Design on the edge: an urban industrial waterfront in Richmond
Bridgeport Sub-Area and Van Horne Industrial Park

By

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B Sc. (Agr.) University of British Columbia, 1998

A thesis submitted in partial fulfillment of the requirements of

the degree of

Master. in Landscape Architecture

In

The Faculty of Graduate Studies

University of British Columbia

We accept this thesis as conforming to the required standard

The University of British Columbia

May 2002

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Date _August 22, 2002_

Abstract

Richmond, also known as Lulu Island, was carved out from the passage of the Fraser River to the Pacific Ocean. The River and its rich delta soils have bestowed a strong fishing and agricultural industry upon Richmond. This thesis examines an area of Richmond that is located along the shores of the Fraser River where the North Arm splits into the Middle Arm. This area, specifically the Bridgeport sub-area and the Van Horne Industrial Park, is a predominantly light industrial neighbourhood located along the northwest shores of Richmond.

This particular site has gradually undergone redevelopment over the past ten years as commercial land uses have begun to take the place of residential and agricultural land uses. These new land uses, in many instances, are not complementary to one another and the area moves towards becoming dominated by big box commercial and tourism-based commercial. Residential land use is being replaced by these new land uses due to the noise generated from the flight path for the north runway of the Vancouver International Airport which passes directly over this neighbourhood.

This thesis explores three revitalization schemes that would allow for the redevelopment of this area to proceed in such a way that creates an opportunity for a strong neighbourhood identity. One that recognizes the demands and diverse nature of the area while establishing a variety of land uses that are able to coexist and take advantage of the site's physical and experiential attributes and its strategic location within the city and region.

Table Of Contents

List of Figures

Acknowledgments

I would like to thank my thesis committee Louise Boutin, Brian Guzzi, Don Luymes and Douglas Paterson whose support, perseverance and guidance throughout this process was invaluable. A warm acknowledgement is also owed to the 'unofficial' members of my committee Joanne Proft and Bruce Greig who kindly offered their time and insight. I would also like to thank my family and friends for not calling search and rescue. Thanks and appreciation are owed to the staff at the City of Richmond for all of their help and assistance.

Finally a special thanks to my classmates for their honest feedback and good company during the late hours.

Overview and Summary

1.1 Introduction

The growth and redevelopment of a city is a dynamic process. It is important to establish 'good bones' for a city to grow on thereby creating positive spaces and logical sequences of the built and natural form. Often cities in their planning strategies neglect areas which end up becoming 'leftover' space and subsequently this space is relegated to one type of land use or a variety of incompatible land uses. When these areas make up the edges of a city the effects often weaken the network of the city as a whole.

Richmond is a local example of a community that is experiencing these pressures of urban growth and transformation. Richmond can be described as a multi-cultural, post-modern city, one that has developed over a short period of time. The area of interest for this thesis is located within the Bridgeport neighbourhood. This site is bounded by No. 4 Road, the Moray Bridge, the Bridgeport Road/Sea Island Way couplet and the North Arm of the Fraser River. A prominent feature of this site is the now abandoned Bridgepoint Market, a once promising urban link to the waterfront this market is now virtually abandoned. What remains in the surrounding area is a mix of light and heavy industrial uses and an active marina on the south side of Moray Bridge and at the Bridgepoint Market.
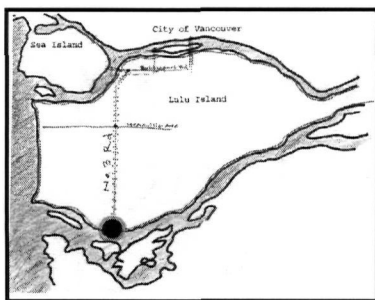
Figure 1: No. 3 Rd Corridor

The site for this project is situated at the end of the No. 3 Road corridor which runs the north-south length of Richmond (Figure 1) and acts as Richmond's unofficial main street. No. 3 Road can be thought of as a significant processional route for the City of Richmond as it links the North Arm to the South Arm of the Fraser River and passes directly through the city centre and past significant nodes such as City Hall, Richmond Centre and Brentwood Mall. City Hall acts as a major civic node (Figure 2) and connects to a larger civic green space that is located to the west of it. The southern terminus of No. 3 Rd is rural in character as this end is predominantly surrounded by agricultural land. This terminus is situated at the South Arm of the Fraser River which is articulated with lookout areas and a public trail system. This contrasts the northern end of No. 3 Rd which ends unceremoniously at Bridgeport Road instead of at the shores of the Fraser River, thus not providing a visual connection.
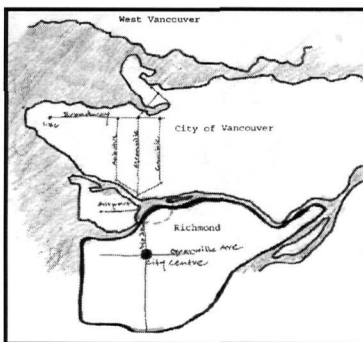
Figure 2: Larger context of No 3 Rd, project site delineated with dashed line.

The northern end of No. 3 Rd is where Richmond connects to the rest of the Lower Mainland as this is where Bridgeport Road connects to the Moray couplet system and the Oak Street Bridge, both of which connect to the larger street system of Vancouver (Figure 2). This is where the first northern Richmond entrance from the Oak Street Bridge brings people in from the Lower Mainland to the airport along Bridgeport Road (Figure 3). The Moray couplet brings people into Richmond from the direction of the airport (Figure 4).

This area therefore becomes a pivotal point in Richmond's circulation system.

As the 'main street' of Richmond, No. 3 Rd needs to be anchored at its northern and southern ends in order to strongly define this as a main corridor. No. 3 Rd presents an opportunity to reveal the island status of Richmond by creating a visual connection to the River at either end. The significance of the northern end of No. 3 Rd in addition to being a pivotal point in traffic circulation is that it is also a pivotal point in the River as this is where the Fraser divides into its Middle Arm (Figure 5).

1.2 Thesis Goal

To create a strong neighbourhood identity through a revitalization scheme that takes advantage of the site's physical and experiential attributes, its strategic location within the city and region in such a manner that balances social, economic and ecological imperatives.

1.3 Thesis Objectives

To generate three designs for the site, not as a master planning exercise but as a way to explore the following objectives:

- To develop a framework that allows for vibrant districts with multiple yet compatible land uses including residential.

- To increase public open space along the river.

- To reconnect the existing trail system on the site.

- To preserve the existing Environmentally Sensitive Area.

- To articulate the end of No. 3 Road through a civic node.

- To link the riverfront to the rest of the city through the No 3 Rd corridor.

- To introduce two key uses for the site (a trade centre and educational facility) that will act as an anchor and as activity points in the development of the site.

- To develop a block and street pattern that supports local business, light industry and compatible residential use as well as creating a pedestrian friendly environment.

- To locate a transit station that serves both light rail and bus transit.

- To preserve existing commercial and industrial businesses that provide a job base for this area.

1.4 Theoretical/Policy Basis:

It is necessary to review the current policy (Official Community Plan) of the City of Richmond in order to distill themes from the policies that relate to the possible land uses for this site. It is also necessary to look at waterfront projects that address industrial

2

redevelopment, as precedent. This will involve a literature search into past projects of similar scale and context.

Precedent sites include:
- -London, England: the redevelopment of canal lochs.
- -False Creek, BC
- -Eastern Docklands (Borneo), Amsterdam
- -Toronto Waterfront

These precedent sites will be evaluated as a potential typological framework for this particular site and used in part to create the basis for the site programme itself.

1.5 Methodology:

1. A phenomenological approach will be used in investigating the existing experiential qualities of the site. Also an investigation on authenticity as a way of possibly informing the failure of the Bridgepoint Market site.
2. Multiple design approach in order to explore different options.
3. Land use proposals will be investigated for the area in conjunction with the existing planning process and projections that the City of Richmond has for this area.
4. A programme for the site will be developed to create a solid framework for this project.
5. The site will be evaluated on four different scales:
   - *The larger City of Richmond.*
   - *The Fraser River: rationalizing the mouth of the River as to how it relates to the River as a whole.*
   - *The specific site located between No 4 Rd, Sea Island Way and the Moray Bridge.*
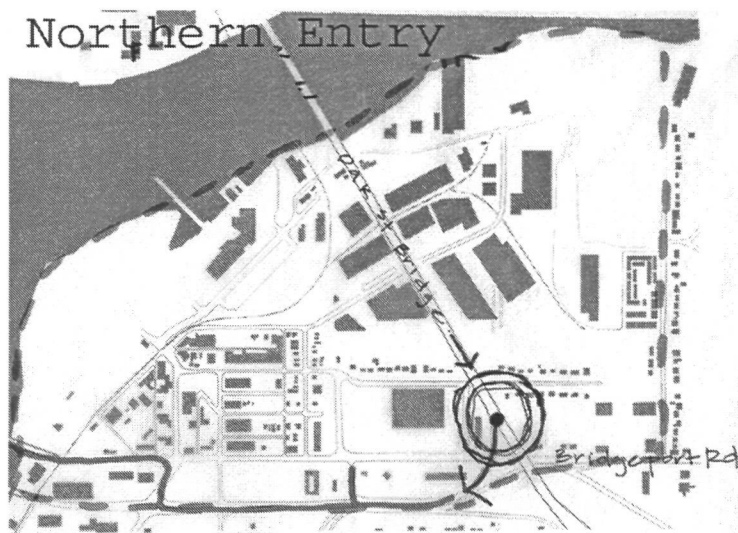   - *The details of this site.*

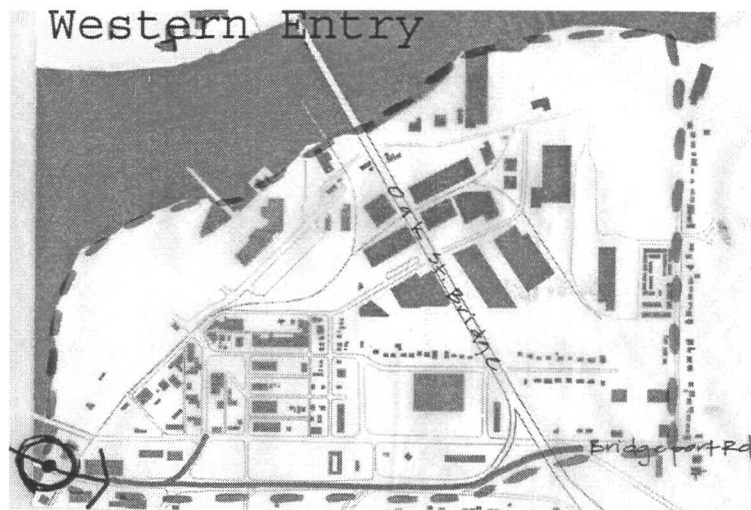**Figure 3:** Northern entry off of Oak Street Bridge

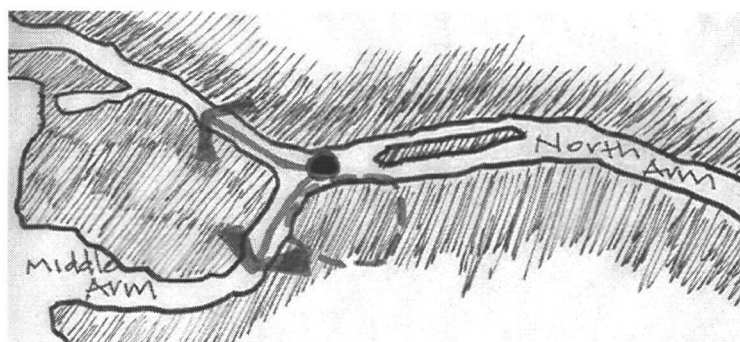**Figure 4:** Western entry off of Moray couplet

Figure 5: North and Middle Arm of Fraser River

Review of Theoretical/ Policy Literature

2.1 Literature Review

1. Cycles of Urban Growth and Decay

The postmodern city is one that is subject to the phenomena of urban revitalization and redevelopment. These changes are constant and revolve around the forces of socio-economic and cultural shifts that are happening at a global scale. This section aims to discuss the 'recycling' that occurs in a postmodern city under the framework of ideas that have been put forth by social geographers and urban planners.

In Leonie Sandercock's *Cosmopolis* she discusses her own utopic sentiments for the application of postmodern theory in urban planning. She criticizes modernism and positions herself in 'utopian modernism' while offering alternatives in the realm of theory and pedagogy. She begins by challenging the system of power that is currently operating, that defined by modernism. Sandercock defines modernism as those theories and practices held by European planners and architects such as Le Corbusier and Hausmann and Americans such as Frank Lloyd Wright. These modernist notions speak of technical rationality, order, coherence, regulation and homogeneity whereas the postmodern city is heterogeneous in nature. She establishes the parameters of modernist ideology as being overtly individualistic, entrepreneurial, paternalistic and controlling. Her utopian 'cosmopolis' calls upon the theories of feminism, post-colonialism, and post-modernism. This results in three major influences that she sees responsible for the changes that would allow and foster her theories.

These influences are:
1) Age of Migration (Changes in demographics.)
2) Post-colonial politics
3) Rise of Social Movements

Her theories are based in culture rather than (Marxist) economics, in doing so she concentrates her attention on the demographic restructuring of cities. Such changes include the reclaiming of urban and regional space by First Nations, women, minority groups among others. She discusses the fear of 'the other' that surfaces in larger cities that are becoming multi-ethnic/racial at such a fast pace that this diversity results in racial strains.

Michael Dear takes a different approach in his article *"Imagining Postmodern Urbanism"* where he divides postmodern urbanism into 3 stages of growth: birth, youth and maturity. Birth begins with a homogeneous slab or a blank slate that possesses the inherent potential for connectivity to the world around it. Development begins sporadically with small parcels that do not relate to any urban core or to the conventions of traditional urban space and its edges (Dear, website). Here he uses an image of Slab City, a campsite located in the California desert on an abandoned military site. This area is a stop over for travelling senior citizens and acts as a makeshift community during the wintertime. A unique community in that it is characterized by the beginnings of a town infrastructure replete with services from repair shops to barbers and a 'happy hour' every afternoon.

The next stage in development is youth where these small parcels proliferate into larger parcels that grow in proximity to one another but do not possess any functional similarities to one another. This produces a 'theme parkization of the landscape' (Dear, website). This densification continues and proper infrastructure is added as an afterthought allowing the area to appear as a traditional townscape yet inter-parcel connectivity remains elementary. During the final stage of maturity sprawl becomes evident in this now polycentric metropolis. Functional connections between the core and hinterland may occur on a regional basis but connections are just as likely to cores in other regions or even on a national and global level (Dear, website).
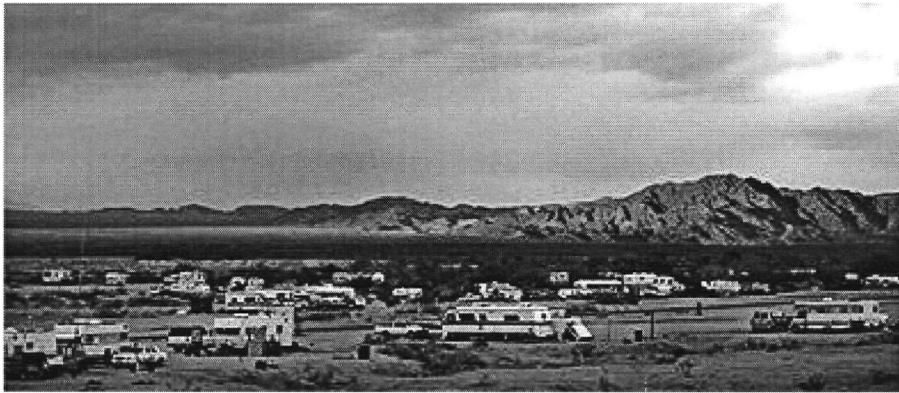

Figure 6: *Slab City*   Source: Prime Times, "Welcome to Slab City", http://www.mailtribune.com/primet/archive/1999/41399p1.htm

Nan Ellin's *Postmodern Urbanism* discusses how the development trends of the early 1980's focused on the edges of cities and have created what are now known as "outer cities" or "edge cities". The land uses found in these areas rival those of the city core and include business centres, shopping malls, public space, and low density residential among other uses. These areas often strive to become more user friendly and pay close attention to colour, ornament, themes by mimicking the aesthetics and details found in traditional cities.

There are many opinions revolving around edge cities. Some view them as a "physical expression of the service and information economy, just as the traditional city was an expression of the era of manufacturing" (Ellin, p. 87). The last episode of urban growth occurred a century ago as marked by the era of manufacturing. We are now experiencing a similar surge due to the proliferation of the service industry and this is evident in the edges of our cities, at major suburban freeway interchanges, turning this traditional metropolis structure inside out.

Vancouver is an example of a city that has experienced many economic and social changes due to its restructuring from a manufacturing-based to a service-based economy (tertiarization). The restructuring as experienced by Vancouver has not only been led by the growth of the tertiary sector but it is also seen in the expansion of such service industry categories as finance, insurance, and real estate which have experienced a 300% increase in the last 3 decades (Hutton, 1994). This has consequently spurred a reconfiguration in Vancouver notably in the spatial expression of the City itself. This is seen in the functional specialization and globalization of the central business district and central city and also by the proliferation of suburban areas (the creation of edge cities). It is also seen in the inner city through processes of removal, relocation, transition and redevelopment (Hutton, 1994).

In *Edge City* Joel Garreau discusses this shift as an effort to change our routines of work, play and home. The inhabitants of the edge city commute and live within these new urban job centres while, in some cases, the original downtown areas become a ghost town. He tackles various issues by looking at specific regions across North America as examples and uses these regions as a starting point to undertake several issues. These include issues such as civil liberties as seen in New Jersey's Bridgewater township. Here the town centre is found in a privately owned mall. Issues of enforced conformity are found in Phoenix where residential communities are run by corporations rather than government.

Garreau establishes a five part definition for a place to be considered an edge city. According to Garreau an edge city is any place that:

1. Has five million square feet or more of leasable office space-the workplace of the Information Age.

2. Has 600,000 square feet or more of leasable retail space.

3. Has more jobs than bedrooms. The population increases at 9am and decreases at the end of the workday.

4. Is perceived by the population as one place. (A destination.)

5. Was nothing like 'city' as recently as thirty years ago.

(Garreau, p. 6-7, 1991)

In general, Garreau agrees with the trend of the edge city which he supports with the simplistic market capitalist assumption that if that's where people are then that's where they want to be. In doing so he ignores the people left behind or deliberately excluded from the edge city (ie the poor) and doesn't discuss the inner city as a place where non-desirable land uses occur (such as highways). These places therefore become the true left over spaces. It can be said that this form of development is responsible for increasing the gap between rich and poor. The same processes that create 'edges' also act to divide us according to race, income, and culture and pose a threat far greater than that which can be circumvented by the wonder of these places (Ellin, 1996).

2. History and Memory

> *"An authentic sense of place is above all that of being inside and belonging to your place both as an individual and as a member of a community, and to know this without reflecting upon it."*

(Edward Relph, 1976 in *Place and Placelessness*)

This section looks at issues associated with history and memory as a way of discussing the social and cultural importance of managing the cycles of urban growth and decay. Properly managing these cycles allows for the preservation of history and memory. This discussion of history and memory ties into notions of authenticity as many new developments ignore the existing history of a place and instead impose a set of historical aesthetics that do not bear any reference to the memory of place.

An authentic image of a city can be said to be forged and understood by the inhabitants themselves (Lynch, 1972). Therefore an important aspect of authenticity is appropriation (Patterson, Larc 520). Authenticity involves reflecting upon your surroundings in such a way that concern is shown for the area and its many components, allowing the inhabitants to take exclusive possession. Another definition that ties into authenticity is 'experiential depth' (Paterson, Larc 520). This can take many forms including: social richness, diversity, opportunity, historical depth among many others.

In Christine Boyer's article *Cities for Sale: Merchandising History at South Street Seaport* she discusses the city as 'a spectacle' and uses South Street Seaport in New York City as an example. She defines such peripheral developments much in the same way that Joel Garreau describes the Edge City, as a place where work, play and residential come together. It is the lack of cultural and social richness of these places on which Boyer focuses her discussion on authenticity. In describing such developments along the East River in New York Boyer states:

> "Certainly no unified image of the city emerges from this series of disparate scenic views. Nor does a visionary masterplan establish a logical and orderly arrangement of the scenery. New York is no longer a city concerned with such high Modernist aspirations as providing a broad range of housing, efficient public transport, or leisure and work spaces for the masses...These developments are pre-mixed design packages that reproduce pre-existing urban forms: office and residential towers, townhouses and hotels, stores and restaurants, health clubs, performing arts centers, museums, esplanades, marinas, parks and squares." (p.182-184)

Boyer discusses these private enclaves as places that cause "... a reframing of urban reality" (p. 187). She describes these types of developments as insulating the privileged from the realities of a city and therefore from any sense of their civic responsibilities. Thus echoing Nan Ellin's ideas of how these places serve to fuel a class of society that consumes, furthering them from a connection to the broader public (Boyer, 1992).

These types of developments recreate the past in a way that glosses "over real social change by capitalizing on the yearnings for lost innocence, heroic feats, adventures, explorations and conquests...these dramas of action compensate for present day failures" (Boyer, 1992). In reality these places are "true non places ... without connection to the rest of the city or the past, waiting to be filled with contemporary fantasies, colonized by wishful projections, and turned into spectacles of consumption" (Boyer, 1992).

The inauthenticity of these places is further established through programmatic features which allude to a history that is not grounded in the physical realities of the site.

> "What characterizes these new urban zones are the reiteration and recycling of already known symbolic codes and historic forms to the point of cliché. Codes control signs, materials, colors, ornamentation, street furniture, and street walls; and codes also dictate the design of public spaces, the types of buildings, and the range of activities. Most important, codes contain a schema or program that generates a narrative pattern, a kind of memory device that draws associations and establishes relations between images and places, resemblances and meaning" (p. 188)

Christophe Girot (1999) directs us to look at our cultural habits and practices that are often specific to our country and to a more specific sub-area. These habits can act to inform surrounding spaces and ground them in their context (authentic). It is, however, important to not make the mistake of grounding an area in its history to the point that its current conditions are completely obscured and the place becomes inauthentic in form. The balance between past and present is important to maintain. In discussing the edges of cities Girot turns our attention to this balance, and directs us away from our instincts that conjure up a 'utopia' in the physical or theoretical sense which lead us back to a discussion of authenticity.

> "The landscape of the outskirts is the sum of thousands of objects superimposed in a dispersed order, set down any old how, with a total disregard for their surroundings. It is a world without actors where the process of chaos theory and deconstruction have swallowed up a phenomenon which was already evolving. I doubt if whether the concept of a harmonious city as conceived by Prince Charles' favourite architects and landscape architects is the panacea. Nor will we solve the problems of landscape on the outskirts of our cities by nostalgically conjuring up some Victorian-style world... " (Girot, p. 34, 1999)

3. **Landscape of Renewal and Amelioration**
   (current approaches to industrial redevelopment)

   Industrial areas are key in the discussion of the edge of a postmodern city as we experience a shift from a manufacturing to a service based economy. How do we adapt these areas to the rest of the city in a way that improves the existing social, economic, cultural and ecological aspects of the region? An industrial area provides a cultural landscape that reminds us of our industrial history, a perfect palette for land art and also a safe place for experimentation (Weilacher, 1999). These disrupted landscapes provide us with evidence of the eternal struggle of man over nature. These landscapes can also be areas where nature's regenerative powers are seen through the re-inhabitation of plant and tree species (Weilacher, p.28). It is important, though, to not view the potential of an industrial area as merely an attractive background or to change the area beyond recognition and thus ignoring the latent richness of the site (Weilacher, p.30).

2.3 Existing Policy

In summary, the main themes found throughout the City of Richmond's OCP indicate the importance of preserving existing habitats while also creating areas for public access along the shoreline. The river's edge is seen not only as a place that can provide a habitat for a rich diversity of species but also as a place for public enjoyment. Any residential use that would occur on this site must take into account the possibility of other uses and these uses must be designed in such a way as to not hinder the enjoyment of these residential areas. Although aircraft noise is a major concern in this area the noise levels (30-35 Noise Exposure Forecast Countours) fall within the Canada Mortgage and Housing Corporation (CMHC) Guidelines. These guidelines state that areas that fall within these levels can be supported but must be insulated against noise in such a way that is supported by CMHC standards (City of Richmond, Bridgeport Sub-Area Plan).

Review of Precedents

There are many precedents that can be used for an industrial waterfront area. In choosing the following precedents many factors were considered in terms of finding a connecting theme between the following sites and the site at Richmond. Such factors can be categorized as social, economic and political. More importantly these sites were chosen as they represent ideas that can be further elaborated on for this site or because they allow for a re-framing of the initial theory and policy that applies to this site. The success of failure of these sites was not an issue as much can be learned from either scenario.

3.1 London Docklands

There were a hundred
thousand shapes and
substances of incompleteness,
wildly mingled out of their
places, upside down,
burrowing in the earth,
aspiring in the earth,
moldering in the water, and
unintelligible as in any
dream.

- Charles Dickens on London in 1848

The London Docklands serve as an example of urban regeneration in Europe. The size of this area is 5,500 acres and spans both banks of the Thames River east of the Tower of London. Before its development this area was home to a declining industrial base, derelict docks and poor road and public transport even though it housed approximately 40,000 people (Masser, 1992). Margaret Thatcher's government subsequently created the London Docklands Development Corporation (LDDC) in 1981 in order to attract private investors into this area with the hopes of creating a vital urban area. One of the first successes of this site was the establishment of Canary Wharf which contains one of Europe's largest office complexes. This then triggered a boom in the residential property market thus helping to establish the beginnings of a community. The problems however that have plagued this area include the lack of transportation planning, integrating the existing community with the new one, creating a visually rich urban area (Masser, 1992).

The problems that have plagued the London Docklands can be attributed to the LDDC not creating a large scale masterplan and instead allowing market forces to shape the social and physical order of the place. The result is an area that resembles the unplanned cityscapes of North America and the Pacific Rim. The Docklands provide an example of the dilemma faced by many urban designers who seek to guide development against the political will that is pulling in the other direction (Edwards, 1993)

Social: A social infrastructure has not been created in order to create a sense of community. This could have been avoided with proper master planning.
Economic: Private sector investment in commercial areas was the impetus for development which also triggered a boom in residential development.
Political: The government established the LDDC in order to bring about investment as the driving force of the development.

3.2 Vancouver

Vancouver is a city that has experienced many economic and social changes due to its restructuring from a manufacturing-based to a service-based economy (tertiarization). An example of a site that has visibly made this reconfiguration is the False Creek Area. An example of this is the redevelopment that is happening on the South East False Creek Flats. This site was home to many industrial uses in the late 1800's and is now converting to residential communities. City council saw this area as an ideal place for family housing due to its proximity to the downtown area and has opted to apply the principles of sustainable development to this area. The following principles are outlined in the South East False Creek policy statement as a guide to development:

1) Implementing Sustainability
SEFC should promote the implementation of sustainable development principles
in an urban setting, and thereby contribute to improving the mainstream
practices of urban development throughout Vancouver and the region.
2) Stewardship of Ecosystem Health
The development of SEFC should improve the ecological health of the
False Creek Basin. It should recognize the need for conservation, restoration
and management of local, regional and global ecosystems. Therefore,
resource conservation and waste reduction measures should be implemented
to a level that will meet the needs of present and future generations.
3) Economic Viability and Vitality
Development in SEFC should ensure economic viability without subsidy
so the knowledge gained will be relevant to other development projects.
4) Social and Community Health
The development in SEFC should seek ways to strengthen social networks
and enhance the quality of life for all in the neighbourhood. This can be
achieved by creating a livable, complete community which: enhances cultural
vitality and diversity; provides a wide range of accessible housing
and employment choices; and encourages participation of residents and
visitors in stewardship of the neighbourhood.

Social: A strong framework that includes principles of sustainability and applying design in such a way that it creates strong centered communities.
Economic: Vancouver's shift from a manufacturing-based to a service-based economy has created a demand for such developments as those seen along False Creek. It is crucial to look at the economic viability and vitality of these areas in order to create a strong link between these areas and the downtown area of Vancouver.
Political: This land use plan was instigated by the City of Vancouver. The City has, however, followed an open public process in order to better envision the potential of this site.

3.3 Toronto

This City's waterfront was once slated for the 2008 Olympic Village but due to its loss for the bid the City is now faced with the future of this area. Presently there are approximately 2,000 acres of undeveloped, derelict land some of which is contaminated or lacking in proper infrastructure. The establishment of the Toronto Waterfront Revitalization Corporation was realized as a means of bringing together all levels of government in order to generate an action plan to improve this area. An investment of 1.5 billion dollars was committed by the government in order to create the necessary infrastructure needed to

attract private sector investors. This includes the extension of Front Street, soil remediation in the Portlands area, and an environmental assessment of the Don River mouth (WRT Newsletter, 2001). When looking at the Lake Ontario waterfront from a larger scale many towns such as Niagara-on-the-Lake and Gananoque have been working as individual areas and together in order to create a diverse and experientially rich waterfront experience. Toronto, however, has neglected this aspect of the City (except for a few areas) and needs to create a space that creates unity within the City and also further links this place to its region. Projects underway include many revitalization projects such as 4 major brownfield restoration projects, 6 waterfront habitat restorations, 4 harbour/marina revitalization projects.

Other projects include:
- *5 new cultural heritage facilities*
- *A state of the art natural heritage interpretive centre*
- *Interpretation of over 21 waterfront habitats*
- *Improvements to over 20 waterfront parks along the existing Lake Ontario Trail*
- *7 new waterfront sports and recreation facilities*
- *Over 125 km of new Waterfront Trail and Linkage Trails*
- *6 major Waterfront Trail promenades*
- *3 major bridges*

(WRT Newsletter, 2001)

Social: This area is being opened up to the public through many public facilities thus creating safe areas for the public to access the existing waterfront of the City.
Economic & Political: A corporation was established in order to bring all levels of government together with private sector investors. The government initiated development by creating the necessary infrastructure in order to attract investment.

3.4 Eastern Docklands, Amsterdam

This town planners of Amsterdam decided to create a new suburb of the city by building four peninsulas in the middle of the River Ij due to it's central location and river views. The creation of this suburb fell to the architects Jo Coenen, Sjoerd Soeters and the firm West 8. Each was designated an island on which they could realize their urban vision for the area. In order to retain the latent richness of the area structures such as the port buildings and warehouses have been renovated instead of removed (Koster, 1995).

A criticism of this site is that the proper infrastructure has not been planned in order to accommodate the influx of new residents. Local schools are being over run and unable to accommodate the baby boom that has occurred in the area. Limited amenities such as only one grocery store and dry cleaners, and very few restaurants and cafes exist in these neighbourhoods. Luckily the popularity of the area is slowly resulting in the inflow of more commercial areas. Attractions such as floating movie theatres and buoyant cafes and restaurants are also in the future plans of this area (Weich, 2000).

Virtually every new building has underground parking so this hasn't been a problem for those who live there. In terms of transportation this area is easily accessible by care, bike bus or ferry. Plans are underway to build a bridge directly to Centraal Station that will cut the commute time to downtown Amsterdam in half. One drawback to the high density of

the area are the limited number of open spaces. It is however mentioned that the presence of the River creates the feel of an open space everywhere (Weich, 2000)

Social: This area provides a dense residential development in close proximity to downtown Amsterdam. It is still lacking in proper social infrastructure but only time will tell if this can be rectified after the fact.

Economic: A strong residential base creates unlimited opportunities for properly planned commercial space.

Political: The City of Amsterdam opened up the planning of this area to some of the Netherlands top architects, landscape architects and planners.

Preliminary Site Analysis and Design Framework

4.1 'Landing': a Site Description

"Phenomenology is a science of beginnings"
(Seamon 1982)

When first approaching a design one must take an overall inventory of the site, in other words conduct a site analysis. Often in doing so personal assumptions and notions about the study site become apparent. Phenomenology states that these assumptions and notions are often not in accurate context with the realities of the site. What a phenomenological perspective aims to do is to revisit the person-environment relationship in an attempt "to return to the foundations of meanings, things and experiences, and to describe those foundations accurately and clearly" (Seamon, 1982).

When first landing on this particular site in Richmond one is positioned on the edge of a city, on a bank, close to the mouth of the Fraser River (Girot, 1999). However, this is not apparent to a person passing through in an automobile as the River isn't visible from any of the major roads which pass through this site. Upon entering the site and driving along River Road, towards the Bridgepoint Market, a thriving industrial landscape becomes evident, on both edges of the Fraser River. The dominant sound is that of planes flying overhead in punctuated intervals (Figure 7).

The Bridgeport neighbourhood is located on the Fraser River and is composed of light industry, some commercial, residential, and a few hotels. These uses are scattered on the site creating a fragmented feeling as some parts of the site are quite busy and others feel derelict. Bridgepoint Market acts as a beacon on the site, its looming clock tower visible from any point. The market, now abandoned except for a pub and marina, has the feeling of a ghost town. Even the people inhabiting the existing uses fail to infuse the market with any trace of life as the scale of the space is too large.

Walking along the pier to the west of the market there is a small inlet from the river, protected by a sand bar and vegetated by small trees and shrubs. Groups of birds and ducks congregate here. This is area is designated as an Environmentally Sensitive Area (ESA) and provides a quiet refuge for local fauna.

A dominant use of this site is the cement factory located near the Moray Bridge. It is evident from the constant passing of gravel trucks coming in and out of the factory site. The factory itself is a large expanse of land with looming mountains of sand and gravel conjuring images of vast desert landscapes. Its location along the shores of the Fraser River makes it entirely visible from the Arthur Laing Bridge.

An old railway line cuts across the site. Abandoned it is camouflaged by tall grasses in some areas and in other areas it forms part of a trail system. Parts of the railway lines are still used by the Van Horne industrial park located east of the Oak Street Bridge (Figure 8). This area is dominated by holding tank industrial uses, large buildings which are used to store goods before they are shipped elsewhere.

14

This contrasts the small pockets of light industry that scatters the area east of the Oak Street Bridge. Everything from auto repair to custom ironwork inhabit the quiet streets of this neighbourhood which centres around the end of No 3 Road. A street grid system similar to that of Steveston is found in this area. This can be explained by the fact that there used to be an active rail line that connected Steveston to Vancouver and a train station was located on this site, thus spurring development.

4.2 History: Cycles of Growth and Decay

First Nations people were the first to step upon the soils of Richmond in order to fish and collect berries. Other ethnic groups followed including inhabitants from the Netherlands, Finland, Japan, and China. The prosperous fishing industry and fertile agricultural lands were key in establishing the multicultural population that is still flourishing today (City of Richmond, website). It is thought that the flat landscape and fertile soils of Richmond attracted Dutch settlers as this typology reminded them of their homeland.

4.3 Current and Proposed Infrastructure

In reviewing the Bridgeport Sub-Area Plan prepared by the City of Richmond it is identified that economic strength is a key factor when considering development in this area. It is therefore vital to maintain the existing commercial and light industrial uses as these businesses provide a significant source of employment in Richmond. A catalyst for development is further needed to rejuvenate this area and this may be found through either a light industrial/business park or multiple family residential development "as a catalyst of tourism oriented commercial uses". The proposed policy generated through the Sub-Area plan that supports economic development includes:
- *The retention of any existing industrial uses that form part of the Van Horne Industrial Park.*
- *Create designated commercial use areas that are automobile orientated.*
- *Create tourism based commercial uses and to work with property and business owners to promote this type of use.*
- *Prevent large scale, single use retail from occupying this area.*
- *Allow for the development of zoning mechanisms to accommodate any innovative development, if pertinent.*
- *Permit any marine activities along the foreshore that extends from the Moray Bridge to the Bridgepoint Market site.*

(pages 9-11 Bridgeport Sub-Area Plan)

A rapid bus system that connects Richmond to Vancouver is currently in place and passes along the Bridgeport neighbourhood along the No. 3 Road. Future plans include a rapid transit corridor that would enter and exit Richmond near the Bridgeport neighbourhood and would connect Richmond-Vancouver-Vancouver International Airport.

Noise is a limiting factor for land use as one of the airport flight paths passes directly over this site. The following map shows the expected noise exposure contours for the year 2011. Environmentally sensitive areas must also be taken into consideration as there is one located near the Market Site.

4.4 Preliminary Site Analysis

4.4.1 Context

Regionally this site is located where the North Arm of the Fraser River splits into the Middle Arm (Figure 9). The North Arm splits due to the location of Sea Island at the mouth of the River. Sea Island is the location of the Vancouver International Airport. The location of this site is also pivotal from a municipal scale as this is:
- the northern terminus of No. 3 Road,
- where the Oak Street Bridge/Highway 99 connects through,
- where the Bridgeport Road/Sea Island Way couplet connects Highway 99 to the Vancouver International Airport.

4.4.2 Experiential

This site is rich in history and traces of the past can still be found (Figure 10). There is an abandoned rail line that runs through part of this site which was once used to transport goods from the Steveston cannery to the port of Vancouver. There are also more tangible experiential qualities such as the flight path which brings airplanes directly over the site approximately 10 storeys from ground level. The Bridgeport Road/Sea Island Way couplet which runs east-west acts as a psychological barrier to the site. The couplet is so congested and busy with traffic in comparison to the narrow quieter streets to the north that it acts as an informal edge to the area. Cutting a diagonal through the site is the Oak Street Bridge. This bridge meets grade at Sea Island Way and gains in height to the north. Views to the River are sparse and aside from the bridges the only accessible shoreline is at the Bridgeport Market and at the terminus of No. 4 Road.

4.4.3 Circulation

Major circulation routes include a provincial highway (Highway 99), major arterials (Sea Island Way and Bridgeport Road), smaller collector streets, railway, trails systems and the flight path (Figure 11).

4.4.4 Building Types

A mass-void diagram of the site reveals that this site is quite sparse in terms of building footprints relative to land base (Figure 12). Approximately half of the buildings are accessible to the public and the other half is private (this consists of private industry and single family residential). There is only one building on the site which is public and that is the firehall located on Bridgeport Road.

4.4.5 Natural Systems

The majority of the shoreline on this site is designated as an Environmentally Sensitive Area (Figure 13). The shoreline can be further subdivided into an estuarine marsh and an inter-tidal mudflat area.

4.4.6 River Use

The shoreline on both the north and south side of the Fraser River are designated as industrial land use with some areas being water-dependent industry (Figure 14).

4.4.7 Views

Views onto the site are found on both the Arthur Laing and Oak Street Bridge (Figure 15). The Arthur Laing provides a view of the shoreline and the Bridgeport Market whereas the Oak Street Bridge provides a view of the Bridgeport Market and the Van Horne Industrial park.

4.4.8 Zoning

The majority of this site is zoned Light Industrial followed by Commercial and pockets of Single Family Residential (Figure 16).

4.5 Preliminary Design Framework

What happened to create this ghost town? The answer lies in the looming red clock tower. Bridgepoint Market is a place we have all seen before in the Lower Mainland. It is the Granville Island of Richmond. This is echoed in its architecture but in what else? Its authenticity is in question.

Bridgeport Market can be viewed as a spectacle or a landscape of consumption where the architecture provides cues to an industrial past yet the spectator is not grounded in any form of physical reality. None of the existing forms are allowed to inform the space and much like Seaport in New York, as discussed by Boyer, Bridgepoint Market is an isolated, self enclosed development, not easily accessible by car or public transportation.

This area has many of the components often associated with a cohesive neighbourhood. These include:
- natural areas
- working waterfront
- marina where locals and others store their boats
- a strong job base for the area

Bridgepoint Market however does not have a dense surrounding residential base, among other aspects, to act as a community market and instead it has become a destination in a place where there is little else to arrive for. It needs compatible land uses which may include residential among others. Unfortunately a large residential base is improbable in an area located so close to an airport due to the noise generated from being situated under a flight path. The airport must therefore be looked at in terms of other opportunities that it presents. Land uses that have been proposed to the City of Richmond for this area include a high tech business park and/or conference centre. This form of land use would utilize the proximity of the airport and the City of Vancouver, and Highway 99 which leads to the US. In addressing a new land use for this area one must look at Bridgepoint Market's failure as a lesson for future land uses and design.

The beginning of this section discusses phenomenology as a 'landing' approach to this site. Here one is left with the question of the position of the person on the site and in the City as a whole. This site offers few if any clues that one is situated within the City of Richmond and the only apparent clue to the many components of the Bridgeport area are: the Bridgepoint Market, the Oak Street and Moray bridges, and the passing airplanes overhead. One is left with a sense of placelessness and inauthenticity as there are few if any ties to the City as a whole.

In order to create a sense of community and allow the Bridgeport area to move towards sustainable development it is important to create a balance between economic, social and environmental interests in this area (Sub-Area Plan, p.27). There is a need to establish a community infrastructure in this area in order to support a mixed-use development. The Sub-Area plan identifies the need for a variety of recreational facilities including the need for park space that accommodates both passive and active uses and perhaps ties in with the waterfront access as outlined in the Official Community Plan. An increased workforce in the area will also create the demand for appropriate childcare facilities.

Industrial landscapes are replete with opportunities to create a site that is socially, economically and environmentally rich. These parameters are the starting points for establishing a programme for this particular site. Creating a strong social infrastructure is key in establishing diverse yet complimentary land use activities. The importance of creating a strong social infrastructure is important and can be done in many ways through:

- Direct public access to the waterfront;
- Creating strong master plans that address the present and future needs of those that inhabit the area;
- Transportation links that bring people into these neighbourhoods and allowing them to commute out if necessary;
- Adopting notions of social sustainability and applying them in the development of neighbourhoods.

Creating a strong economic base for future development is also key for the vitality and prosperity of the area. Examples of this include:

- Creating a government "committee" to create the proper infrastructure that will attract private sector investment in properly zoned areas;
- Planning for complementary and compatible land uses;
- Using local and existing resources from designers to regional structure to create a sense of place that is unique to the area;
- Establishing a residential area so that the site is used on a round the clock basis and so a wider range of land uses can occur on the site.

Environmental considerations for this site include:

- Preserving and enhancing the existing ESA taking into account the larger habitat of the Fraser River shoreland.

Figure 7: *Photo montage of Bridgeport area*

* site images taken december, 2002

Figure 8: Photo montage of the Van Horne Industrial Park

* site images taken january 2002, van horne industrial park

context site analysis
west bridgeport neighbourhood
Richmond, B.C.
n.t.s.

© FORST ENTERPRISES - FOTOFLIGHT

Figure 9

experiential site analysis

west bridgeport neighbourhood
Richmond, B.C.
scale 1:2000
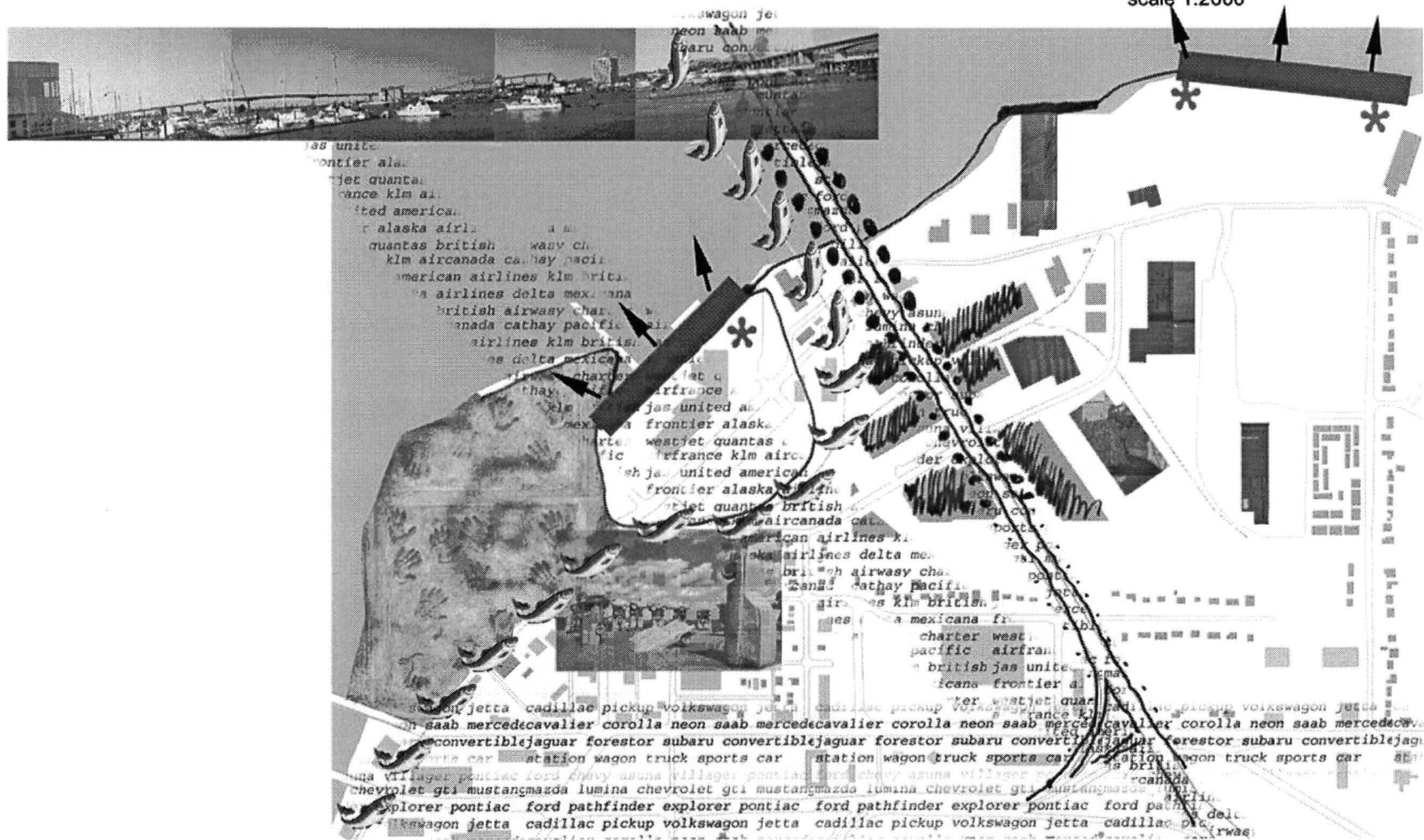
Figure 10

circulation

site analysis

west bridgeport neighbourhood
Richmond, B.C.
scale 1:4000

legend
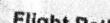
Provincial Highway

Major Arterial

Collector Street

Railway

Trail

Flight Path

Major Intersection
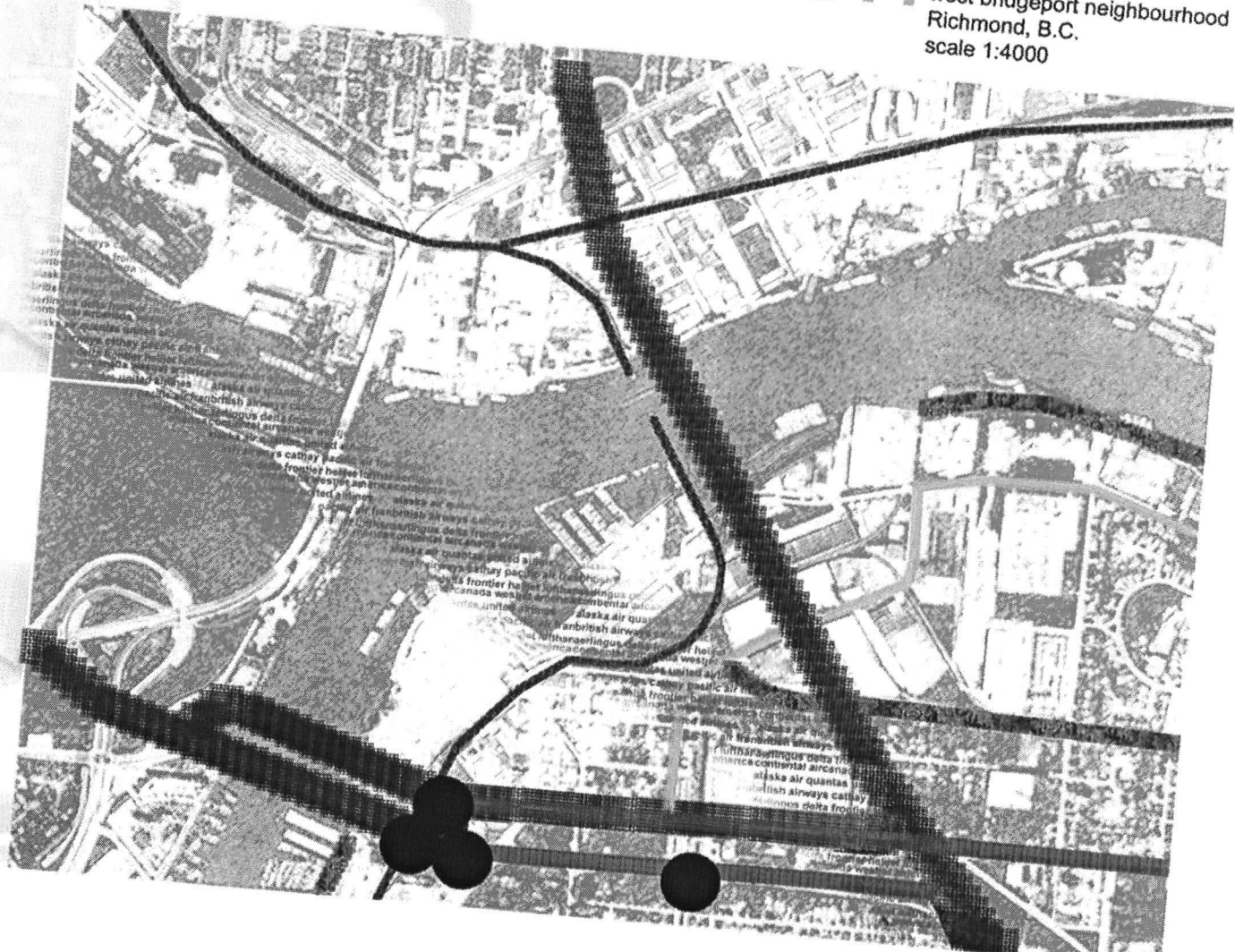
Figure 11

building types

site analysis

west bridgeport neighbourhood
Richmond, B.C.
scale 1:2000

legend

BUILDING TYPES

- private
- public access
- public

OTHER

- bridges
- Fraser River
- railway

private

public access
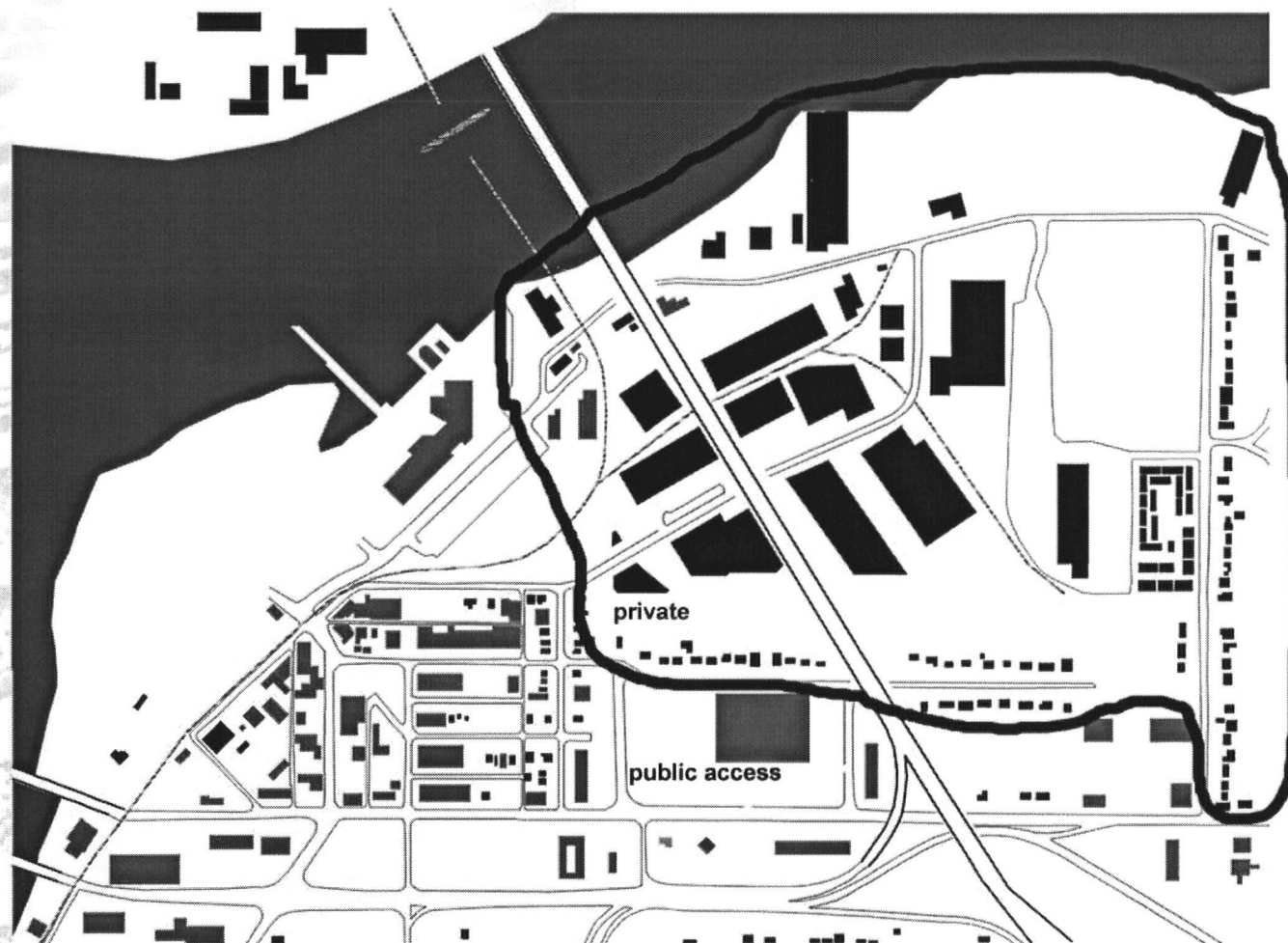
Figure 12

natural systems

site analysis
west bridgeport neighbourhood
Richmond, B.C.
scale 1:2000

legend

—— Developed Shoreline

Estuarine Marsh

Intertidal Mudflat

Old Fields

Environmentally Sensitive Areas

Permeable Surfaces

25

Figure 13

fraser river land use

legend

generalized municipal upland uses

Commercial

Industry

Water Dependent

Green Areas

boundary lines

Site Boundary
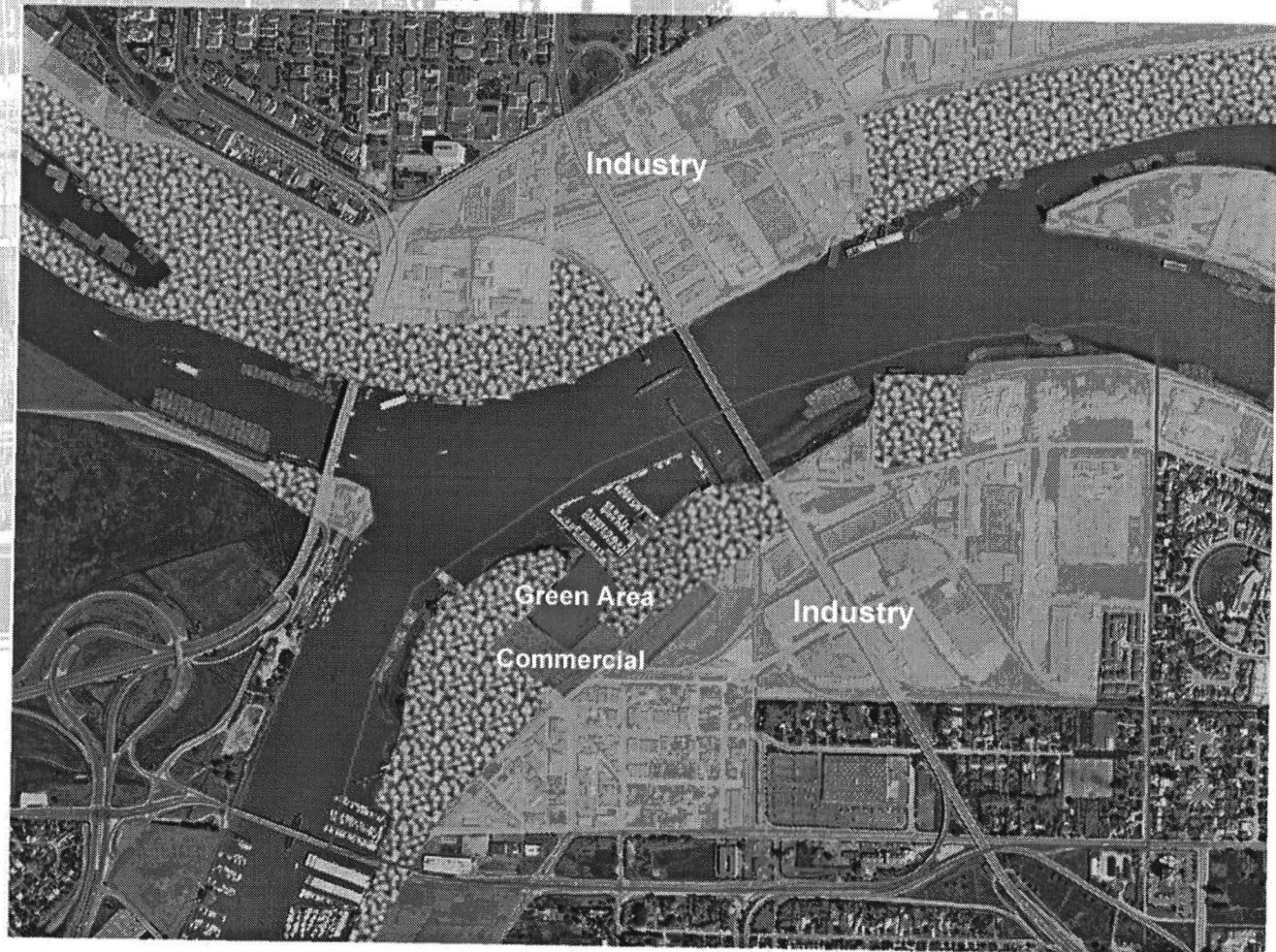
* Source: Port North Fraser Land Use Plan

Industry

Green Area

Commercial

Industry

26

Figure 14

views site analysis

west bridgeport neighbourhood
Richmond, B.C.
scale 1:4000

Figure 15

zoning

site analysis

west bridgeport neighbourhood
Richmond, B.C.
scale 1:2000

legend

C6 Commercial

I2 Light Industrial

I5 Industrial Storage

R1 Single Family

R2 Townhouse

G2 Service Station

MA2 Marina

SPU School & Public Use
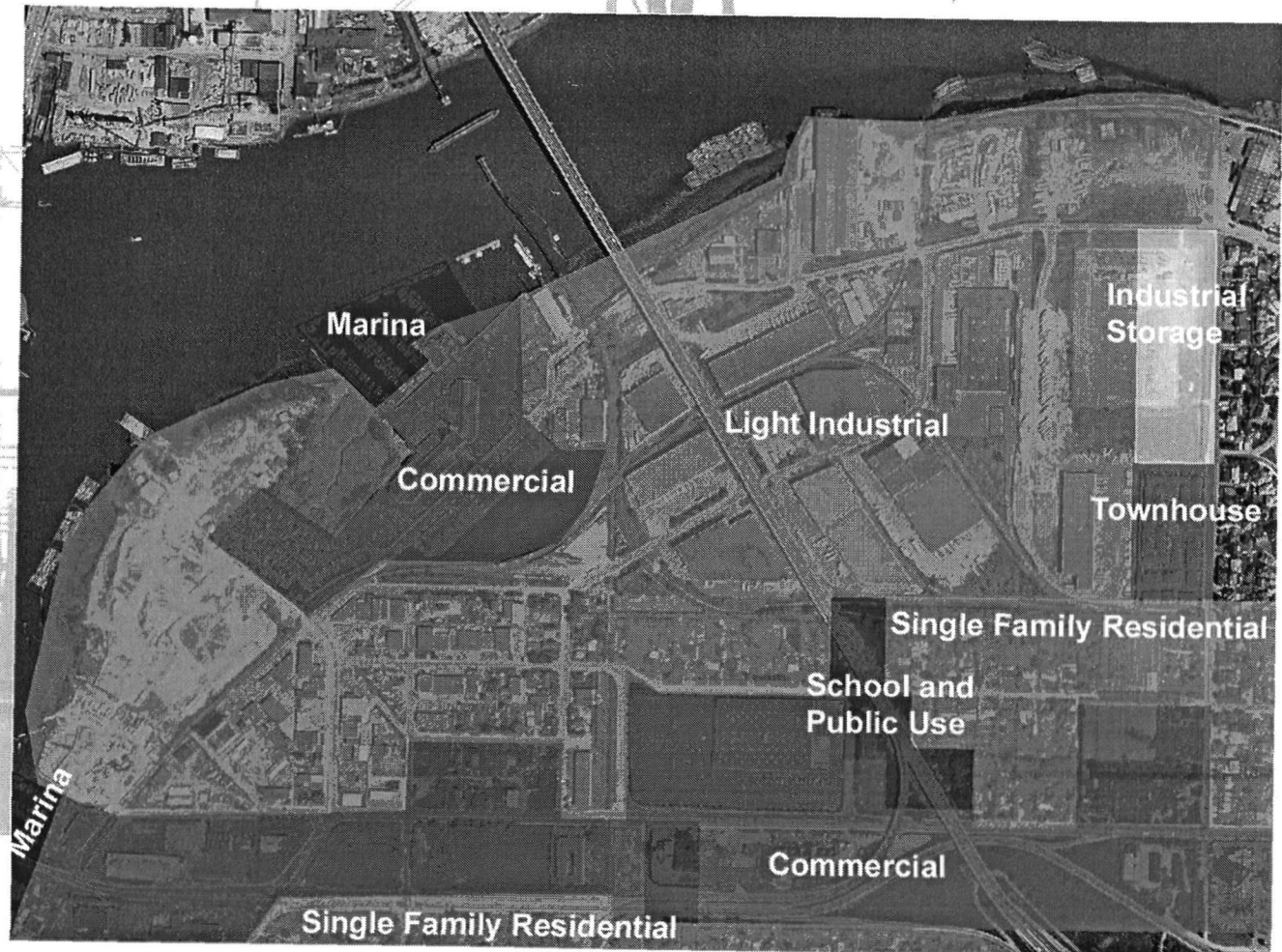
* from November 1992 Bridgeport Area Plan, City of Richmond

28

Marina

Industrial Storage

Light Industrial

Commercial

Townhouse

Single Family Residential

School and Public Use

Marina

Commercial

Single Family Residential

Figure 16

Design Expression

5.1 Summary of Programmatic Elements

5.1.1 Transportation Systems

Analysis shows that this site is on a pivotal location with regards to traffic circulation. The Oak Street Bridge passes through the site as Highway 99 which exits onto Bridgeport Road bringing people from the southern outlying areas of the Lower Mainland to the airport. Existing transit routes that pass through the area include the B-line that runs from Vancouver International Airport to downtown Vancouver. Proposed transit for this area includes a light rail system in addition to the existing bus transit system (Figure 17).

1. *Transit Interchange*
Provide a transit interchange area that services both light rail and bus transit. Ensuring that most people live/work near this area in order to minimize dependence on the automobile and promote more sustainable forms of transportation. To promote the use of an at-grade LRT system in order to minimize the visual impact of this form of transit and in order to better utilize the ground plane.

5.1.2 Residential Land Use

Single family housing is slowly being phased out by commercial development. This is due to the noise from the flight path which is thought to have led to most of the existing single family houses to be put on the market. In recommending residential development for this site it is important to take into account the impact of the flight path which prevents this from being the primary land use of this neighbourhood. In recommending residential development it must be targeted towards a demographic whose lifestyle is more adaptable to the constraints caused by the flight path. This demographic would include students, short term residences (time-share/apartment-hotels), single people or couples without children. The limitation is that these residences would have to be professionally sound proofed and therefore the outside component of the unit would not be significantly used due to noise. In order to compensate for noise pollution these units would have to be affordable and sited along the River (Figure 17).

1. *Character*
To promote a sense of community through building types/configuration, street scale, pedestrian routes and common space.
2. *Siting*
To site housing in areas that are most appropriate for such land uses, taking advantage of the local opportunities such as views, greenspace, the river, commercial amenities and transit.
3. *Noise*
To establish medium density housing areas that are appropriately sound proof and reflective of the market need for housing in this area.

5.1.3 Industrial Land Use

The Van Horne industrial park makes up a large component of the Bridgeport sub-area and provides a large component of the areas job base. Most of these large scale buildings act as 'holding tanks' for goods that are being transported elsewhere. The biggest impact of this

land use is that it creates a large expanse of non-permeable surfaces. Over the next 20 to 50 years these types of land uses will be phased out due to the prime location of this area due to it's close proximity to the airport and major highway (Figure 17).

5.1.4 Commercial Land Use

The commercial areas on this site are predominantly hotel and big box retail. The east-end of Bridgeport Road (near Knight Street Bridge) is dominated by big box retail and this is slowly dominating all of Bridgeport Road (Figure 17).

1. Access
To make existing big box retail pedestrian friendly by providing both automobile and street front pedestrian access in order to serve both the community and the surrounding region.
2. Parking
To look at a more efficient parking to retail square foot ratio. The pending LRT station may provide a decreased demand on parking.

5.1.5 Trade Centre

The City of Richmond has looked at developing a Trade Centre in Richmond in order to complement the Convention Centre that will be built in downtown Vancouver. A possible location for this is the former Bridgepoint Market. This may involve retrofitting the existing building for this use or looking at an entirely new facility on this site (Figure 17).

Trade Centres act to bring together exporters, importers and service providers. They also to provide up-to-date information to businesses in a timely and efficient manner. Trade shows depend on large exhibition spaces where international businesses can display their goods and services. Space may also be allocated on a permanent basis to promote local businesses. These centres also act as forums for workshops and lectures that relate to key local and global business issues.

In addition to providing display spaces for local businesses other civic funcions may also occur here. These include art displays, civic events and celebrations to name a few. In situating a trade centre on this site an anchor is created from the existing City Hall on No. 3 Road.

The types of programmatic activities associated with Trade Centres include hotels, restaurants, and some commercial retail. This neighbourhood would be an ideal location for this use as it would directly link to the airport via the provincial highway, proposed LRT and existing B-Line bus system. Most of the events that occur in a trade centre involve bringing together people from various parts of the world so location therefore becomes a key issue.

5.1.6 Post-Secondary Educational Facility

Another proposal for this site is an international university campus that would cater to Pacific Rim students. This type of programming would be appropriate here as it in close proximity to the airport and downtown Vancouver. The LRT system would allow for these connections to be more efficient (Figure 17).

Types of programmatic activities that can be associated with this type of use include open space systems, transit centres, short-term stay residential, restaurants, hotels, and retail. The

location of this type of facility could combine programming needs with that of the Trade Centre. This can be achieved through the siting of these two facilities.

5.1.7 Environmentally Sensitive Area (ESA)

Currently the entire shoreline in the Bridgeport sub-area and Van Horne Industrial park is classified as an ESA. The most critical area lies to the southwest of the former Bridgepoint Marketplace. This area is presently bordered by one of the Market's blacktop parking lots. In achieving the ecological imperatives set forth in the goal statement it is important to rehabilitate and expand this area. This will then act as a civic green space for the area and further articulate the terminus of No. 3 Road. It also has the possibility of acting as a node in the trail system (Figure 17).

5.1.8 Trail Systems

Presently the trail system runs along the North Shore of the Fraser River but is truncated in the Van Horne Industrial park and begins again south of the couplet system. A link along the Fraser River should be established and done in such a manner that the land adjacent to the trail reflects the scale and intent of such a system (Figure 17).

5.2 Three Visions for Bridgeport

Three plans were created for the Bridgeport area. The aim in creating these plans is to explore different possibilities given a set of both negotiable and non-negotiable elements. Non-negotiable or fixed elements include the light rail transit (LRT) system whose exchange is located between the Bridgeport Road and Sea Island Way couplet along No. 3 Road. This light rail system is proposed in the following plans as an at-grade rail system. By keeping this system at-grade the quality and character of the neighbourhood is preserved, creating less vertical impact.

The change from existing to proposed land use is also common to these three plans as the aim here was to diversify this area by further mixing commercial land use with industrial land use and allowing the shoreline to become public open space (Figure 18). Industrial uses are reduced in order to expand commercial uses and take advantage of the prime location of this neighbourhood within the city and region. Single family residential is reduced and only maintained in the adjacent Tate neighbourhood and a small area is proposed along the waterfront away from the flight path.

Big box development is a land use that is beginning to dominate Bridgeport Road. If this type of land use continues to be desirable to the city then it is necessary to create a framework for development that would allow this land use to occur in such a way that does not deteriorate the streetscape. A possible configuration that would allow for a comfortable building height to street ratio would involve bringing the front entrance right up to the edge of the street thus creating both a pedestrian entrance on the high street and a vehicular entrance at the back of the building (Figure 20).

5.2.1 River Walk

This option explores looking at a hybrid model between a completely built or dense waterfront development and a waterfront that is entirely composed of open space systems

(Figure 22). The result is a waterfront that takes advantage of prime locations for both built and open space areas.

Shoreline Character

A dense shoreline characterizes this plan (Figure 22). Both a natural and built edge are found along the river shore. An island has been carved out near the end of No. 3 Road. This island, named Duck Island, existed in the early part of the 20th century.

Couplet

Buildings are located near the centre of the couplet and parking therefore fronts both Bridgeport Road and Sea Island Way (Figure 19).

Major Programmatic Activity

A trade centre is located to the west of the Oak Street Bridge (Figure 27). Across the street from this, at the former Bridgepoint Market site, is a marina with commercial and marina-related facilities. A small riverfront residential development is located west of No. 3 Road. Duck Island is divided into both an open space and commercial land use.

No. 3 Road Terminus

A large traffic circle is located at the terminus of No. 3 Road along with an extension of the marina for larger boats thus providing a view of boat masts from the foot of No 3 Road (Figure 25).

Transit

The LRT utilizes the existing train trestle to cross over the North Arm of the Fraser River and eventually connect to the Cambie Street transit corridor (Figure 26).

Open Space

Both natural and built areas punctuate the River's edge. Large parks are located both next to the couplet bridges and on Duck Island. A smaller park is located along the river east of the Oak Street Bridge.

5.2.2 Lulu Sweet Park

This option explores terminating No. 3 Road with a significant open space dominating the shoreline thus tying in with the southern terminus of No. 3 Road which is also punctuated with an open space system.

Shoreline Character

This naturalistic shoreline is dominated by a large park that begins at the couplet bridge system and widens at the terminus of No. 3 Road (Figure 29). Another park is located east of the Oak Street Bridge and both parks connect to one another through a proposed shoreline trail system (Figure 28).

Couplet

Buildings front onto both Sea Island Way and Bridgeport Road with parking located in between buildings (Figure 20).

Major Programmatic Activities

The major programmatic activity for this area is the park that acts as a formal terminus to No. 3 Road. There is also a Trade Centre located to the west of the Oak Street Bridge (Figure 28).

No. 3 Road Terminus

Lulu Sweet Park is located at terminus of No. 3 Road thus anchoring the south to the north end of No. 3 Road with a significant public open space.

Transit

The light rail system will carry on from the exchange, at Bridgeport Road and No. 3 Road, eastbound down Bridgeport Road. The LRT will then cross over at a proposed street, Fallow Field Road, that runs parallel to the west No. 4 Road. The bridge that carries the LRT over the river will be a swing bridge thus allowing the LRT to run close to grade along Fallow Field Road. Bringing this bridge too far above grade will compromise the area and limit future land uses.

Open Space

This plan is dominated by an open space system located along the riverfront.

5.2.3 The River Cup

This option explores a built waterfront by bringing commercial space close to the riverfront. The riverfront does, however, remain publicly accessible through a trail system.

Shoreline Character

A public trail lines the edge of the Fraser River (Figure 30). This trail widens into a series of pocket parks which centre around the major programmatic activities. The trail is backed in most parts by commercial and light industrial land use and a narrow tree lined roadway acts to create a separation between these two uses.

Couplet

Buildings front onto both Sea Island Way and Bridgeport Road with parking located in between buildings (Figure 20).

Major Programmatic Activities

A trade centre is located east of the Oak Street Bridge (Figure 31). This location utilizes the underside of the bridge as a stacked parking area. The building itself fronts onto a main road which separates the facility from the river trail system. A public pier lines up with the central axis of the building.

No. 3 Road Terminus

No 3 Road terminates with a large circular enclosed portion of the River or 'cup' that is held above the existing water level of the River, providing a visual cue to the island nature of the city (Figure 32). This cup allows for a view of the River from No 3 Road without compromising the existing dyking system.

Transit

The LRT will carry on from the exchange northbound on No. 3 Road. Upon reaching the terminus of No. 3 Road it will cross over the Middle Arm of the Fraser River on a swing bridge.

Open Space

In addition to the large park located to the west of the cup and next to the couplet bridges there is also a trail system that connects the existing trail system to the river front. This trail connects to the River at Belly Park, an aircraft viewing area. Before reaching the park the trail is lined up with the flight path.

5.3 Conclusion

As the world continues to face the impacts of urbanization, as suburbs become cities, it is important to incorporate and advocate for creating places that are grounded in experiential depth. Doing so allows the inhabitants of these streets, neighbourhoods and cities to ground themselves both in the physical and social geography of these places. To do this in an authentic manner allows for the inhabitant to gain a sense of appropriation and for these areas to gain a neighbourhood identity.

The intention of this thesis is to provide the beginnings of a revitalization scheme for this neighbourhood. The three proposed options for the Bridgeport area are intended to provide a variety of scenarios through their various programmatic components. The components of each option are meant to function individually, as this area would realistically develop in a parcelized fashion over a period of time. These options and their components are also meant to establish a connection between place and region, linking back to the city of Richmond and the Fraser Valley region as a whole.
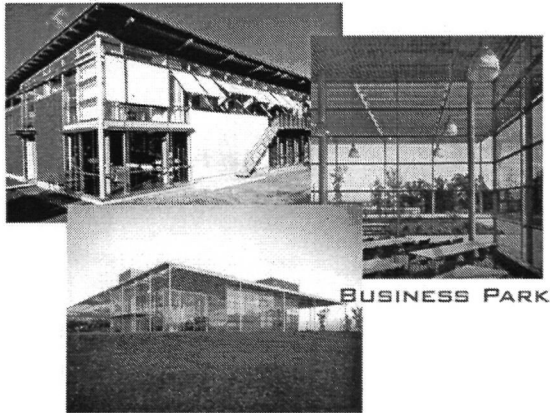
BUSINESS PARK
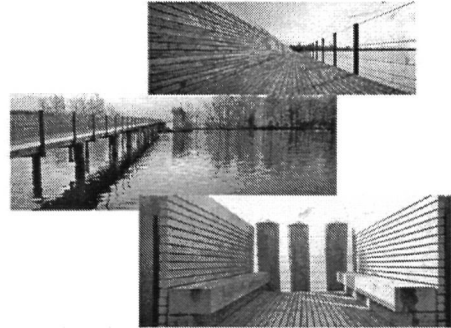
Trail System / Environmentally Sensitive Area
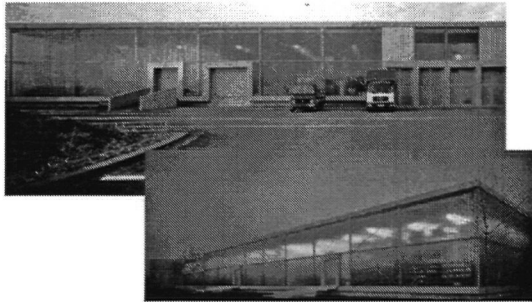
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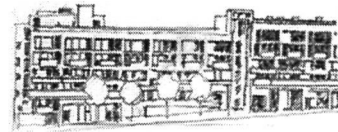
Residential Land Use
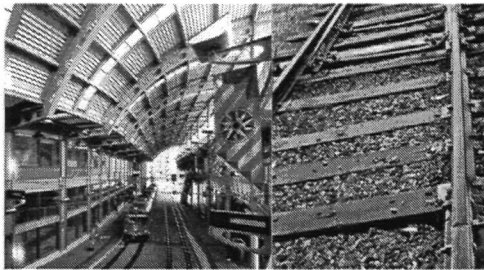
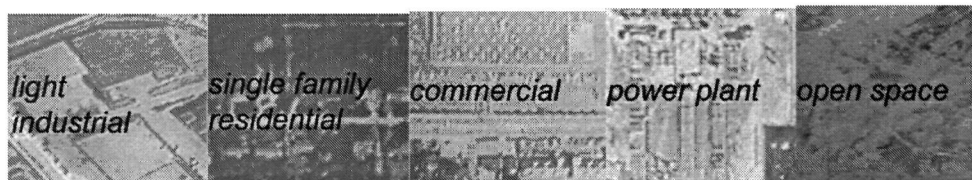Transportation Systems
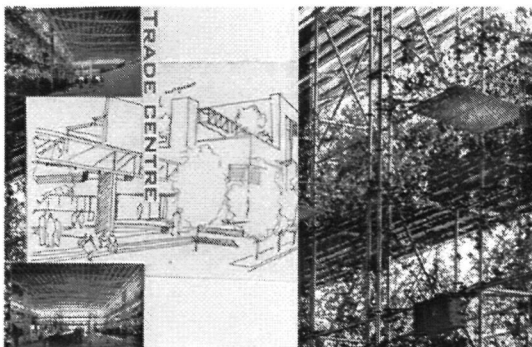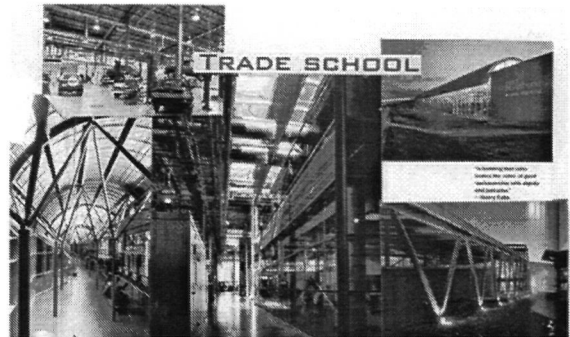
TRADE SCHOOL

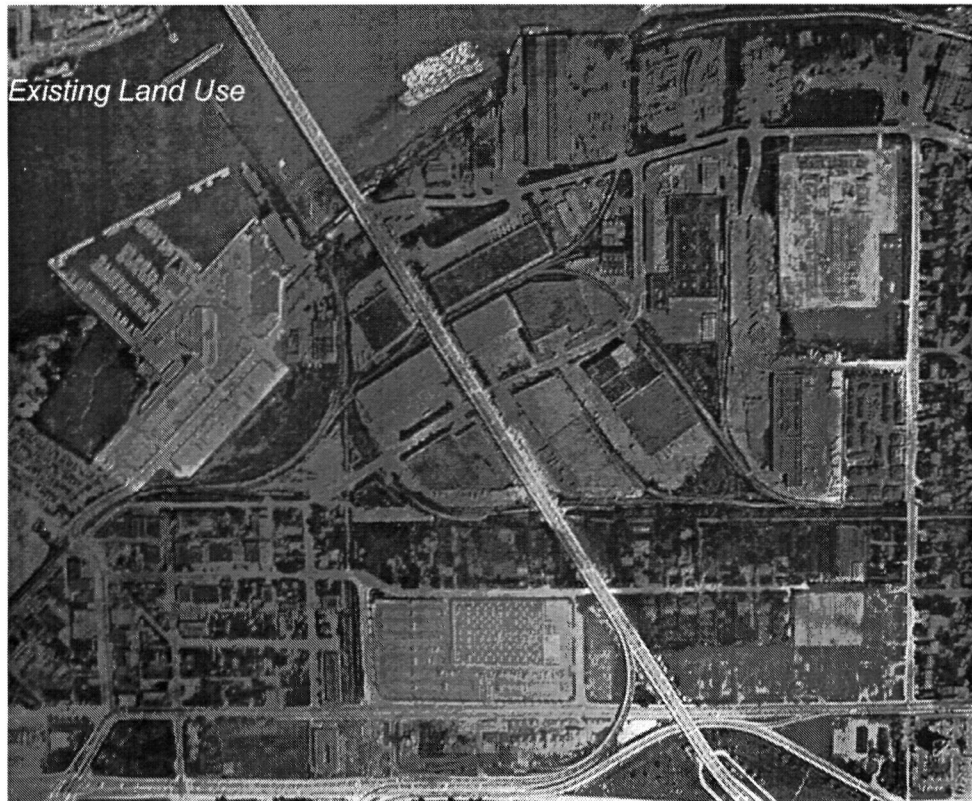Figure 17: Programmatic uses

Figure 18: Existing and Proposed Land Uses

36

Couplet Options
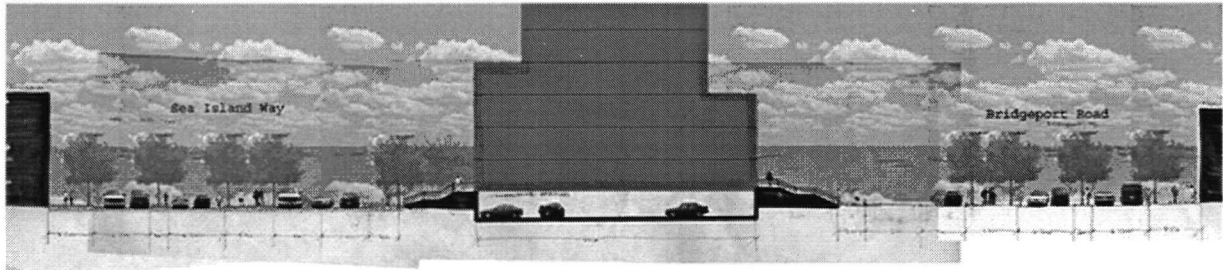Bridgeport Sub Area, Richmond BC

Figure 19

Option One: This option looks at placing a singular building between Sea Island Way and Bridgeport Road. Parking would occur underground and in front of the building along Sea Island Way and Bridgeport Road. This would allow for easier visual access for drivers.
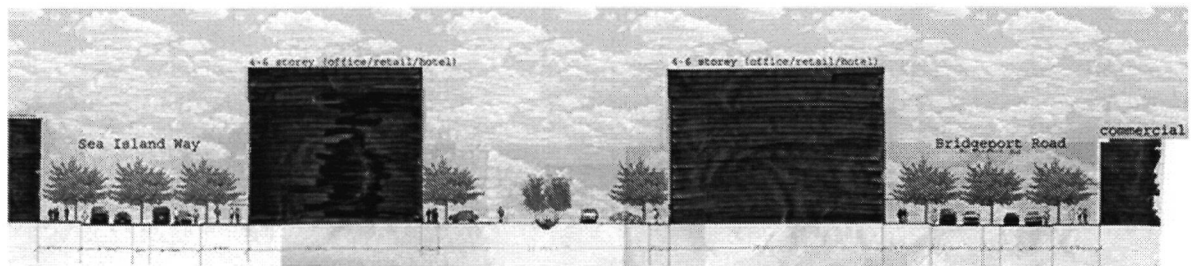
Figure 20

Option Two: This option sites 2 separate buildings along Sea Island Way and Bridgeport Road. Parking would occur between the two buildings and additional parking could occur underground. This configuration allows for pedestrians to easily access building entrances and creates a more comfortable building height to street width ratio.

Figure 21

Big Box Development

This form of development is common along Bridgeport Road. Future development should allow for buildings to be sited close to the road. This would allow for both a vehicular and pedestrian entrance and create a more comfortable building height to street width ratio.
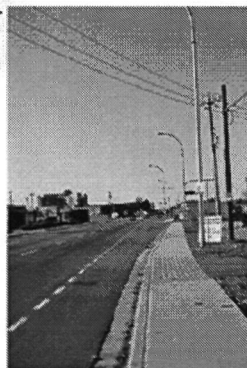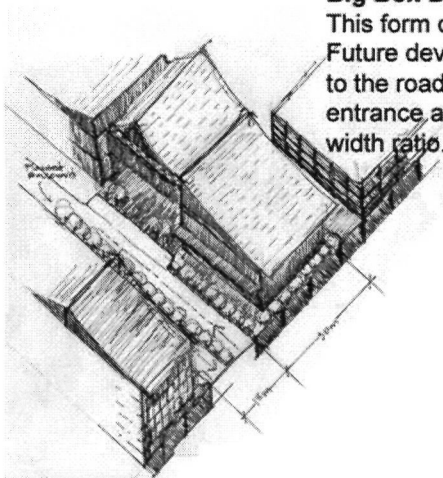
Bridgeport Road facing west.

Bridgeport Road facing east.

Neighbourhood Option
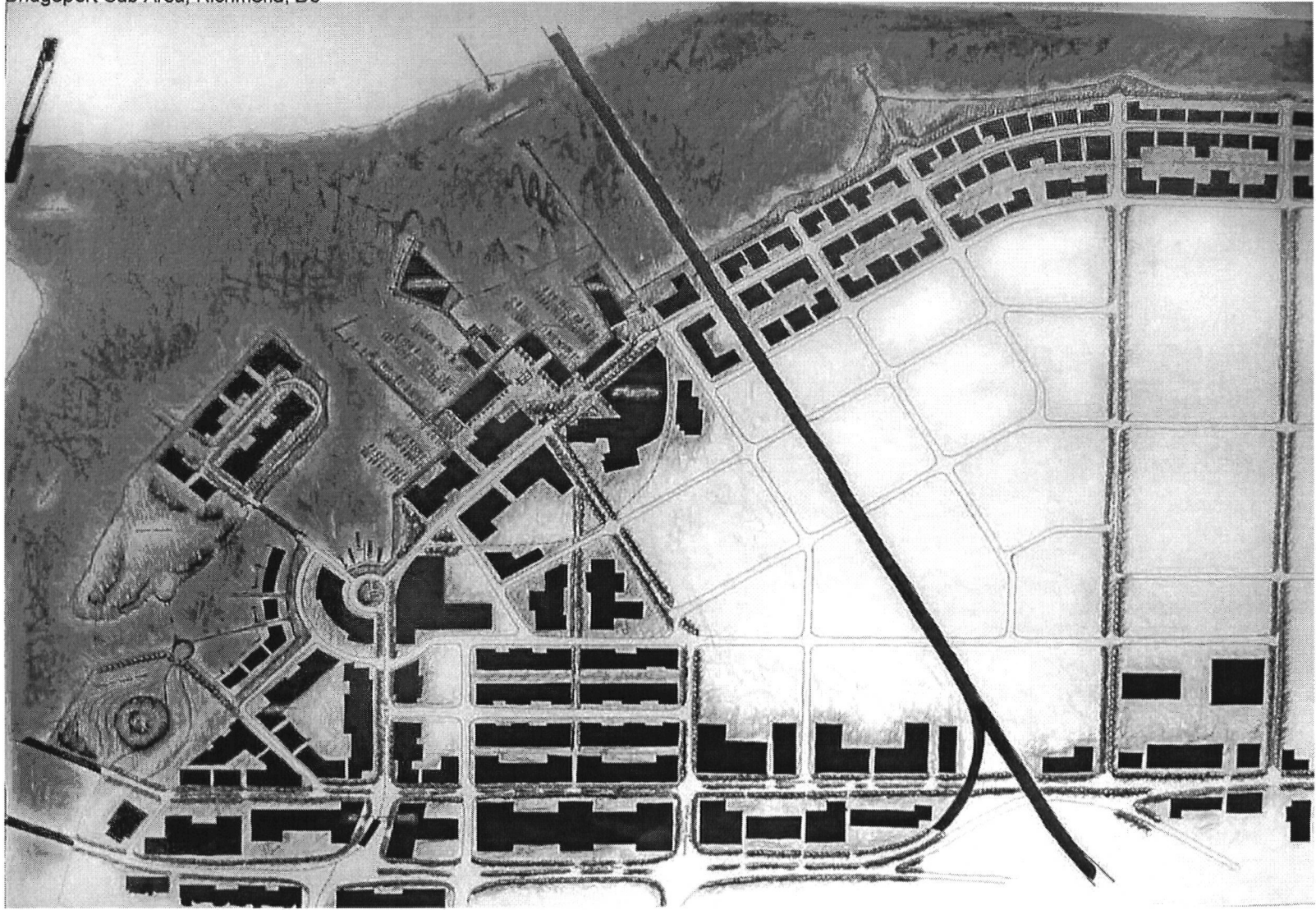Bridgeport Sub Area, Richmond, BC
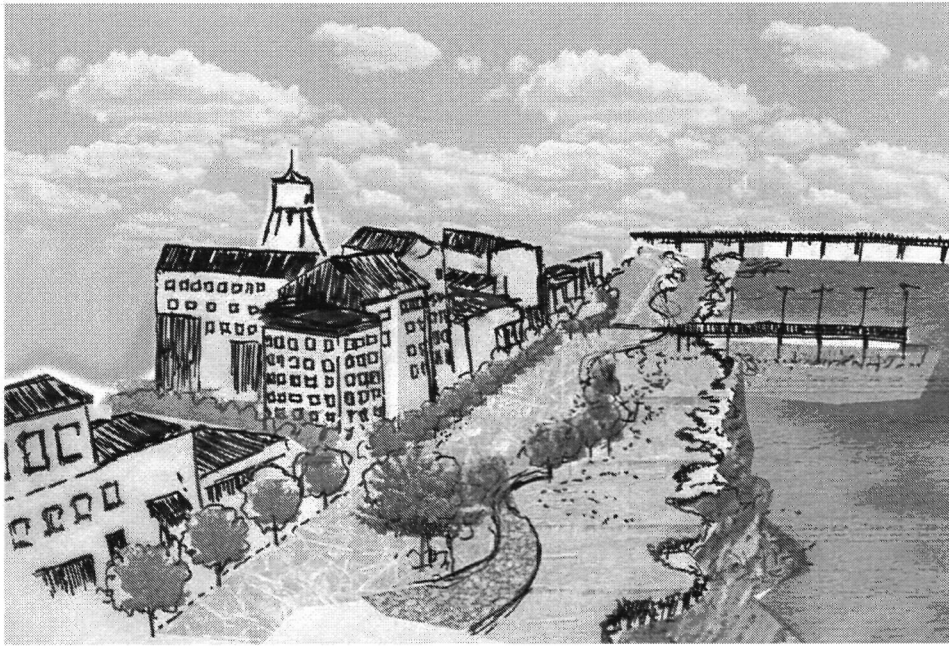

Figure 22: River Walk option

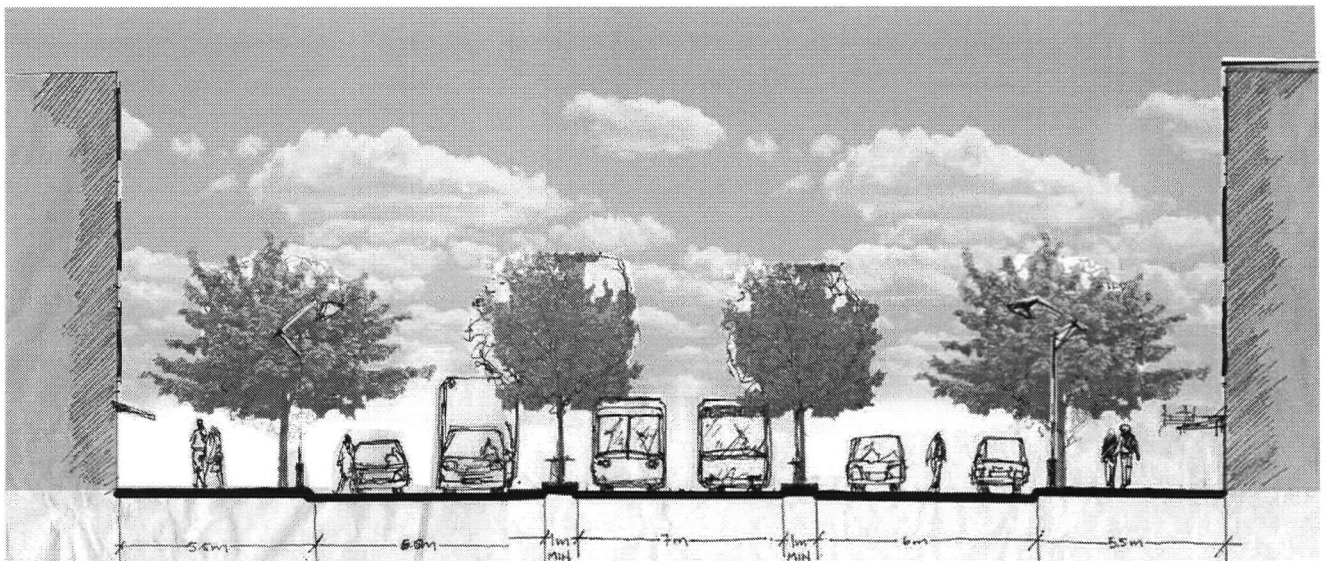**Figure 23:** Built Waterfront as seen in River Walk option

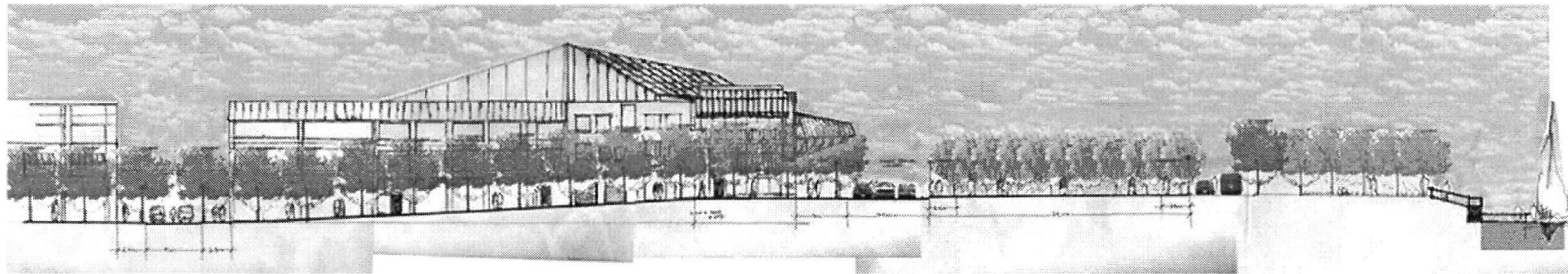**Figure 24:** Typical section through No. 3 Road

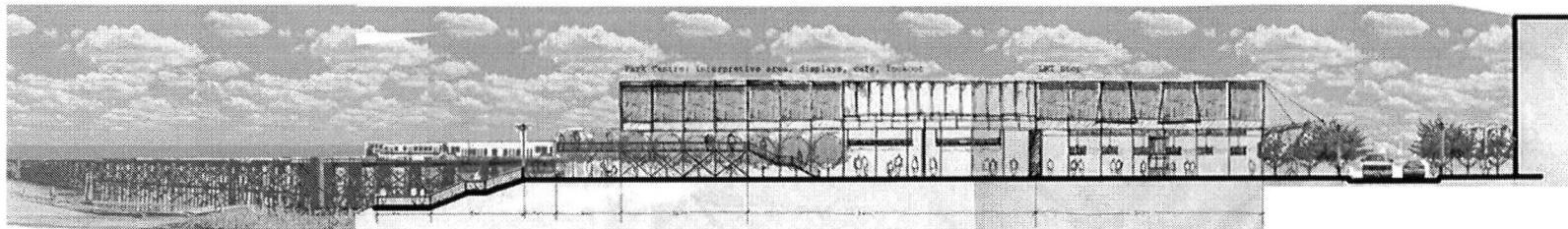**Figure 25:** Section along No. 3 Road facing west, River Walk option

Figure 26: Section through proposed LRT stop utilizing the existing train trestle, River Walk option
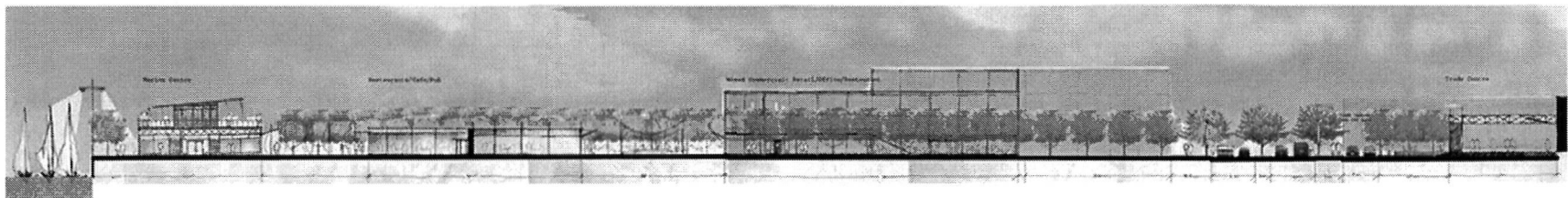

Figure 27: Section through waterfront commercial area and Trade Centre, River Walk option
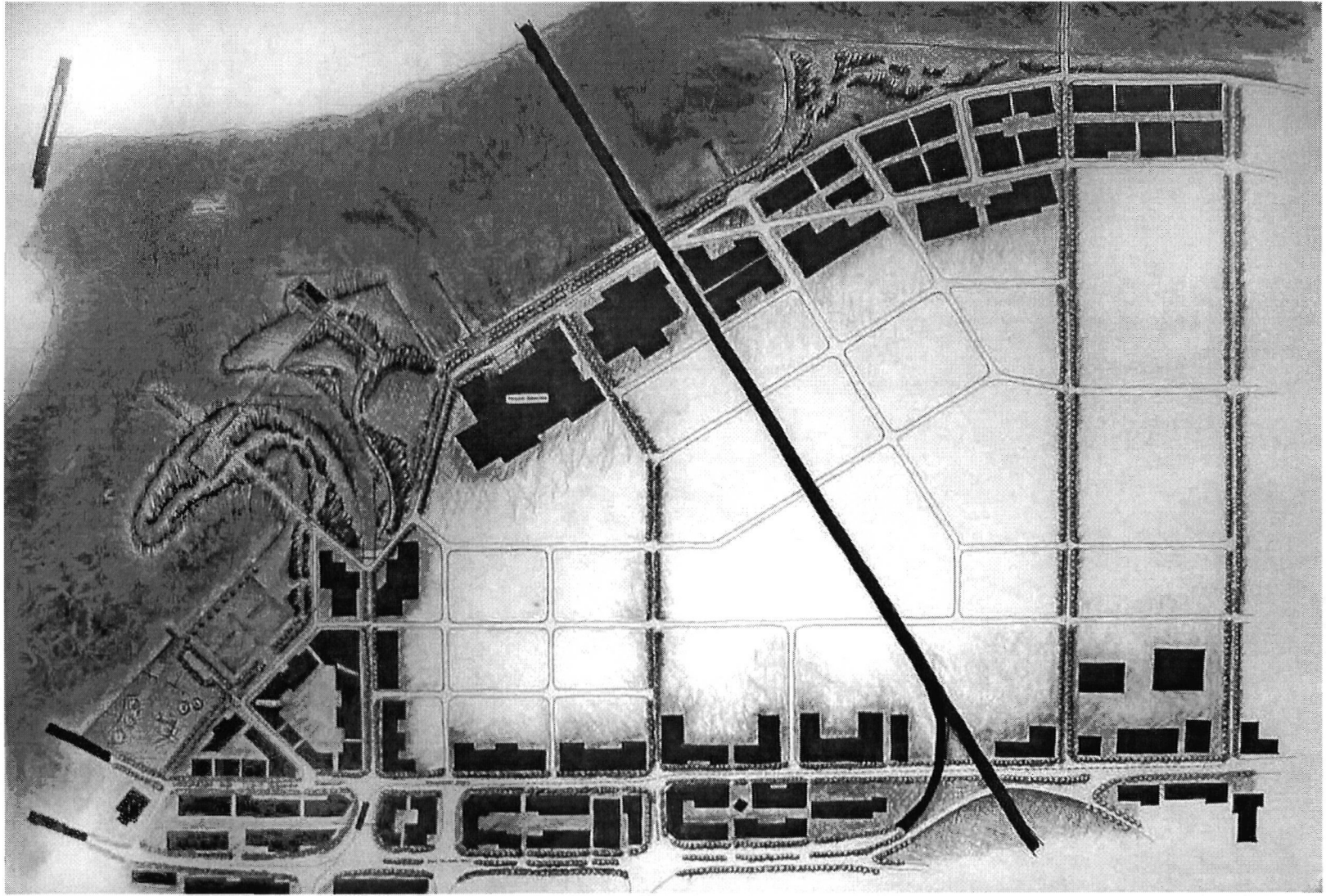
Neighbourhood Option
Bridgeport Sub Area, Richmond, BC

Figure 28: Lulu Sweet Park Option

Figure 29: *Section through Lulu Sweet Park*

Neighbourhood Option
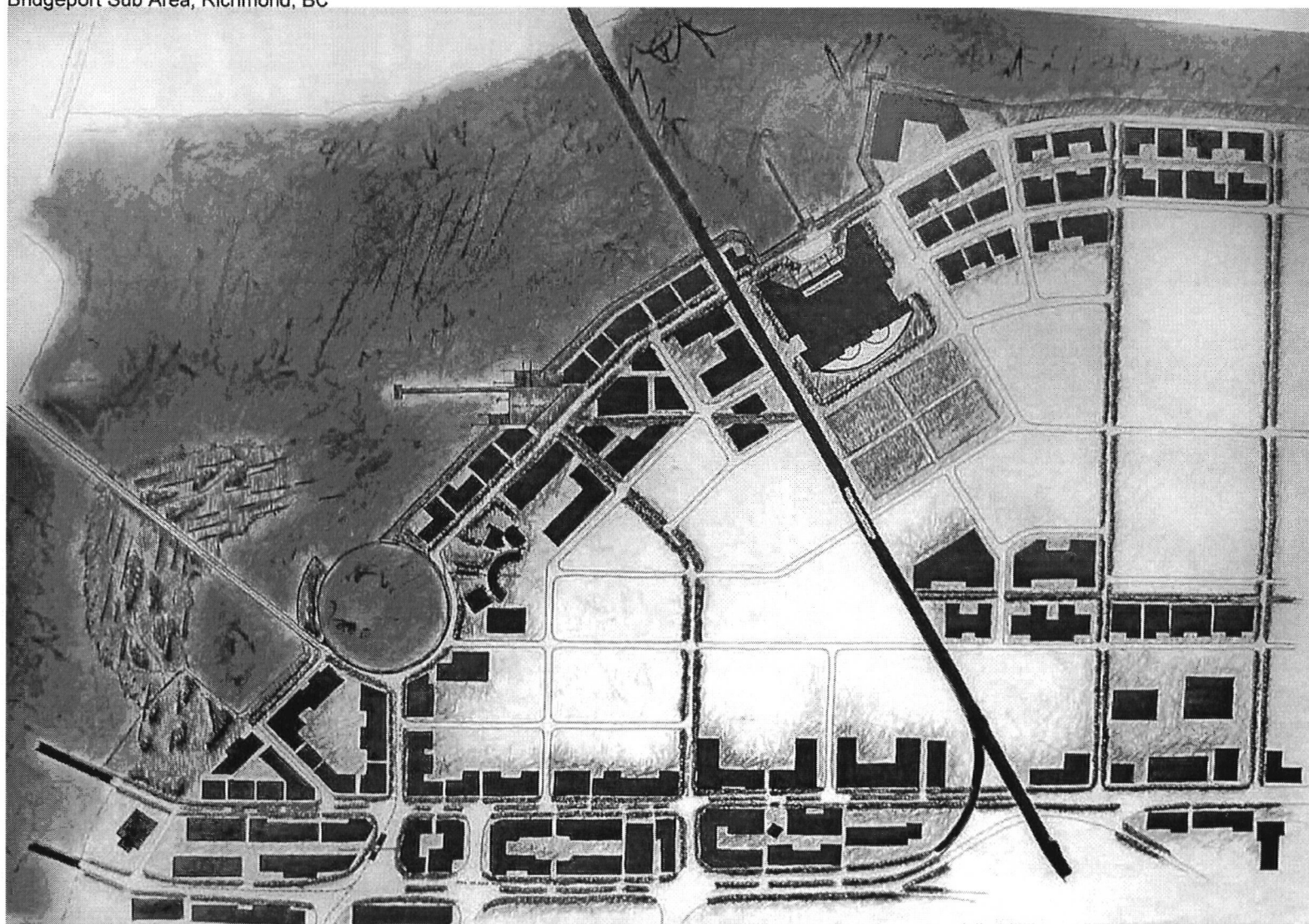Bridgeport Sub Area, Richmond, BC
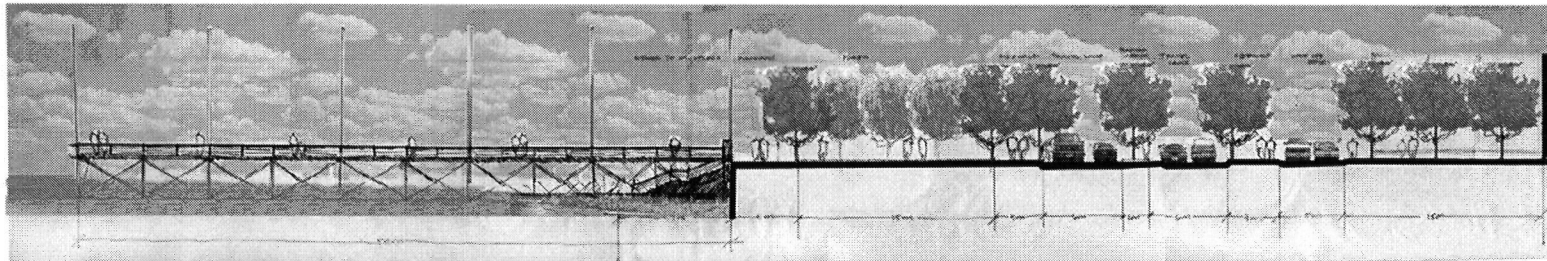
Figure 30: The River Cup Option

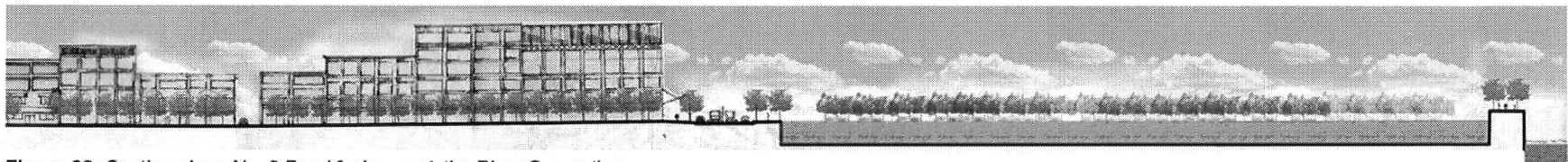*Figure 31:* Trade Centre east of the Oak Street Bridge, the River Cup option

Figure 32: Section along No. 3 Road facing west, the River Cup option

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