec Street. Presented here are eight design goals, each a single objective intended to address the major opportunities and constraints identified earlier. The goals are further detailed with several strategies that explore ways to achieve each goal through site specific design interventions. The strategies provide ways of transforming the space along Quebec Street based on lessons learned thus far. These preliminary considerations are broad suggestions to inform a much more detailed design plan created by a process which includes opportunities for public input and participation through open houses, design workshops and charrettes.

The design goals and strategies recommended throughout this chapter were created in accordance with several overarching design principles, which represent desired outcomes of effective urban design. The principles were collected from the City of Vancouver's planning and urban design departments, the Southeast False Creek Official Development Plan and from my own desire and value for design that ensures the creation of functional, attractive, memorable, comfortable, animated and safe cities and public spaces for all users.

Each goal, strategy and principle work toward the same end: to improve the public realm along Quebec Street and contribute to the long-term success of this area and Vancouver as a whole. Overall, I envision Quebec Street playing a crucial role in the emerging identity of False Creek as a continuous public amenity surrounded on all sides by well-connected and vibrant communities. These residential communities, set amongst lush and actively used public parks and open spaces, will reinforce Vancouver's great urban achievement. Through this design I wish to see people, residents and visitors, enjoying the many amenities located within the community. An array of options at your doorstep - a place where owning a car becomes a nuisance, where high speed and local trains zip past automobile traffic. I see Quebec Street linking all these great things together in a truly special place that strengthens and is strengthened by the valuable urban resource of False Creek and the greater identity and character of Vancouver.

DESIGN GOALS

**Generate a Strong Sense of Place and Identity
Based on a Unified Image of False Creek**

**Encompass False Creek with a
Grand Tree Lined Boulevard**

Modernize and Extend the Existing Streetcar System

Create a Public Transit Zone Linking All Systems

Strengthen and Expand Street Network

Reduce Visual and Physical Impact of Overpasses

Extend Creekside Park to Quebec Street

**Develop an Integrated System of
False Creek Oriented Open Spaces**

GENERATE A STRONG SENSE OF PLACE AND IDENTITY BASED ON A UNIFIED IMAGE OF FALSE CREEK

Goal Opportunities

- Emphasize Important Landmarks
- Realize Potential of Southeast False Creek Development
- Integrate New Residential Developments

Goal Constraints

- Placelessness: Lack of Character and Identity
- General Site Isolation

Goal Design Principles

- Identifiable Sense of Place
- Livable Communities
- Demonstrated Sustainability



Figure 4.1: Transit Station Sign, 2006



Figure 4.2: Transit Station Detail, 2006



Figure 4.3: Standard Park Sign, 2006

This goal envisions Quebec Street as a major, unifying element in the greater image of False Creek, anchoring the identity of the continuous ring of developments docked along the urban waterway. As the gem in the crown of False Creek's gleaming glass tower-lined public shoreline, Quebec Street's future is as a vibrant, active and bustling community people are proud to call home. The goal is to create a clearly recognizable and visible character for Quebec Street; a sense of uniqueness, belonging, safety, comfort, familiarity and a feeling of human attachment. In order to achieve this goal, Quebec Street must borrow and adopt from False Creek's existing strong image to establish a specific and specialized identity for itself. The strategies below recommend site specific design interventions to establish Quebec Street as a truly unique and special place, celebrating the natural, social and historical context of False Creek.

STRATEGIES

Develop a Clear Image

- Identify a theme (tool for telling stories) for the Quebec Street Community, established on shared cultural values and concerns.
- Possible themes: False Creek waterfront, environmental stewardship, the streetcar, outdoor recreation opportunities, or the area's industrial, railyard, and pre-settlement history.
- Create activities and events directly related to the community theme. For example, with the theme of outdoor recreation, future developments may include expanding the skate park, adding a BMX park, water sport venues, a velodrome and basketball courts.

Build Local Character

- Use design (of landscaping, street trees, street furniture, signs, banners, lighting, pedestrian crossings, etc.) to actualize an identified theme. For example use a consistent, recognizable image such as iron silhouettes of a streetcar.
- Reinforce patterns of form through: landscaping, building treatment/articulation, and movement/circulation patterns by maintaining a historical rail right-of-way as a remnant of past use.
- Preserve and adapt historical buildings for modern uses such as the Canadian Northern Pacific Railway Terminal (bus and train depot), the BC Electric Railway Men's Quarters (artist lofts), the Cobalt (bar and hotel), and the C&N Backpacker's Hostel.
- Recall historical structures and uses by adapting existing uses. For example, the great Market Hall was located on the current site of a fast food restaurant, creating a farmer's market here would recall its former historical significance as well as provide an essential service.

Make a Connection

- Integrate new and existing developments with Chinatown, Strathcona, Mt. Pleasant and eventually Southeast False Creek.
- Emphasize the important proximity to False Creek with permanent linkages to the water (street signs, special events, banners).
- Provide a natural transition at the street level between high-density residential uses of City Gate and the low-lying industrial uses to the south and east by creating development which strongly defines the street corridor through its built form and smoothly transitions from tall towers to much smaller buildings.

ENCOMPASS FALSE CREEK WITH A GRAND TREE LINED BOULEVARD

This goal seeks to seamlessly link Quebec Street to the proposed public realm improvement plans for Pacific and 2nd Avenues. This would create a unified urban experience focused on a single great street encircling the entire length of False Creek connecting many parks and open spaces to the water. The vision is of a vibrant and active boulevard bustling with heavy but managed automobile traffic, highly-visible public transportation in the form of prioritized streetcars and many people moving easily about by foot and bicycle. The creation of a False Creek ring road will strengthen the existing street hierarchy as well as activate the waterfront and enrich the community. The strategies below recommend unified tree and landscape treatments, strong linear connections to False Creek and the streetcar as core elements of the Grand Boulevard.

STRATEGIES

Create Unity with a Street Tree Strategy

- Establish a strong and solid framework for the boulevard by using the same tree species and median treatments along Pacific, 2nd and Quebec Streets. Select trees based on purpose (scale, color, canopy shape, character, street end view) and habitat (availability, ground condition, hardiness, environmental considerations). Consider these trees: Cleveland Norway Maple or Sawtooth Oak for sidewalks and Scarlet Sentinel Maple for medians.
- Pacific Boulevard will run along the planned Creekside Park extension, offering the opportunity to develop a boulevard through the park. Utilize landscaping along the street (medians, sidewalks, corner bulges) that relates to the landscape plans for the park, thus uniting the two spaces together. Continuing this special landscape treatment along the boulevard will reduce the scale of the corridor.
- Highlight the gateway intersections of 2nd & Quebec and Pacific & Quebec with design elements such as landscaped corner curb bulges, special lighting/paving, public art and/or heritage elements.

Strengthen Linear Connections to False Creek

- Construct strong physical, visual and experiential connections between the street and the waters of False Creek by accentuating the terminus of each cross-street with a prominent feature so people will be naturally drawn to the waterfront. (Examples include a heritage relic, sculpture, public art or the harbor itself).
- Redesign the intersection where Pacific and Expo Boulevards meet Quebec Street to seamlessly link these streets into a single experience. This intersection could act as the major entrance point to Creekside Park by focusing pedestrian activity towards the water.
- Landscape with native False Creek species such as tidal grass and crabapple trees. Rain gardens provide infiltration for run-off and should be incorporated wherever possible becoming part of a larger rainwater management strategy.

Quebec, A Streetcar Street

- Highlight the street car (proposed to run along Pacific/Quebec/1st Ave.) as a major linking element reinforcing the identity of the False Creek boulevard by incorporating images and heritage elements (interpretive panels, touchable artifacts, landmark tributes) into the design of streetcar vehicles, transit shelters and the right-of-way.

Goal Opportunity

- Create False Creek Ring Road Connecting Pacific to 2nd Ave.

Goal Design Principles

- Legible Street Hierarchy
- Active Waterfront
- Livable Communities



Figure 4.4: Plan of False Creek Tree Lined Boulevard with Gateways & Seawall



Figure 4.5: Scarlet Maple, Sawtooth Oak, & Norway Maple



Figure 4.6: Tree-lined Boulevard in Beijing, China
Credits: Bruce Perry, 2004

MODERNIZE AND EXTEND THE EXISTING STREETCAR SYSTEM

Goal Opportunity

- Extend Existing Streetcar Network

Goal Design Principle

- Demonstrated Sustainability

Streetcar Findings

- Exclusive Right-Of-Way Is Preferred
- Extend Improvements To Entire Public Realm
- Transit Shelter Design Should Maximize User Safety/Comfort
- Streetcars Are Easily Integrated Into Urban Neighborhoods
- Streetcars (Over Buses) Are Reliable and Permanent

The goal is to modernize and extend the existing streetcar system from its current terminus at Quebec Street and National Avenue to other areas of Vancouver such as downtown, the waterfront and Stanley Park. Creating a unified False Creek (by connecting its open space to the community) is highly dependent on designing improvements to the current streetcar network. This includes creating an integrated public streetcar system to serve Quebec Street and adjacent neighborhoods with stops at local community and commercial locations. A high-quality, modern public transit system is essential to providing residents with adequate access and mobility choices and by offering them an attractive alternative to the automobile. The double-track streetcar infrastructure and operation can be situated in a permeable and greened tramway. A contemporary, creative streetcar design will bring people, movements and vitality to the waterfront, creating a strong sense of character, place and identity. The strategies below recommend using the streetcar as a demonstration project of sustainable transit, establishing a streetcar only right-of-way along Quebec Street, and utilizing the construction of the streetcar as a catalyst for larger public realm improvements.

STRATEGIES

Demonstrate Sustainability

- Incorporate sustainable design features into the construction of the streetcar line by using as few impervious surfaces as possible. For example, where possible 'pave' the tracks with grass or rocks.
- Ensure the design of the streetcar through Creekside Park acknowledges the park and strengthens the connection from False Creek to City Gate by allowing frequent opportunities for people to cross the tracks.
- Emphasize the clean nature of modern streetcar systems and advertise its sustainability (on the trains, at stations, and on maps).

Spread Improvements Streetwide

- Create a plan which establishes that the streetcar construction will also include greater improvements such as street trees, transit shelters, benches, lighting, trash cans, clocks and beautification.
- Transit shelters offer the opportunity for incorporating public art and local community announcements as well as shelter from weather, seating and safety.
- Streetcars are easily integrated into urban neighborhoods, providing a reliable alternative to buses.

Prioritize the Right-Of-Way

- Creating a streetcar only trackbed and right-of-way will not only increase the streetcar's efficiency but will also work to define the spacial relationships along Quebec Street. The streetcar corridor will act as a focal element which minimizes the impact of such a large open space by breaking it up into a smaller human-scaled experience.
- Establishing a streetcar only right-of-way stresses public transit as a priority through this corridor making this sustainable option more competitive against the personal vehicle both in terms of speed and timing but also comfort and reliability.



Figure 4.7: Streetcar in Green Trackbed, Orleans France, 2006 Credits: City of Vancouver



Figure 4.8: Existing Conditions Cross Section of Quebec Street



Figure 4.9: Proposed Cross Section of Quebec with Streetcar Alignment

CREATE A PUBLIC TRANSIT ZONE LINKING ALL SYSTEMS

The goal is to create a public transit zone that links ferry, streetcar, SkyTrain, bus and rail circulation systems located nearby Quebec Street. Creating a highly visible and attractive public transportation zone will not only solidify and clearly indicate connections for travelers but will also establish transit as a major priority for the city. Single-occupancy vehicles travelling through the area will hopefully observe how smooth and simple it is to travel by public transit and be motivated to travel this way in the future. The transportation zone will also help strengthen the unique identity and character of False Creek by solidifying Quebec Street's key roll in the city-wide movements of people, reinforcing this civic priority to visitors and residents alike. The strategies below recommend establishing a clear and highly visible transit zone through the use of transportation oriented materials, recognizable and coherent signs and maps, and by prioritizing pedestrian, bicycle, and transit movements.

STRATEGIES

Design the Public Realm to Link Modes of Transportation

- A transit zone should be established encompassing the Pacific Central Rail Station to the east, the bus stop at Main and Terminal, the Main Street SkyTrain station, the Science World Streetcar Station and the False Creek Ferries to the west.
- Use specialized pavement treatments (color and texture) and materials (gravel, lumber, rails and rail ties) to demarcate a continuous zone of pedestrian space (sidewalks, park paths and crosswalks) to visually link the main transit stations.
- Street furniture (benches, newspaper stands, trash cans, clocks, lights, etc.) designed to reflect transit themes will reinforce the recognizable transit image and enrich the experience of travelers.
- Signs and maps should be placed at key points to aid people in locating the various stations and minimize confusion. Advertise locations of different modes of transit, including use of the ground plane, to facilitate intuitive movements and easy transfers.
- A main transportation kiosk could be built adjacent to or inside the coffee shop at Main and Terminal which sits at a very active point in the transit zone. This kiosk could provide maps and schedules (potentially real-time) of all available transportation options located nearby as well as information on events and activities.
- A series of public art spaces could be incorporated at key locations to provide another layer of connection using the theme of the historical and modern role of rail and transit to the vitality of the city.

Transportation Priorities: Alternatives to the Automobile

- Develop a movement system that reflects the city's downtown transportation priorities (in order of importance: pedestrians, bicycles, transit, goods movement, and automobiles).
- Movement systems should support transportation alternatives to vehicles by requiring dedicated space for bicycle lanes, greenways and tramways and through limiting the requirements for parking.
- Consider redesigning the surrounding streets right-of-ways to first ensure adequate space for sidewalks and crosswalks, then bicycle circulation and transit, and then allot the remaining space to goods movement and automobiles.

Goal Opportunity

- Increased Transit Connections

Goal Design Principle

- Integrated Transit Options

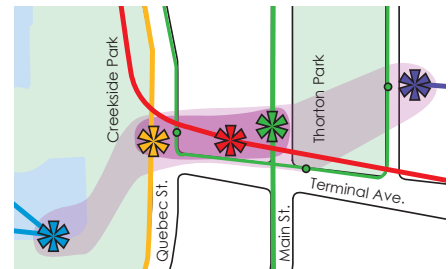


Figure 4.10: Transit Zone Linking Ferry, Streetcar, SkyTrain, Bus, and Rail Transit Systems

YOU ARE AT:






-  Main Street SkyTrain Station
-  Science World Streetcar Station
-  False Creek Ferries
-  Local Buses
-  Pacific Central Rail Station

Figure 4.11: Sample Kiosk Information Sign Placed at Key Locations to Direct Travelers

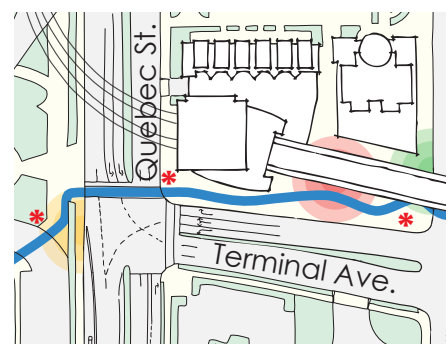


Figure 4.12: Demarcated Zone with Specialized Pavement Treatments Highlighting Stations

STRENGTHEN AND EXPAND STREET NETWORK

Goal Constraints

- Lack of Clear Connections at Intersections
- Congested Intersection
- Large Blocks Incompatible with Residential Land Uses
- Diminished Right-Of-Way

Goal Design Principles

- Legible Street Hierarchy
- High Quality Public Realm

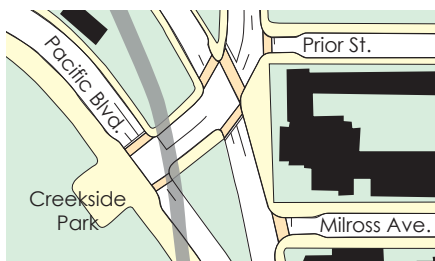


Figure 4.13: Plan Showing Proposed Changes to Intersection of Pacific & Expo and Quebec

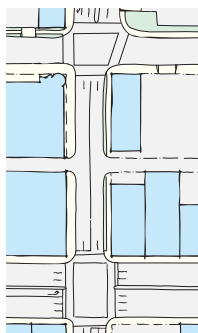


Figure 4.14: Option 1: Maximize Movements Without Altering ROW

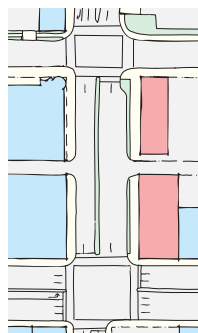


Figure 4.15: Option 2: Expand Street ROW New Parcels (pink)



Figure 4.16: Detail of Proposed Streets (blue) and Pedestrian Pathways (pink) for SEFC Lands

The goal to strengthen and expand the street network at and around Quebec Street is based on the need to create clear and functional street intersections which strengthen the overall system. In addition, there is a need to segment large, continuous blocks with new public street corridors. Currently, Quebec Street is a main arterial, providing movement of goods and is a major commuter and transit route. It is four lanes wide and would be improved by increased pedestrian and automobile access options within the neighborhood and by connecting to the regional circulation systems. The strategies identified focus on three specific intersections and recommend improvements to the overall street hierarchy.

STRATEGIES

Redesign Intersection:

Quebec Street At Pacific and Expo Boulevards

- Minimize ambiguous traffic lanes and maximize pedestrian and bicycle circulation (establish with lane markings, bulb outs, pavement treatments, etc.) to clearly distinguish separate spaces for the various uses.
- Create permanent parking only lanes set apart by widened sidewalks at intersections (will minimize crosswalk length and protect parked cars).
- Create clear connections and well defined pedestrian spaces at intersections by marking crosswalks with highly visible street paint in zebra-stripe patterns and provide gentle sloping curb cuts to ease transition between grade of sidewalk and street. Create pedestrian refuges where medians are wide enough.
- Create nodes of activity by focusing landscaping and public realm treatments at intersections (possible location for streetcar station).
- Extend the existing street network into development plans for the park creating a strong axis terminating at the waters of False Creek.

Redesign Block Pattern:

Quebec Street Between 1st and 2nd Avenues

- Research options for various alignment patterns for the street in order to allow maximum automobile efficiency while maintaining adequate pedestrian and bicycle movements.
- Option 1: Leave the right-of-way as is and narrow the sidewalks (as small as possible). Allow no on street parking and narrow travel lanes to allow two lanes of traffic in each direction (discourage or prohibit left turns at First Avenue).
- Option 2: Acquire property rights to extend the right-of-way of Quebec Street between 1st and 2nd Aves. in order to continue the tree lined boulevard streetscaping all the way to 2nd Ave. This will ensure that the pedestrian realm is not compromised and that traffic priorities have been honored.

Redesign Block Pattern:

Quebec Street between National and 1st Avenues

- Create two new local serving streets east/west between Quebec St. and Main St. This will make a finer grained street and block pattern providing access for the new commercial and residential developments and transition to the False Creek Flats area.
- The streets will transition between the standard street patterns to the north and south of the site with the new block design.

REDUCE VISUAL AND PHYSICAL IMPACT OF OVERPASSES

The goal to reduce the visual and physical impact of overpasses focuses on the Georgia and Dunsmuir Viaducts and to a lesser extent the SkyTrain guideway. Overpasses have long been considered a necessary evil of regional street hierarchies and traffic circulation patterns. Typically, little has been done to minimize the negative impacts or to functionally improve these spaces. Considering the development potential of overpass space as part of the fabric of street and community design is an opportunity to create a seamless high quality public realm, by increasing the aesthetic qualities in this area. The strategies below recommend masking the harsh monolithic concrete viaducts with vegetation, physical improvements and structured activities to visually and physically break apart the barrier into separate experiences.

STRATEGIES

Reduce Negative Visual Overpass Elements

- Create articulation along the continuous concrete face of the viaducts through masking techniques that create a well-defined pattern and visual rhythm. Techniques may include strategic tree placement, landscaping and sponsored public art projects (graffiti, community murals).
- Envision these massive concrete structures blending into the space instead of dominating the experience by using techniques such as colored concrete, artistic geometric patterns and textured details to soften the hard edged concrete structures with color and life.
- Sponsor activities that activate the space in such a way that distracts viewers from the negative image of the solid mass created by the viaducts. Examples include promoting and embracing the existing skate park, constructing a BMX park, and by establishing an overall series of sports activities into a larger and cohesive recreational system.
- The SkyTrain guideway can be visually improved by incorporating some of the same improvements suggested for the Dunsmuir and Georgia Street Viaducts such as sponsoring public art on the blank concrete surfaces, extending the existing tree barrier, and by emphasizing views to Science World and Creekside Park.

Reduce Negative Physical Overpass Elements

- Clearly connect both sides of the viaducts through linear pathways which will guide pedestrian traffic from one side to the other. This can be accomplished in conjunction with the potential streetcar alignment on Quebec Street beneath the viaducts. The streetcar will be a physical cue connecting the activities in each area.
- With park space developed on either side, the physical impact of the viaducts will be minimized by maximizing the amount of green space in relation to the grey and black space created by the viaducts and the roadways which run beneath and along side of the structures. The two park systems on either side can be integrated to create a unified space which is experienced as overpasses passing through a single large park instead of as two parks separated by impenetrable overpasses.
- Maximize use of the space beneath and alongside the overpasses, perhaps as space for the streetcar maintenance facility, as a Park & Ride parking lot, or as multi-use flex space for recreational or community based activities. The SkyTrain has an opportunity for a specialized parking space beneath and alongside the guideway.

Goal Constraint

- Negative Impact of Overhead Viaducts

Goal Design Principles

- High Quality Public Realm
- Connected Open Spaces



Figure 4.17: The Georgia and Dunsmuir Viaducts at Pacific Avenue Before



Figure 4.18: The Georgia and Dunsmuir Viaducts at Pacific Avenue Proposed

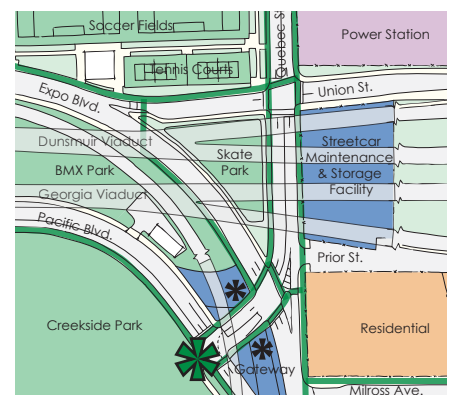


Figure 4.19: Plan of Areas Near Quebec Street & The Viaducts Showing Proposed Connections

EXTEND CREEKSIDE PARK TO QUEBEC STREET

Goal Opportunity

- Expand False Creek Open Space Network

Goal Constraints

- Negative Impact of Parking Lot Adjacent To Street
- General Site Isolation

Goal Design Principles

- Connected Open Spaces
- Active Waterfront
- Demonstrated Sustainability

The goal to extend Creekside Park to Quebec Street minimizes the barrier effect of the parking lot which runs almost the entire length of the eastern side of Creekside Park. This parking lot currently visually separates the pedestrian experience of the park from the street with a large area of pavement. By connecting City Gate developments to the surrounding open space system several design interventions would be realized. It would allow fluid pedestrian movements between open spaces as well as retain on-site parking for Science World and the park. The impact of the parking lot would be reduced by extending the open space to Quebec Street and across to the doorsteps of City Gate. This would eliminate a 400 meter long barricade and solidify Quebec and Pacific as grand boulevards with abundant green space. In addition, this improvement would enhance the appearance of the SkyTrain viaduct to the Quebec Street users. These strategies recommend retaining parking under the SkyTrain viaduct while maximizing improvements to the surrounding environment.



Figure 4.20: Proposed Plan of National St. with Pedestrian Space Entrance to Creekside Park

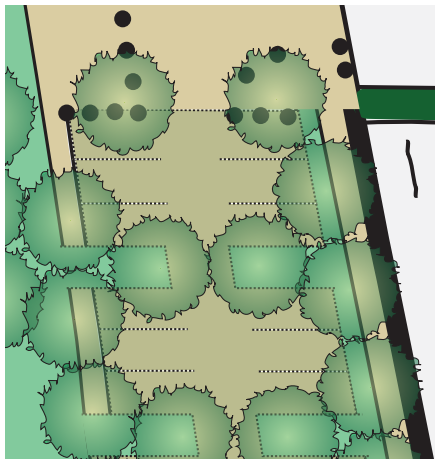


Figure 4.21: Proposed Plan for Car Park with Improved Water Management Features

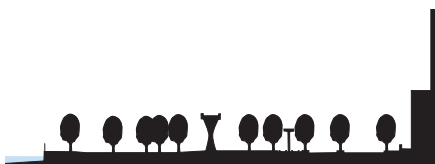


Figure 4.22: Proposed Cross Section from False Creek to the Base of City Gate Towers

STRATEGIES

Reprioritize Parking Into Pedestrian Space

- Minimize the oppressive nature of the currently continuous parking lot by breaking it into smaller pieces which are permeated by pedestrian spaces. The best places to realize this strategy is at the intersections of National and Terminal because this is currently the main pedestrian entrance to Creekside Park.
- By clearly marking this new space with special pavement treatments and bollards (separating car and people space instead of curbs), the overall sense would be space that belongs to pedestrians with cars only allowed to pass through. This is much different than the current situation in which pedestrians wait for cars, giving the authority of space to the motorists. Currently, people are intimidated by cars instead of cars waiting for pedestrian traffic.

Create A Park For Cars

- Bring False Creek to Citygate by turning the parking lot into a green car park: a place to park cars but also integrated as part of the Creekside Park. Incorporate water management features such as open-swale drainage to False Creek creating connected green spaces, and discontinuous paved spaces.
- Minimize impervious surfaces by using permeable pavers for the shared auto/pedestrian spaces and for parking areas. Different colored pavers can be used to demarcate parking stalls instead of paint (more permanent, no toxic runoff).
- Park a tree in every fourth parking spot to extend the experience of open-space to the parking lot.

Connect City Gate and False Creek

- Use trees, landscaping, benches, lighting and other park amenities to visually extend and link park treatment from False Creek to the base of the towers on Quebec Street.
- Minimize vast scale of street by separating spaces into a series of human-scaled experiences using planting strips, landscaping and street trees, thereby enhancing the public realm of False Creek.

DEVELOP AN INTEGRATED SYSTEM OF FALSE CREEK ORIENTED OPEN SPACES

For the goal to create a well-connected sequence of open spaces focused on False Creek, it is essential to link all neighborhood parks in the area into a larger network. By establishing pedestrian and bike corridors between open spaces and False Creek it is possible to create a city-wide network of parks that will allow people to travel easily between these spaces. Signs and street treatments such as pavement materials, specialized crosswalks, and landscaping will be used to create spacial awareness. A continuous network of corridors will establish pedestrian and bicycle priority and link several communities which currently feel disconnected and isolated. Strong visual and physical connections between the waterfront and neighboring communities will be preserved by establishing new and reinforcing existing view corridors, such as those which terminate at Science World. These strategies aim to promote movement to the waterfront through designated pathways, visual cues and focal points. The strategies encourage animation of the public waterfront through selection of land uses and design of shoreline features.

STRATEGIES

Visually Link Open Spaces

- There are several well-established view corridors which should be preserved and enhanced so that they clearly connect the various open spaces into a larger network.
- Regulate tree and building massing to emphasize view corridors along National Avenue, North False Creek and down Georgia Street, all of which terminate at Science World and strongly orient people toward the water.
- Landmarks and local artwork should be utilized to terminate views to False Creek. This will establish a clear mental map of the area with the water as the main organizing feature.

Make Green Paths

- Establish connecting corridors which clearly link Creekside Park, Andy Livingstone Park and Thorton Park along National, Terminal, Quebec, and Carrall Streets by continuing green elements through the streets (such as continual treed boulevards and specialized crosswalks at intersections using the same type of materials).
- Terminate new corridors at the waterfront, thus integrating the seawall and False Creek into the existing street network as well as the greater Vancouver park system.

Connect Bike Routes Through Open Space System

- Create a simple, yet functional bike transition connecting the Adanac/Union bike route in the north to the 1st Ave/Central Valley Greenway route in the south through Creekside Park.
- Use existing spaces and right-of-ways to establish bike priority lanes which allow commuter bike riders to transfer between regional corridors efficiently and intuitively by providing well-marked lanes and pathways which do not conflict with or impede other movements.
- Install recognizable and comprehensible signage to inform commuters and leisure riders of the various bike lane hierarchy that exists around False Creek and throughout Greater Vancouver.

Goal Opportunity

- Expand False Creek Open Space Network

Goal Design Principles

- Connected Open Spaces
- Active Waterfront
- Demonstrated Sustainability

Figure 4.23: Proposed Concept of View Corridors with Sample Locations of Landmarks

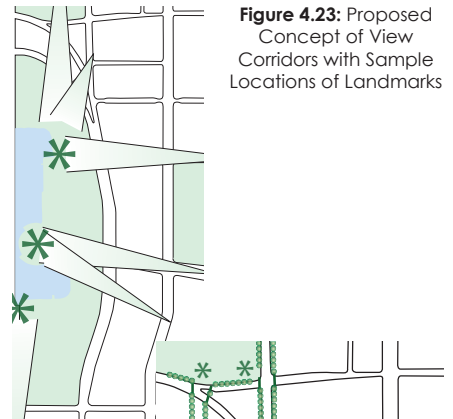


Figure 4.24: Proposed Concept of Green Corridors Linking Surrounding Park Spaces

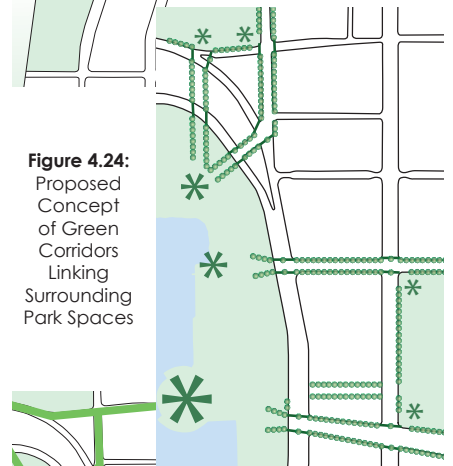
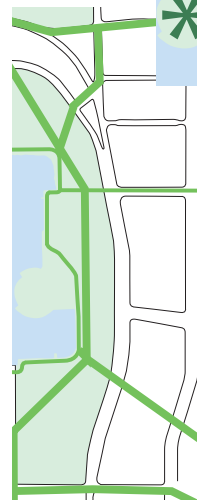


Figure 4.25: Proposed Concept of Bike Routes Travelling Through Park Space



CONCEPT



DIAGRAM



CHAPTER 5



CONCLUSIONS

This professional project provides city planners with strategies to improve the public realm of city streets. Specifically, this research has explored ways of improving the public realm of Quebec Street. This project began with the topic of great streets, examined why Quebec Street is not a great street and recommended ways to transform the public realm into a great street.

First, this project analyzed the successes and failures of three examples of streetcar projects from around the world to illustrate how other cities are designing their transportation systems and public spaces. By researching projects in Toronto, Portland, and Seattle this chapter summarized a set of key findings to be applied to the design of Quebec Street. These findings were:

- Exclusive streetcar right-of-ways provide greater streetcar efficiency, this helps reduce car dependency and makes transit more competitive.
- Streetcars can also operate in mixed traffic lanes without removing on-street parking and loading capabilities.
- Transit improvements provide a greater opportunity for wider public realm improvements along the corridor.
- Transit shelters should be designed with adequate space and amenities to maximize comfort and safety for all users.
- Streetcars are easily integrated into densely developed, pedestrian-oriented, urban neighborhoods.
- Utilize unused space for streetcar functions by placing uses like the streetcar maintenance facility under a highway overpass.
- Infrastructure investments can be minimized by choosing lighter, modern streetcar vehicles which require lower construction and operating costs.
- There is a serious need for local transit mode diversity and this should be realized.
- Streetcars, which are perceived to be more permanent and reliable, attract more riders to transit than a similar bus line.
- The stable nature of streetcars attracts private investment, both in funding the initial streetcar construction and also in greater investments to the surrounding neighborhood.



Figure 5.1: Active Listening at a Charrette
Credits: Urban Design Handbook

The site analysis examined in detail the specific context of the Quebec Street site, specifically identifying the strengths, opportunities, weaknesses, and constraints. This chapter presented many different layers of information, which were synthesized into a summary of the main opportunities and constraints for the design of Quebec Street.

The opportunities were to:

- Integrate New Residential Developments
- Create False Creek Ring Road Connecting Pacific to 2nd Ave.
- Expand False Creek Open Space Network
- Emphasize Important Landmarks
- Increase Transit Connections
- Extend Existing Streetcar Network
- Realize Potential with Southeast False Creek Developments

The constraints were:

- Placelessness: Lack of Character and Identity
- Negative Impact of Overhead Viaducts
- Lack of Clear Connections at Intersections
- Negative Impact of Parking Lot Adjacent to Street
- General Site Isolation
- Congested Intersection
- Large Blocks Incompatible with Residential Land Uses
- Diminished Right-Of-Way

With a set of design principles in mind the project recommended eight specific design goals, each with two or three supporting design strategies, to improve the public realm along Quebec Street. The design strategies were illustrated with supporting images, maps and drawings to further describe the intended outcome of the proposed design interventions. The design goals were to:

- Generate a Strong Sense of Place and Identity Based on a Unified Image of False Creek
- Encompass False Creek with a Grand Tree Lined Boulevard
- Modernize and Extend the Existing Streetcar System
- Create a Public Transit Zone Linking All Systems
- Strengthen and Expand Street Network
- Reduce Visual and Physical Impact of Overpasses
- Extend Creekside Park to Quebec Street
- Develop an Integrated System of False Creek Oriented Open Spaces

The next step for the recommendations of this project are to initiate a large scale design development process, one which includes various opportunities for public participation. The City of Vancouver can use the recommendations presented here to begin a public realm improvement process which will first establish a group of the various stakeholders to include as active members of the redevelopment team. The findings presented in this document can be used as a background for further work once the team of designers, planners, business owners, community members and other stakeholders are assigned to the project. These recommendations along with budget and time frame estimates can then be presented to the community at various open house events to hear their feedback about the ideas, and to get the community involved on developing new options that the public can support. Once a direction has been established then further work can take place in the form of workshops and design charrettes, where various members of the different stakeholder groups come together to create detailed design proposals. After several iterations of design ideas from the charrettes and workshops, the final design development can take place terminating with a plan for Quebec Street, one which seeks to create a streetscape that enhances the experience for all users and enriches the lives of those who call Quebec Street home.

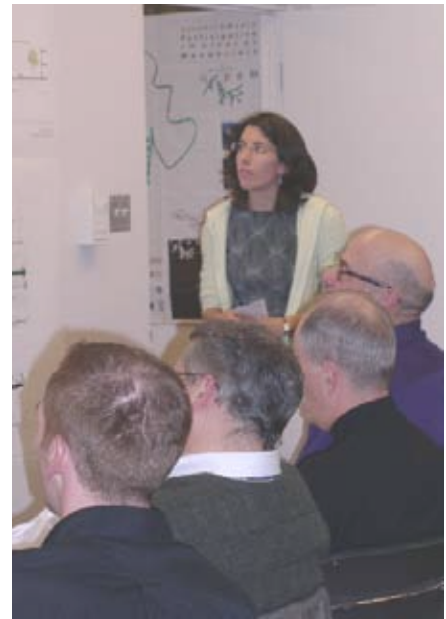


Figure 5.2: Presenting Design Ideas, 2005
Credits: Lisa Brideau

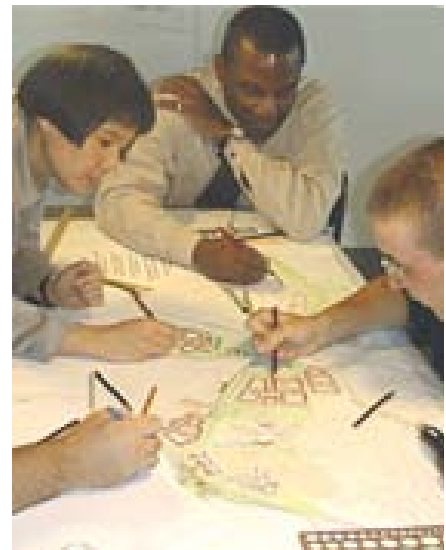


Figure 5.3: Collective Design at a Charrette
Credits: Urban Design Handbook

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Cover Page & Figure 0.2: Paul Smith, 1999.

Figure 1.15: Les Twarog, 2006. www.lestwarog.com/cooperslookout.

Chapter 2 Title Image: Vancouver Downtown Historic Railway, 2005. www.trams.bc.ca/dhr.

Toronto Tile Image: City of Toronto, 2006.

Portland Title Image: Peter Ehrlich, 2006.

Seattle Title Image: Seattle Department of Transportation, 2006.

Site History Title Image: City of Vancouver, 1978.

Quebec Street Today Title Image: City of Vancouver, 2003.

Future Plans Title Image: Thom Quine, 2006.

Chapter 4 Title Image: Southeast False Creek Development Plan, City of Vancouver, 2006.

Figure 4.5 (Scarlet Maple): Lee's Nursery, 2006.

Figure 4.5 (Sawtooth Oak): JusTrees, 2006.

Figure 4.5 (Norway Maple): City of West Bend, Wisconsin, 2006.

Chapter 5 Title Image: Scott Berkun, 2006. www.flickr.com/photos/biznik/223979093.

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