REVITALIZING HISTORIC TOWN CENTER BY DESIGN
----THE CASE OF LADNER TOWN CENTER

by

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This thesis focuses on the role of design in revitalizing historic town center through the case study of Ladner Town Center. Ladner Town Center has a history of 136 years which traces back to its beginning of Ladner brothers’ *Ladner Landing*. It has unique character as a historic town center, intimate scale, and highly respected by its residents and visitors. However, the town center has experienced a decline in its importance as a commercial center and its built space is deteriorating. The revitalization of Ladner Town Center is to retain and enhance its desirable characteristics: traditional character, human-friendly scale, and its unique physical characteristics; to rejuvenate its economic viability for the merchants and the community; and to enhance its convenience and attractiveness for residents and visitors.

The case study of designing for revitalizing Ladner Town Center is approached by first analyzing the existing situation of the historic town center and the unique elements that form the character. Opportunities and constraints are concluded from this analysis, and a variety of basic principles and strategies are proposed related to the goals and objectives for revitalizing Ladner Town Center. Finally, a selected scheme is developed from two alternatives, and more detailed design or key portions of this selected scheme are presented.
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INTRODUCTION

1.1 Why the Case of Ladner Town Center?

The case of Ladner Town Center was chosen for this study for a number of reasons. Ladner Town Center has a history of 136 years which traces back to its beginning as Ladner’s Landing in 1868. Since Delta was incorporated as a municipal district on November 10, 1879, Ladner Town Center had been the political, cultural, and economical center of Delta for about eighty years. Through more than a century’s building and rebuilding the town center has many-layered continuity, includes the traditional character and pedestrian-friendly neighborhood. These are highly valued by residents and visitors. However, Ladner Town Center experienced an economic decline since the opening of the Massey Tunnel in 1959, and the building of the shopping malls along Ladner Trunk Road in the 1970s. In the 1970s and 1980s, several approaches were tried to revitalize the area’s dilapidated buildings, including demolishing them to encourage new construction, but it did not work well. Conversely, some of its unique character and intimate scale was lost.

Now the remaining heritage structures, the traditional character, and the town pattern are important assets to Ladner Town Center. Revitalizing it, rather than simply removing or changing it, is urgent and necessary for the future of the historic town center.

1.2 Thesis Goals

The goal of this thesis is to study the methodology and process of urban design to revitalize the historic town center at the local level using the case of Ladner Town Center. The emphases of the study are:

- Retain and enhance the existing traditional character;
- Create a high-quality, pedestrian-oriented town center;
- Increase economic development opportunities;
- Enhance the cultural, historic, and natural resources.

1.3 Thesis Objectives

The objectives for revitalizing Ladner Town Center are to:
- Enhance waterfront access and public open space linkage;
- Create more types and amount of public open space;
- Create continuity based on the existing traditional characters;
- Create a pattern of human scale and perception, and pedestrian-orientation.
- Create a mixed-use neighborhood;
- Enhance the natural diversities and quality.

1.4 Study Approach

The case study of designing a revitalized Ladner Town Center is approached by first analyzing the existing situation of the historic town center and the unique elements that form its characteristics. Opportunities and constraints for revitalization are concluded from the analysis. Secondly, a variety of basic principles and strategies are then proposed to carry out revitalization activity as related to the goals and objectives of Ladner Town Center. Thirdly, two alternative plans are developed which respond to the principles and strategies in different ways. Then, a selected scheme (Master Plan) is developed from two alternatives for the town center. Finally, three areas of this Master Plan are designed in more detail.

The frame of the study approach is presented below
1.5 Assumption

This project is about the historic town center’s planning and designs, including: public open space, buildings, and streetscapes. Prior to beginning this project, I propose the following assumptions:

- According to the assumption about the population increase in the Lower Mainland and the past population increase rate of Ladner, I assume that the population of Ladner will increase from 25,000 in 2001 to 36,000 in 2011;
- The municipality of Delta and the residents of Ladner will spend money and effort to revitalize the historic town center;
- The owners of the properties in existing town center will sell their land to create room for the new development;
- The new plan of connecting Richmond, New Westminster, and Lander by ferry for tourism and traffic will be executed soon;
- Highway 17 and the arterial road –Ladner Trunk Road, have the capability to carry tour and residents around to the town center.
CHAPTER II: Literature Review

2.1 Introduction

The use of the term ‘historic’ infers value, importance, or fame due to an object’s association with some significant event or person from the past. Historic cities or towns should show a visible sense of the past, which is not necessarily an ancient past. “On many city blocks and village streets in Canada it is possible to find groups of buildings that may span one hundred years of construction methods and styles. Yet they visually support and enhance each other, and in addition they provide examples of our culture and our development. They may be as young as thirty of forty years (or even less), but if they ‘fit’, if they are good structures, if they have any possible contemporary use, they are also parts of the past that we should be striving to retain (Falkner, 1977: 1).”

In its truest sense, a town center “connotes denser arrangements of buildings characterized by overlapping patterns of use and activities, and clearly defined, human-scaled external spaces, where citizens can conduct their business and meet and mingle freely with others.” (City of Raleigh: 1) Meanwhile, the design of town center “is intended to bring order, clarity and a pleasing harmony to the public realm of towns. The public realm is best defined as the network of public spaces -- streets, squares, plazas, parks and sidewalks -- that comprise the connective tissue of spaces that citizens share in their daily lives.” (City of Raleigh: 1)

A historic town center’s revitalization needs to be designed and implemented meticulously. It is the project, which results in the improvement of the economic, social, historical, and cultural environment by involving all facets of the community. In the process of design, the aspects of economic, social, historical, and cultural needs of a community are considered equally.

2.2 Reasons of Revitalizing Historic Town Center by Design
Good design is fundamental to places. A variety of roles or motivating factors exist for design in revitalizing historic town center.

2.2.1 Create a Sense of Place

Sense of place is not an abstract concept. It is something that relates to our daily lives. “Sound, color, texture, smell, and human feelings are all associated with the places in people’s lives. The natural environment, an area's social life, its history and the cultural background of its residents combine to give each community its individual image and sense of place (Rosners, 1996, part3: introduction).”

The public realm is the most importance in creating a sense of place. The public realm includes the open space and streetscapes. Creating a sense of place is to create built environment elements that people can remember and enjoy. It is also to invite people in and encourage collective activities. The sense of place is dynamic and is accomplished through our experience and the values we bring to it. People’s perception and appreciation of a place has being changed as the history develops. They design and complement the built environment to create a sense of place, in turn; the built environment affects people’s lives and senses. The sense of place, as said by Porter in his book—Making Smart Growth Work, is accomplished through the sharing of experiences, the invention and celebration of rituals and traditions, and the design of the built environment to nurture sharing and celebration (Porter 2002: 77).”

The sense of place of a historic town center is a result of historical evolution and the evidence of this is embodied in its environment. It is important to preserve this evidence so that the community can retain its unique sense of place.

2.2.2 Retain Continuity and Evolution

Change and development in historic town centers is often quick and inevitable. Planning, by its nature, involves the management of change, but often that change
occurs too rapidly or in such a way that people begin to fear that their community is losing its sense of place, that everything familiar or characteristic is disappearing (Lynch, 1972). The purpose of revitalizing a historic town center should provide a way to allow change and development to occur while retaining and enhancing the historic character, rejuvenating the economy, and creating an attractive place.

However, changing and development do not mean forgetting the past. In *A Vision of Britain*, Prince Charles stated, “I believe that when a man loses contact with the past he loses his soul. Likewise, if we deny the architectural past—and the lessons to be learned from our ancestors—then our buildings also lose their souls (Charles, Prince of Wales, 1989: 10).” Meanwhile, the “concept of the future is affected by past experience.” (Lynch, 1972: 90). History is vital for understanding the present and evaluating directions for the future.

“Cities are perpetually unfinished serial creations. In each generation, new uses, social patterns and economic activities emerge, while others become obsolete and are displaced, renewed, or transformed. The form of the city develops through a continuous reworking over the traces of what came before. This nonstop evolution of use and form is both inevitable and desirable... For urban evolution to occur successfully, there must be an implied “contract” about the nature of city building in which the contributions of previous generations are understood and creatively reinterpreted, even where change is substantial (Greenberg, 2000: 175).”

2.2.3 Provide Opportunities for Casual Socialization

In North America, the “third place” is always critically missed. Third places are the traditional community gathering places found outside the home and the workplace and include café, taverns, town squares, and village green (Oldenburg, 1989). “Many observers are convinced that these community gathering places are the missing ingredients that people in suburban areas and edge cities are looking for
today.” (Bohl, 2002: 11) The problem of “lost space” exists in many of the North American cities or towns. “Too much empty space and too few people—this finally emerged as the problem of the center in more cities than not... There are simply not enough people to make it work (Whyte, 1988: 6).” Oldenburg stated that the solution is “The Third Place”. “What urban sociologists refer to as their interstitial spaces is filled with people. The streets and sidewalks, parks and squares, parkways and boulevards are being used by people sitting, standing, and walking” (Oldenburg, 1989).

Social life is so important to people. In Pindell’s book, Good Place, he stated, “Towns and cities whose social life coalesces around such places rather than the country club and the private home meet the first criteria for people looking for a good place to live today” (Pindell, 1995: 4). In Gehl’s book, Life between buildings, he presented the same concept. It is the space between buildings—the public realm of plazas, greens, squares and pedestrian friendly streets—that enables a town center or a main street to act as the third place for nearby neighborhoods and communities (Gehl, 1987).

2.2.4 Create Places for Changing Community

The structure of communities in North America has largely changed after the World War II. The traditional families that consisted of a working husband, a stay-at-home mom, and children are not dominant. According to Myers’ article, the traditional family of breadwinner father and stay-at-home mom now accounts for barely one-tenth of all households and working mothers have become the norm (Myers, 1993).

On the basis of survey research, changes are also happening from mass-market standards to niche market differentiation, both by life stage and by lifestyle; from unplanned suburbs to master-planned communities; from suburban anonymity and individualism to a yearning for community; from contemporary to neotraditional styling; from strip-commercial suburban sprawl to compact, highly defined town centers (Warrick and Alexander, 1997).
All the changes affect people's intention of where to live. "By the early 90s, it was evident there was a rebellion, or sea change, in people's attitude about where they wanted to live" (Duany, Plater-Zyberk, and Speck, 2000: 255).

These demographic changes provide opportunities and demands to create diverse and mixed-use environment in revitalizing historic town centers.

2.2.5 Create Open Spaces and Parks within and around

Creating open space and parks is to create a kind of nature in a city. Spirn stated in his book, The Granite Garden, "Nature in the city is far more than trees and gardens, and weeds in side walk cracks and vacant lots. It is the air we breathe, the earth we stand on, the water we drink and excrete, and the organisms with which we share our habitat. ... The city was part of nature.... Cities must resist the habit of fragmenting nature. Only by viewing the entire natural environment as one interacting system can the value of nature be fully appreciated."(Spirn, 1984: 4 )

In Raymond Unwin's book, Town Planning in Practice, he described that the "place" of traditional towns was comprised by civic and green space. His ideal neighborhood is to incorporate fresh air, light, and visual relief. His notion of giving discipline to the space used for civic and recreation purposes—carefully planning the arrangement of parks and other green spaces to create an attractive contrast and balance—contributes to the town planning tradition that now allows us the pleasure of discovering a vest-pocket park or small plaza.

Nature is a whole that embraces the city. It relates to the city's design, complementation, and maintain. It also affects every resident's health, safety, and welfare. But "most (cities) are sitting on a huge reservoir of space yet untapped by imagination. In their inefficiently used rights-or-way, their vast acreage of parking lots there is more than enough space for broad walkways and small parks and
pedestrian places—and at premium locations.” (Whyte, 1988: 6) In the process of revitalization, the city or town should be considered as part of nature and designed accordingly.

In *Charter of New Urbanism*, Comitta emphasizes the importance of public open space and parks to neighborhood. “Neighborhoods appear as balanced living environments when parks are the linchpins of a community. Neighborhoods also appear balanced spatially when plazas, squares, and other open spaces complement buildings. The contrast between built and unbuilt is attractive on several levels between the form textures of buildings and streets and the soft colors and textures of the natural world; between a more formal architectural character and nature’s informality; and between the massing of structures and the openness of common space. With parks and other open spaces to provide visually stimulating contrast, both architectural and natural environments in a neighborhood rest as more distinguished.” (Comitta, 2000: 113-116).

2.2.6 Enhance Economic Health

The vision of a community is important to its economy. Each community plays a crucial role in creating an environment that is attractive to and nurturing of new and existing businesses.

In the *Port Townsend Comprehensive Plan*, it mentioned, “Economic development does not take place in isolation. It is closely linked with virtually all aspects of community life, and is an essential element of a sustainable community. ... Economic development usually means the strengthening of an economy by providing more jobs and producing more revenue within the community, including tax revenues for local governments. Over the long term, the economy needs to balance and diversity enough to absorb inevitable market changes and business fluctuations. A diverse economy also provides a wider variety of job opportunities suited to all skill levels in the work force.” (Port Townsend Comprehensive Plan, 1996, VIII-1)
A primary goal of revitalizing historic town centers is to provide more jobs. Providing better jobs and more economic opportunities should improve the community’s ability to guarantee affordable housing to all, by raising incomes rather than having to rely on cutting the quality of housing. The result of successful economic growth is to strengthen the community’s tax and employment base. A strengthened tax base enables the community to support a higher quality of life for its residents by improving public services and amenities.

Ideally, economic development in a town center should balance economic vitality with stability, environmental protection, and preservation of the small town atmosphere.

2.3 The Evolution of Neo-traditional Town Center Design

“If one wishes to be guided by the best of the past, while still incorporating useful—or inevitable—features from the present, it makes sense to begin by analyzing the various components of traditional in one’s region to determine what makes them especially characteristic of that place.” (Arendt, 1994: 48)

Raymond Unwin noted that in order to create great places we couldn’t simply copy the best historic places. We cannot expect one successful project to serve as a literal model for another project at a different site, in a different city, serving a different marker: variation in site characteristics; in local climate, technology, culture, lifestyle, and architecture; and in the scale and requirements of shops, restaurants, and civic institutions all have to be taken in account. However, Unwin also stated that it is essential to study old towns and their buildings (Unwin, 1909).

“Physically, emotionally, intellectually, any change in man’s nature is so gradual as to be inconsequential in respect to the design of a specific place.... the [Campidoglio’s] perfection of spatial balance and scale—as correct today as in the sixteenth century
because man's perception of space and scale have not changed. Proportion, scale, form, rhythm, value—these are timeless qualities of design, not to be confused with 'style' and 'taste' which vary in the utmost" (French, 1983: 27).

2.3.1 Unwin and Relevance Today

In his widely read book, *Town Planning in Practice: An Introduction to the Art of Designing Cities and Suburbs*, Raymond Unwin clearly approached this subject from an artistic perspective. Unwin's civic art was not about city beauty but about "adopting an orderly framework of streets and public spaces within which the work of individual architects could take its place, and introducing such devices as axial views, expansive public squares, and formal groupings of buildings" (Rybczynski, 1995: 133). The aim of Unwin's work was to "explain what it is that makes towns and cities of the preindustrial period so pleasing, and to formulate specific principles of urban design that can be adapted to the modern period" (Rybczynski, 1995: 194).

Unwin's striking idea was to decrease the width of streets at a time when the automobile was becoming increasingly common. He presented two reasons for this decision: to increase available open space without increasing the size of the entire community, and to slow traffic in neighborhood areas (a technique that has only recently made a comeback in the form of traffic calming). Both of these choices preserved the viability of central places by maintaining reasonable walking distances from homes to other activities, and balancing the needs of pedestrians and vehicles. Other characteristics of Unwin's work include *close*; a diverse mix of housing types; the application of formal principles of civic art to town-scale developments; and a fine-grained mix of dwellings, civic structures, shop and workplaces.

"Although Unwin's work is dated, his approach has potential value and relevance for today's designer. For example, much of the highly acclaimed work of Andres Duany and Elizabeth Plater-Zyberk, has its roots in Unwin's work. Their neo-traditional designs owe much of their initial inspiration to Unwin, who stressed the importance
of town edges and approaches, town centers and enclosed places, the arrangement for roads and intersections, the spacing and placing of buildings and fences, and the harmonious design of buildings” (Arendt, 1994: 49).

2.3.2 Townscape

Gordon Culllen’s Townscape is another book influencing neo-traditional town center design. “There is an art of relationship just as there is an art of architecture. Its purpose is to take all the elements that go to create the environment: buildings, trees, nature, water, traffic, advertisements and so on, and to weave them together in such a way that drama is released” (Cullen, 1971: 7).

Cullen articulates three ways of understanding traditional town: “concerning optics” (serial vision), “concerning place” (human position), and “concerning content” (fabric of town).

The first concept of concerning optics, or serial vision, refers to “a series of revelations” when people move from one position to another through the streets of a town. “Although from a scientific or commercial point of view the town may be a unity, from our optical viewpoint we have split it into tow elements: the existing view and the emerging view.” (Cullen, 1971: 9). He mentioned that long, straight streets produce little of visual interest: “the initial view is soon digested and becomes monotonous” (Cullen, 1971: 9), and emphasized the importance of contrast which helps towns “come alive through drama of juxtaposition.”

Cullen’s second concept of concerning place, or human position, concerns one’s reaction and feeling to the position of our body in its environment. “Arising out of this sense of identity of sympathy with the environment, this feeling of a person in street or square that he is in it or entering it or leaving it, we discover that no sooner do we postulate a here than automatically we must create a there, for you can have one without the other” (Cullen, 1971: 10). The idea of a “here” and “there” is
fundamental to this experience. “The typical town is not a pattern of streets but a sequence of spaces created by buildings” (Cullen, 1971: 10)

Cullen’s third concept is concerning the fabric of townscapes: the visual importance of colors, textures, scale, style, character, and detail elements. “Accepting the fact that most towns are of old foundation, their fabric will show evidence of differing periods in it architectural styles and also in the various accidents of layout.” (Cullen, 1971: 11)

2.3.3 Prince Charles’s Ten Principles

Prince Charles has concentrated on the visual aspects rather than the functional or social aspects of towns. He emphasizes the importance of character, which “is part of an extraordinarily rich tradition which we’ve inherited from our forebears” (Charles, 1989: 17). He also emphasizes the key role of the past. “If you destroy the past, or consistently deny its relevance to the present, man eventually loses his soul and his roots. ...Because our technology changes so rapidly it does not mean our spirits, or our fundamental psychological responses, alter as well” (Charles, 1989: 76). In his book, A Vision of Britain, he presents ten principles: Place, Hierarchy, Scale, Harmony, Enclosure, Materials, Decoration, Art, Signs and Lights, and Community. The following quotation is a selective condensation of his remarks.

- Place: “We must respect the land.... The landscape is the setting for all our architecture.... New buildings can be intrusive or they can be designed and sited so that they fit in. It is seldom enough to disguise them by planting.... New buildings should not dominate the landscape but blend carefully with it. Often large buildings can be departed into elements which will humanize the scale.... If new buildings avoid sprawl and are grouped together more of the landscape can be preserved” (78-79).

- Scale: “Man is the measure of all things. Buildings must relate first of all to human proportions and then respect the scale of the buildings around them. Each place has a characteristic scale and proportion.... Almost all our towns have been
spoiled by casually placed oversized buildings of little distinction, carrying no civic meaning.... The image of the city that inspires these rules is of an enclosed and contained city” (82-83)

- Harmony: “Harmony is the playing together of the parts.... A straggling village street of a wide city avenue which may consist of buildings belonging to many different periods can look harmonious.... All the participants need to understand the basic rules and traditions” (84-85)

- Enclosure: Enclosure “is an elementary idea with a thousand variants, and can be appreciated at every level of building.... The scale can be large or small, the materials ancient or modern, but cohesion, continuity and enclosure produce a kind of magic. The application of these ideas makes a place unique... A community spirit is born far more easily in a well-formed square of courtyard than in random scattering of developer’ plots” (86-87)

2.3.4 The New Urbanism

In the book, *The New Urbanism*, Peter Katz notes, “The New Urbanism is a movement that I feel will be of great relevance to future planning efforts.... The New Urbanism, though, is not just a revival, while it borrows heavily from traditional city planning concepts.” (Katz, 1994: xi) “In one sense, it represents a rediscovery of planning and architectural traditions that have shaped some of the most livable, memorable communities in America—urban precincts like.... traditional small towns where life centers around a courthouse square, common, plaza, train station or main street (Bressi, 1994: xxv).”

In the book, *Suburban Nation*, Duany noted that the new urbanism has adopted the pragmatic neo-traditional philosophy: “the term neotraditional was coined by the Stanford Research Institute to describe the ethos of the baby-boom generation, the generation that is expected to be culturally dominant until the year 2030 (Duany, Plater-Zyberk and Speck, 2000: 255).”
In the *Charter of the New Urbanism*, the Congress for the New Urbanism articulated 27 principles that represent the philosophical essence of urban design. The primary principles are: “neighborhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be formed by architecture and landscape design that celebrate local history, climate, ecology, and building practice.” (The Congress for the New Urbanism, 2000)

New urbanists strongly support revitalizing old town centers and main streets, and reconfiguring portions of newer retail, office, and higher-density residential growth to transform them into village centers, town centers, and urban districts.

The new urbanists learned from and applied the best urban design practices from the “traditional urbanism” found in historic town centers and main streets, while pragmatically adapting them to modern lifestyles, business practices, and technologies.
CHAPTER III: Site Context and Analysis

3.1 Site Description

Ladner is located on the mouth of Fraser River, in the extreme southwest corner of mainland BC, 27 km south of Vancouver, and 27 km west of White Rock. The population is around 25,000.

Figure 1: Ladner in Mainland BC

The town center comprises an area of about 80 acres. It is adjacent to the harbor and bounded by Georgia Street on the West edge, 47A Avenue on the South edge, and the Chillukthan Slough on the East edge. It is in the middle of the Ladner Village.

Figure 2: The Town Center in Ladner

3.2 Historical Background

According to the Provincial Archaeology Branch information, Chillukthan Slough, and Ladner Marsh are the two sites occupied by aboriginal in the Ladner area. Because of the regular river flooding, the visits were only short-term, seasonal by aboriginal people.
The present history of Ladner traces back to its beginning of **Ladner’s Landing** when Ladner brothers (Thomas and William) preempted land on either side of Chillukthan Slough in 1868. Ladner Town Center occupies this first claim by William Ladner. In the beginning, the agriculture in Ladner was initially on a subsistence basis and the principle product was beef cattle.

Water access determined the pattern of early Ladner. Flooding, drainage, and insects are the three significant obstacles faced by early Ladner settlers (Gordon Taylor, 1958). Besides the rich soil for agriculture, another natural resource was the fish from Fraser River. As a result, fishing and fishing processing were major activities in early Ladner history (Gordon Taylor, 1958), and now Ladner Harbour is still a working harbour for fishing.

From the early 1900’s, dairy farming became a more important component of the local agricultural industry. Since Delta was incorporated as a municipal district on November 10, 1879, Ladner Town Center had been the political, cultural, and
economical center of Delta for many years. It had its peak period around 1900-1910. There was government wharf with steamship traffic, a railway terminating at nearby Port Guichon, a highway, several fish canneries, a hotel, stores, and the municipal hall.

From 1914 the economy of Ladner was stagnant and then Ladner became the local supply center for farms. In 1930, the ferry to Lulu Island (Richmond) began to service.

The economy of the town center went down after the opening of the Massey Tunnel in 1959. Fast and convenient connections to other centers, such Richmond and Vancouver, sharply weakened the role of Ladner Town Center as a commercial center. Conversely, because the tunnel provided fast and convenient access to relatively inexpensive housing, the demand of housing in Ladner dramatically increased. The population increased from 2,000 in 1960 to 10,000 in 1970 (as shown in Table 1).

Because of the creation of the Agriculture Land Reserve in 1972, Ladner’s development was defined in the developed
area of 1970 and East Ladner. Infilling and rebuilding were the major ways to
develop in Ladner. The developed area was almost the same. But the population
increased from 10,000 in 1970 to 25,000 in 2000 (as shown in Table 1).
In the 1970s and 1980s, several approaches were tried to revitalize the town center,
including demolishing the old building to encourage new construction, but it did not
work well. Conversely, some of its unique character and intimate scale was lost.
Meanwhile, the building of two big shopping malls (Trenant Park Square and Ladner
Shopping Mall) along Ladner Trunk Road decreased the role of the town center in
economy.

Table 1: Historical population growth for all of Ladner

Source: Urban Renewal in Ladner, Dieter Naumann, 1964; Delta Planning Department; and
Compusearch Micromarketing Data & Systems 1995

3.3 Physical Context

Ladner is located at the mouth of Fraser River. It is about 1.3 meters higher than sea
level. The soil is mixed marine and fresh water deltaic deposits. River flooding, sea
tide, and drainage system are the three major elements affect the physical
characteristics of Ladner.
During the spring run-off period, rains and/or quickly melting snow packs in the interior of BC can sharply increase the height of the river, and lead to the river’s flooding. Floods occurred in 1894, and the dyke system was built subsequently. Meanwhile, high tide from the Strait of Georgia water prevents the river from fully discharging its complete upstream flow. The level of the river rises when the upstream flow exceeds the discharge rate into the ocean.

The drainage system of Ladner is the third major influence on the level of the water table. This drainage system has improved a lot to the natural landscape. Before the
installation of drainage, Ladner was often under water for five to six months of the year (Gordon Taylor, 1958). Drainage is provided by pumping. The drainage system was designed to maintain a minimum level of water in the sloughs and ditches to provide irrigation water for farming. The farmers pump water out of the sloughs and open ditches into their field irrigation systems as it is needed.

This means that the water level within the Ladner Town Center is determined by the needs of the agricultural community, the river, and the tide level. The water level has an important influence on the construction standards. In Ladner, the base level required for all new construction is 1.7 m above sea level, and no habitable spaces or parking below ground level are permitted.

3.4 Regulatory Context

Land use in Ladner Town Center is guided by two documents. One is the Official Community Plan (OCP) adopted as a bylaw (Bylaw No.3950) in 1986. Another is the
Delta Zoning Bylaw (Bylaw No.2750, 1977), which regulates the current zoning for individual properties and the land use.

In Figure 12, the town center is mix-used, including light industry, service, retail, institution and residence. The light industry is mainly along the harbour for fishing; services are mainly located along the slough; retail businesses concentrate in the core of the town center (along Delta Street and 48 Avenue); multi-family residences are located on the west and south of the town center; single-family residences surround the center. This pattern of land use also reflects the beginning of the town center as a local distribution and market center for fishing and agricultural industries.

3.5 Characters of Buildings and Streetscapes

Urban character is formed by a combination of buildings and streetscapes. Ladner's traditional character is also manifested by the character of buildings and streetscape. These elements, and their inter relationships, are mapped, categorized, and graphically analyzed.

3.5.1 Character of Buildings

There is presently a mix of building types in the town center: retail mall, strip retail, apartment, industrial, detached houses, public facilities, etc. There is also a mix of time-periods of construction and styles of architecture: heritage buildings (75+ years old), pre 1950’s pedestrian-oriented retail, 1960/70’s car oriented strip mall, 1980/90’s character buildings. From an architectural perspective, some of these contribute positively to the character of the town center; some detract from it.

3.5.1.1 Criteria to the Character of Buildings

The criteria upon which the building assessment was made included:
• Creating the history continuity
• Definition the public realm of streets and open space
• Creating a human-scale, immersed environment that maintains the atmosphere of a traditional town center throughout
• Balancing the needs of business and civic facilities and the needs of residents
• Creating Vernacular and historic architectural styles through
  ➢ Height of buildings and individual floors
  ➢ Scale and massing
  ➢ The spacing between buildings and the street
  ➢ The proportions of windows, bays, doorways, porches, and other features
  ➢ Materials, finishes and texture

3.5.1.2 Evaluation of the Character of Buildings

According to these elements and the criteria above, the character of buildings was addressed by cataloging into three types: Good, Moderate, and Poor. The Figure13 shows the result of this analysis. Examples of each class are shown in the accompanying photographs.
Figure 13: The evaluation of the character of buildings in the town center and some examples

3.5.2 Character of Streetscapes

3.5.2.1 Typical Character (Section) of the Existing Streetscapes

The sections show four typical kinds of streetscapes. They were formed in different time periods and characteristics. They also reflect the character of surrounding buildings and status of the town center development.
There are four typical types of streetscape in Ladner Town Center: narrow retail street; landscaped retail street; harbourfront street, and sloughfront street.

Figure 14 Typical sections of the streets in the town center

3.5.2.2 Criteria to the Character of the Streetscape

The criteria upon which the streetscape assessment was made included:

- Creating a hierarchical network for the street layout
- Narrowing roadways
- Creating building front directly onto streets
- Paralleling parking on one or both sides
- Planting street trees in a parallel parkway
- Reducing curb radius
- Creating more positive visual experience
- Creating pedestrian scaled lighting and furniture
- Creating a sense of focus and enclosure
- Creating an appropriate proportions of the streetscape (ratio of street wall to width is 1:2 to 1:3)
- Delineating the pedestrian realm including sidewalk widths, fences and edges, and parkway
- Screening parking lots

3.5.2.3 Evaluation of the Character of Streetscape

According to the criteria above and the existing situation, the character of streetscapes was addressed by cataloging into three types: Good, Moderate, and Poor. The Figure 15 shows the result of this analysis. Examples of each class are shown in the accompanying photographs.
3.6 Existing Heritage Sites

The older buildings of the town center play an important role in present Ladner. They cover a wide range of styles from unadorned, quickly constructed commercial buildings, to grand houses, and former municipal hall. Some of these buildings were built in the late 1800’s or early 1900’s. The accompanying map shows the existing
heritage sites in and around the town center. Most of them are the residential houses. The landmark heritage sites and buildings include: Massey’s Marine Supply store on the end of Delta Street; Government Wharf on the end of Elliott street; Delta Museum in the core.

Figure 16: The existing heritage sites in and around the town center and some images

The stock of heritage buildings is related to two factors. One is the time of Ladner’s initial period of growth before 1914. Another is the economic decline of the town center after the opening of the Massey Tunnel in 1959. This period saw some heritage buildings torn down in order to create room for new structures.
The heritage sites and building are the wealth for the community, and they are highly respected by the residents and visitors.

3.7 Evolution of Building and Street Pattern in History

The pattern of Ladner Town Center is rich and dynamic. Through 136 years of building and rebuilding, it has produced a many-layered continuity. Meanwhile, the developments and processes has being threatened both the identity and way of life that are granted.

The evolution of building and street pattern in history was documented and mapped below.

In the 1910's, the town center had become a social and economic center for farming families through the municipality. Development was concentrated around the first claim area filed by William Ladner. Elliot Street and Delta Street were the two main streets around which commercial and industrial buildings located.
By the 1950's, more buildings were located along Elliot Street, Delta Street, 48<sup>th</sup> Av., and Bridge Street. The street pattern was more obvious.

Because the construction of George Massey Tunnel (1959) provided an uninterrupted road connection between Ladner and Vancouver, the town center experienced economy decline and the old commercial structures played much less important roles than before. Otherwise, rapid subdivision and development happened in other Ladner neighborhood in the 1970's.

By 2000, several approaches were tried to revitalize the area's dilapidated buildings, including demolishing them to encourage new construction. A new commercial shopping mall (Harbour Market Mall) and some other mass mixed used
buildings appeared. The six blocks between Delta Street and Georgia Street was combined to create one huge block for a multi-family residential development.

3.8 Circulation Systems and Parking

The traffic is pretty simple in Ladner Town Center. Ladner Trunk Road connects the town center to No. 17 Highway. It is also the arterial road linking Ladner to Richmond, Vancouver, and White Rock. Elliott Street is the main road connecting the town center to Ladner South. Their intersection is the window for the town center to the outside.

The figure of Traffic Volumes shows the following information:

Main traffic passes by or through the edge of the town center by 47Avenue and Elliott Street; the road use; the traffic relationship between the town center and the surrounding.

This information is useful as reference data in arranging the layout of the town center, reducing traffic congestion, and improving streetscape.

Because of its flat topography, Ladner is an ideal place for pedestrians and cyclists. As early as 1898, the Bylaw to regulate bicycles had been passed. The routes in town
center are part of the larger cycling and walking route system of Ladner. They provide alternatives to vehicles for residents and tourists in daily, commercial, and recreational activities.

Chisholm Street is an important section of the walking dyke route from Deas Island Regional Park to Westham Island.

According to the Ward Traffic Study (1997), there are 1,055 existing parking stalls throughout the town center. About 54 percent of these are on-street; and the others are on private commercial land. The parking utilization study indicated that, within the times of peak use (10:00 AM to 3:00 PM), the majority of the stalls have an occupancy rate of less than 59 percent. This fact show an opportunity for revitalizing the town center without adding more parking stalls, since there is capacity for increased parking.

3.9 Blue and Green

It was along the Ladner Harbour and Chilukthan Slough that pioneers settled in 1868 and it was the harbour and slough that provided their livelihood. The intersection of the harbor and the slough is the original “Ladner’s Landing” site where the wharf is currently located. The harbour provides fishing, industry, and recreation for Ladner people. The slough provides views, irrigation, and habitat as well. They form the boundary for the town center as well as connections to the landscape beyond. However, some of these opportunities are not available due to the lack of access over privately-owned lands adjacent to the harbor and slough.
There are a number of facilities clustered in and around the town center. These existing institutional buildings provide multiple functions for the community precinct. They also give opportunities to revitalize the town center in using these facilities efficiently.
Many parks are located around the town center. They include a municipal level park—Ladner Harbor Park, a community level park—Memorial Park, a neighborhood level park—Ladner Lions Park, and some local level parks and park reserve land. They are used for passive recreation, culture, and institution. They provide good views, destination, and interest for the community.

The “Blue and Green” structure of the area provides fantastic spaces and facilities, and presents great opportunities for revitalizing the town center on use existing resources.

3.10 Summary—Opportunities and Constrains

From the inventory and analysis above, the following opportunities and constraints can be achieved in the design for revitalizing Ladner Town Center.

3.10.1 Opportunities:

The context and analysis about the town center show a hierarchy of opportunities.

A. Enhancing historical character
   • Use Ladner Harbor and Chillukthan Slough as recreational and educational sites
   • Keep and complete the traditional character of streets
   • Keep the continuity of pattern and culture in the old town center.
   • Create a fine-grain street fabric and weave a permeable network for pedestrians in the town center
   • Create an attractive town center entrance or square adjacent to the main intersection

B. Enhancing waterfront and surrounding access
   • Connect heritage sites for education and as destinations.
• Integrate the surrounding harbor, slough, parks, and civic facilities to town center.
• Create and complete an intimate waterfront walkway and access from the core the other area of the town center.

3.10.2 Constraints:

The context and analysis about the town center also show a hierarchy of constrains

A. Erosion of historical character
• 70’s and 80’s “modernization” created huge blocks and huge mass buildings. They destroyed part of the traditional town patterns. Some of the changes are impossible to recover.
• Some streetscapes, such as Elliott Street, have lost their sense places.

B. Barriers to waterfront
• The development along the slough and waterfront blocks the view and access to the slough, harbor, Lions Park and Harbor Park.
• The dyke system blocks the access and view to the waterfront

C. Lack of connection to the rest of Ladner

• The slough is a barrier between town center and the new shopping malls.
• Ladner Harbor Center Mall blocks the connection between the “Main Street” (Delta Street) and Lions Park
CHAPTER IV: Design Principles and Strategies

3.1 Design Principles

According to the goals and objectives, the following design principles are proposed for Ladner Town Center revitalization:

1. Create a strongly linked open space and pedestrian pattern

2. Create continuity and a sense of enclosure along streets, and respect and expand upon the existing character of buildings and streets
3. Enhance the types and amount of public open space

4. Design for human scale and perceptions, prevent building masses that are out of scale with the heritage of Ladner, and provide a pedestrian-oriented town center, with public life focused on the street

5. Complement the natural characteristics and enhance ecological diversity.
6. Create a unique town center through diverse elements of streets and buildings and mixed and multiple uses.

Figure 30: Principle 6

3.2 Design Strategies

Based on the design principles, the goals and objectives, and the opportunities and constrains concluded in Chapter III, the strategies can be achieved as below:

1. Create a strongly linked open space and pedestrian pattern.
   - Create an intimate Waterfront walkway
   - Link the harbor to Memorial Park by “Main Street” (Delta street)
   - Create boardwalk along slough
   - Create mid-block pedestrian connections
   - Link Lions Park to “Main Street” (Delta street)
   - Link the harbor (Govt. Wharf), Village entrance, and institutional facilities (community center, Boy & Girl’s Club)

2. Create continuity and a sense of enclosure along streets; respect and expand upon the existing character of buildings and streets.
   - Streets are enclosed by street wall, and town square is enclosed by buildings
   - Scale is appropriate to the historic character of Ladner

3. Enhance the types and amount of public open space.
• Linear open space addresses the edge of town center along the slough and harbor
• Create more open spaces in middle of the town center, such town square and local parks

4. Design for human scale and perceptions, prevent building masses that are out of scale with the heritage of Ladner, and provide a pedestrian-oriented town center, with public life focused on the street.
  • Create a 1:2 to 1:3 ratio of street wall to the street width
  • Blocks, streets, and buildings harmonize with the existing heritage character and scale
  • Create human scaled elements of streets and buildings
  • Create a network of pedestrian walkways
  • Create continuity along the walkway to improve the pedestrian experience
  • Create appropriate sizes and locations of crosswalks, and depressed curbs, provide wide sidewalks and small curb radii
  • Create a safe pedestrian realm
  • Provide ground texture, pedestrian scaled lighting, furniture and signing
  • Create small blocks and mid-block pedestrian connection

5. Complement the natural characteristics and enhance ecological diversity.
  • Plant native vegetation along streets and water edge.
  • Increase habitat and decrease development impact on the environment, especially to the slough and harbor
  • Preserve important visual features of landscape, and prevent built structures blocking vistas

6. Create a unique town center through diverse elements of streets and buildings and mixed uses.
  • Create diversity in building types and details, but keep a consistency in traditional style
• Create diversity of block sizes, building width, and street elements
• Create diversity on the third dimension of height and mass
• Create mixed-use buildings, such as ground level is for retail, and upper level is for residential or office
CHAPTER V: Design Response

5.1 Alternatives

According to the principles and strategies, two alternatives are born. They are “Green Village” and “Market Town Center”. Their plans are shown in Figure 31.
Figure 31: The plans of the two alternatives
5.1.1 Criteria for Evaluate the Alternatives:

The criteria upon which the alternative assessment was made included:

Balance of development
- The total unit of development is similar for the alternatives

Economic conditions
- More types and amount of businesses provide a range of job opportunities
- Appropriate businesses match the traditional economy in heritage town center
- Density of housing and commerce supports civil amenities and commercial activities
- Consider the extremely high expense to acquire open space in getting private properties

Ecological conditions:
- Reduce development and commercial activity impact to habitats along the slough and harbor
- Linear open space provides a green infrastructure and recreational place
- Infill development to recycle existing buildings and sites
- Use existing sources as much as possible instead of creating new alternatives

Social conditions and community characteristics
- Provide educational opportunities for residents and visitors
- Promote interaction in neighborhood and public space
- Enhance place identity by maintaining the traditional characters of the town center
- Preserve heritage buildings and sites

5.1.2 Comparison of the Alternatives
The alternatives are compared in four ways:

- 3D models from south and north directions—Figure 32
- Perspectives of Elliott Street and Slough—Figure 33
- Typical sections of Centre Block, Harborfront, and Sloughfront—Figure 34
- Data of the proposed buildings’ area and category—Table 2

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*Table 2: Comparison of the two alternatives*
Figure 32: 3D models of the two alternatives from south and north
Figure 33: Perspectives of Elliott Street and Sloughfront
Figure 34: Typical sections of Centre Block, Harbourfront, and Sloughfront
5.2 Selected Scheme

According to the criteria and the comparison in four ways, I have chosen the Market Town Center as the selected scheme for these main reasons:

- Although the edge of the town center is not all covered by green and parks, some green and parks clusters provide access to the harbour and slough.
- There are existing parks beyond the town center and convenient accesses to them.
- The density is balanced across the whole town city instead of concentrated in the center block.
- The structure of commercial, residential, and office in the town center is balanced, and there is an emphasis on the historic character as a commercial town center.
- A gathering place, Market Square, is created for the whole Ladners’ social life.
- Money is saved in acquiring the existing private properties along the slough and harbour, and keeps the people’s jobs on the properties.
- The continuity of the historic pattern in the town center is maintained.

The Master Plan is developed on the basis of the alternative—Market Town Center and the plan is shown in Figure35.
Figure 35: Master Plan of selected scheme

MASTER PLAN 1:2000
5.3 Three Nodes Detail

Figure 36, 37, and 38 show the three nodes — Market Square, Slough Terrace, and Harbourfront — detail in Plans and Sections.
Figure 36: Town Square—Plan, Section, and Detail

TOWN SQUARE PLAN 1:750

SECTION A-A 1:400

LEGEND:

Concrete
Compacted Base Course
Compacted Type 2 Fill
30mm O Rigid Parf. PVC Lateral Line

Groat

Shed Pole
300mmx500mm Clear Red Brick Pavers, 40mm Thick

6m Side Walk

6.5m Travel Road

3.5m Selling Area

15m Fountain and Seating Area

3.5m Selling Area

48 Av.

Town Square
Figure 37: Slough Terrace—Plan, Section, and Detail
NEW WATERFRONT PLAN 1:750

CHISHOLM STREET

NEW WATERFRONT PLAN 1:750

SECTION C-C 1:400

Figure 38: New Waterfront—Plan, Section, and Detail
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