

A CASE FOR SMART GROWTH



Deborah Curran

West Coast
Environmental
Law – 2003



Generous funding for this project was provided by:

The Real Estate
Foundation of BC



The Law Foundation
of British Columbia



North American Fund
for Environmental Cooperation



Affordability and
Choice Today



Many individuals assisted in the preparation of this Case for Smart Growth by reviewing drafts and providing information and other assistance. Thanks go to:

Chris Rolfe who conceived of this project and set it in motion;

Lawrence Alexander for his strategic advice;

Alexandra Melnyk and Ceciline Goh for their administrative assistance;

Chris Heald for keeping the internet connections functioning, and for the layout and design of this publication;

The Smart Bylaws Guide Advisory Committee, the members of which provided guidance, resources and pointed in the direction of relevance for a small community audience:

- a.. Eric Bonham (Director, Municipal Engineering Service, Ministry of Community, Aboriginal and Women's Services, Province of BC);
- b.. Patrick Condon (James Taylor Chair, University of British Columbia);
- c.. Casey Edge (Executive Officer, Canadian Association of Home Builders, Victoria);
- d.. Blair Erb (Vice President, Coriolis Consulting Corp., Real Estate Institute);
- e.. Carol Finnie (Executive Director, CoolAid Housing Society);
- f.. Allison Habkirk, (Mayor, District of Central Saanich);
- g.. Harry Harker (President, Planning Institute of BC; Planner with the Village of Cumberland);
- h.. Kevin McNaney (Community Assistance Coordinator, Smart Growth BC);
- i.. Martin Paul (Project Manager, Keen Engineering);
- j.. Marie Potvin (Associate, Lidstone Young Anderson);
- k.. Ken Vance (Policy Analyst, Union of BC Municipalities).

Minelle Mahtani of IMPACS for her communications expertise;

Kirsty MacKenzie for her volunteer research and compilation of the chart on page 18; and

Luis Curran for taking, and permission to use, the photos on the cover and on pages 11, 13, 15, 17 and 19.

National Library of Canada Cataloguing in Publication

Curran, Deborah, 1968-

A case for smart growth / Deborah Curran.

ISBN 0-919365-23-X

1. Cities and towns--Growth--Environmental aspects--British Columbia. 2. Land use--Planning--Environmental aspects--British Columbia. I. West Coast Environmental Law Research Foundation II. Title.

HT243.C32B75 2003

307.76'09711

C2003-905399-7

Contents...

- EXECUTIVE SUMMARY v
- INTRODUCTION 7
- HOW THE SMART BYLAWS GUIDE WORKS 8
- WHAT IS SMART GROWTH? 10
 - Promoting urban revitalization and a healthy land base by rural preservation, by containing urban areas, channeling development into existing neighbourhoods and adopting integrated planning and management approaches 11
 - Incorporating green infrastructure into communities 13
 - Creating compact complete communities by mixing land uses and using land more efficiently 15
 - Increasing transportation choices through land use decisions 17
 - Creating inclusive neighbourhoods by ensuring that a diversity of housing types are accessible to a wide range of people of different age groups, family types and incomes ... 18
 - Maximizing the enduring benefits of developments by using resources wisely on sites and in buildings that are tailored to specific neighbourhood conditions 19
 - Supporting municipal goals through cost recovery by ensuring that development cost charges and other taxes and fees reflect the true cost of different types of growth 20
 - Promoting smart growth throughout the development process by reforming administrative processes and addressing liability issues 21
- BENEFITS OF SMART GROWTH 22
 - Smart growth decreases development costs 22
 - Smart growth decreases municipal service costs 24
 - Smart growth decreases long-term operating costs 25
 - Smart growth creates more affordable housing 26
 - Smart growth increases property values 27
 - Smart growth creates safer neighbourhoods 27
 - Smart growth attracts footloose, new economy businesses . 27
 - Smart growth supports local economies 28
 - Smart growth enhances the working land base 29
 - Smart growth enhances the existing natural and built assets of communities 29



Smart growth makes transit and other non-automobile transportation modes viable	30
Smart growth creates safer streets	30
Smart growth supports healthy children.....	31
Smart growth protects drinking water supplies	31
Smart growth builds social capital	31
Smart growth supports a healthy environment	32
CHALLENGES OF SMART GROWTH	33
Smart growth requires changes to bylaws and engineering standards	33
Smart growth requires a shift away from relying solely on the automobile for transport	34
Smart growth may require different risk management.....	34
Smart growth needs a knowledgeable development industry, municipal culture and citizenry	35
CONCLUSION	35
ENDNOTES	37

Executive Summary

Smart growth is taking off in British Columbia. In recognition of BC's leadership role, West Coast Environmental Law has developed a *Smart Bylaws Guide* to assist local governments to implement smart growth strategies through policy and bylaw changes. It describes smart growth practices, and backs up the theory with case studies, technical standards and bylaws that can be tailored to specific municipal circumstances. The *Guide* brings together the best practices of municipalities across BC, and highlights other innovators in the US and Europe. The entire *Guide* can be accessed at www.wcel.org/issues/urban/sbg.

This *Case for Smart Growth* is one element of the *Guide*, and presents credible evidence and the economic rationale for local governments to adopt smart growth strategies.

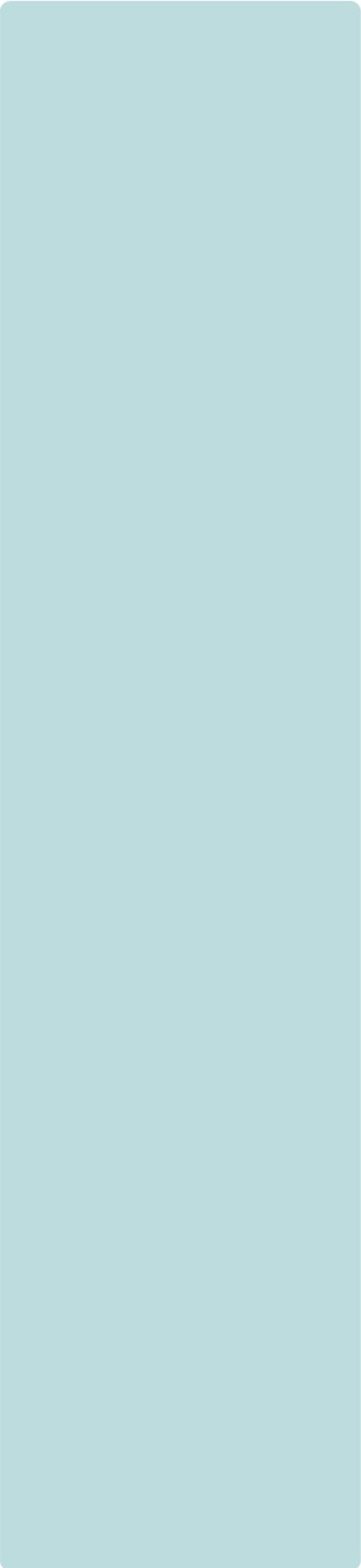
The first part of *A Case for Smart Growth* introduces the concept of smart growth, and describes how the *Smart Bylaws Guide* is organized.

The second part sets out the eight principles of smart growth and describes the strategies that achieve each goal.

The third part presents the benefits of smart growth. By concentrating development in already-serviced areas with attention to design and creating a variety of housing choices, research shows that smart growth:

- Decreases development costs;
- Decreases municipal servicing costs;
- Decreases long-term operating costs;
- Creates more affordable housing;
- Increases property values;
- Creates safer neighbourhoods;
- Attracts footloose, new economy businesses;

"Quality-of-place – particularly natural, recreational, and lifestyle amenities – is absolutely vital in attracting knowledge workers and in supporting leading-edge high technology firms and industries. Knowledge workers essentially balance economic opportunity and lifestyle in selecting a place to live and work. Thus, quality-of-place factors are as important as traditional economic factors such as jobs and career opportunity in attracting knowledge workers... Given that they have a wealth of job opportunities, knowledge workers have the ability to choose cities and regions that are attractive places to live as well as work."¹

- 
- Supports local economies;
 - Enhances the working land base;
 - Enhances the existing natural and built assets of communities;
 - Makes transit and other non-automobile transportation modes viable;
 - Creates safer streets;
 - Supports healthy children;
 - Protects drinking water supplies;
 - Builds social capital; and
 - Supports a healthy environment.

The fourth part describes some of the challenges that smart growth presents to developers, municipalities and citizens. It will require changes to bylaws and engineering standards, and will require different risk management. It will also entail changing how we get around in communities, and increasing the knowledge about development practices in BC communities.

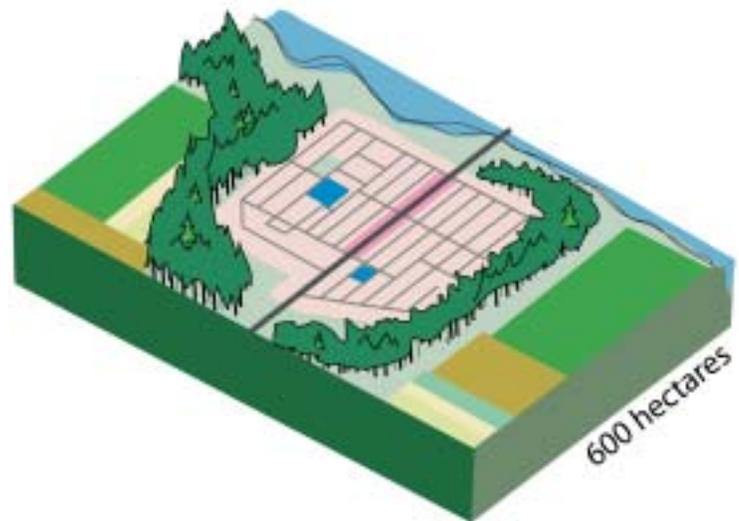
Introduction

Smart growth is taking off in British Columbia. BC offers some of the best examples in North America of smart growth projects at the regional, municipal and local scale. Looking around our communities we may not recognize it in practice, but many aspects of the culture of development in BC can be labeled smart growth. Some municipalities and developers from BC are now regarded as leaders in this North American approach to stopping urban sprawl, revitalizing commercial centres, and maintaining a working land base.

In recognition of our leadership role, West Coast Environmental Law has developed this *Smart Bylaws Guide* to assist local governments to implement smart growth strategies through policy and bylaw changes. The *Guide* is addressed to the towns and small cities in BC that often do not have the resources to research and apply new practices in a comprehensive way. It describes smart growth practices, and backs up the theory with case studies, technical standards and bylaws that can be tailored to specific municipal circumstances. The *Guide* brings together the best practices of municipalities across BC, and highlights other innovators in the US and Europe. The entire *Guide* can be accessed at www.wcel.org/issues/urban/sbg.

This *Case for Smart Growth* is one element of the *Guide*, and presents credible evidence and the economic rationale for local governments to adopt smart growth strategies.

"We do not achieve the kind of residential and commercial mix of land uses, and the densities, that you have in your town and city centres. Citizens in British Columbia value their open space as much as they value vibrant commercial centres and healthy downtowns. We need to apply this lesson across the US."²



Village Pattern – Jackie Teed and Patrick Condon with Chris Midgley, Neighbourhood Pattern Typology

How the Smart Bylaws Guide Works

The *Smart Bylaws Guide* is composed of seven interconnected tools:

1. The Case for Smart Growth outlines what smart growth is and why it is of benefit to local governments. It goes beyond principles and provides economic and other data to prove that smart growth strategies work.

www.wcel.org/issues/urban/sbg/case

2. This Smart Bylaws Summary describes the basic elements of smart growth using case studies and ranging from the regional and municipal scale to site and building scale. It provides an overview of the entire *Guide*, and links from within the chapters take readers to the other online tools described below.

www.wcel.org/issues/urban/sgb/summary

3. Web pages discuss each smart growth tool in more depth and provide examples of case studies.

www.wcel.org/issues/urban/sbg/

4. Case studies document development projects that exhibit a number of smart growth features, including bylaws and contact information.

www.wcel.org/issues/urban/sbg/casestudies

5. Bylaws and policies accompany each smart growth strategy. They are either working examples from local governments or have been drafted to assist local governments to effectively use specific *Local Government Act* powers.
www.wcel.org/issues/urban/sbg/bylaws
6. Checklists enable staff, council members and citizens to evaluate projects and municipal programs.
www.wcel.org/issues/urban/sbg/checklists
7. Resources provide links to further online information.
www.wcel.org/issues/urban/sbg/resources

The whole *Smart Bylaws Guide* can be found at
www.wcel.org/issues/urban/sbg

What is Smart Growth?

“Smart Growth has two primary features: the “where” and the “how”. It happens “where” development can be accommodated with minimal adverse impact to the environment, and in places where development takes maximum advantage of public investments already made. Smart Growth also addresses “how” the finished development will work with neighboring development to restore choices that are missing in places marked by sprawl: such as the choice to walk or use public transit, the choice to meet neighbors in attractive common spaces, or the choice to live in an apartment, a house, or a condominium.”³

Smart growth refers to land use and development practices that enhance the quality of life in communities, preserve the natural environment, and save money over time. The aim is to limit costly urban sprawl, use tax dollars more efficiently and create more livable communities. Smart growth practices range from promoting compact complete communities to supporting a viable working land base. Developments that conserve resources (land, infrastructure, and materials) cost less and increase property values.

Smart growth comes in many forms and is essentially a new name for various land use patterns and infrastructure funding mechanisms for which people concerned with neighbourhoods have advocated for half a century. The new features of this package of strategies are a recognition that suburban development should not be subsidized by taxpayers, and that sustainability goes beyond consideration of the natural environment and includes social concerns like affordable housing. Smart growth works from a regional to site and building scale.

The Eight Principles of Smart Growth:

1. Promoting urban revitalization and a healthy working land base by rural preservation and by containing urban areas, channeling development into existing neighbourhoods and adopting integrated planning and management approaches.
2. Incorporating green infrastructure into communities.
3. Creating compact complete communities by mixing land uses and using land more efficiently.
4. Increasing transportation choices through land use decisions.
5. Creating inclusive neighbourhoods by ensuring that a diversity of housing types are accessible to a wide range of people of different age groups, family types and incomes.
6. Maximizing the enduring benefits of developments by using resources wisely on sites and in buildings that are tailored to specific neighbourhood conditions.
7. Supporting municipal goals through cost recovery by ensuring that development cost charges and other taxes and fees reflect the true cost of different types of growth.
8. Promoting smart growth throughout the development process by reforming administrative processes and addressing liability issues.

Promoting urban revitalization and a healthy land base by rural preservation, by containing urban areas, channeling development into existing neighbourhoods and adopting integrated planning and management approaches

Two generalizations can be made about communities in BC. First, most are surrounded by a combination of working lands (forested or agricultural), mountains, water, or traditional territories of aboriginal communities that limit geographic expansion. Second, the economic health and community focus of town centres has declined over the past thirty years in favour of shopping malls located outside town cores. Citizens and municipal council members are working to stop the deterioration of the economic, cultural and social hub of communities. They are also beginning to question the use and cost of infrastructure, recognizing that available infrastructure should be used before financing is made available for new growth. Refusing to subsidize sprawl and supporting urban revitalization are complementary approaches to smart growth. The key to drawing attention back into the town centre is through integrated planning (planning for the community as a whole, including its environmental, economic and social health) and permitting.

Citizens and municipal council members are working to stop the deterioration of the economic, cultural and social hub of communities.



Smart growth strategies that achieve this goal include:

- using urban containment boundaries to encourage urban revitalization and the preservation of working lands;
- ensuring every neighbourhood and community has a focal point and economic centre;
- taking a systems approach to planning by integrating watershed, road, transportation, green infrastructure, community, neighbourhood, affordable housing and economic development plans;
- adhering to municipal plans; and
- using performance indicators and monitoring to track progress.



Incorporating green infrastructure into communities



Green infrastructure refers to the ecological processes, both natural and engineered, that provide economic and environmental benefits in urban areas. Traditionally, municipalities dismantled green infrastructure in favour of pipes and mechanical forms of urban environmental management. Municipalities are increasingly returning to the benefits of green infrastructure because they are often less costly than hard infrastructure, and offer aesthetic and social benefits. The green infrastructure can also increase property values as it is viewed as an amenity in neighbourhoods, and includes:

- rivers, creeks, streams and wetlands that retain and carry stormwater, improve water quality, and provide habitat;
- parks and greenways that link habitat and provide recreation opportunities;
- working lands such as agricultural or forested areas;
- aquifers and watersheds that provide drinking water;
- open ditches that are important as habitat and for the hydrologic cycle;
- engineered wetlands and stormwater detention ponds that retain stormwater and improve infiltration; and
- trees and rooftop gardens that clean air and cool urbanized areas in the summer.



Smart growth strategies that achieve this goal include:

- implementing green and blue spaces strategies to acquire and connect the green infrastructure;
- planning for integrated stormwater management;
- achieving subdivisions that complement the green infrastructure;
- setting performance standards for impermeability, infiltration, tree cover, and ecological functioning; and
- supporting working lands through buffering, zoning and integrated planning.



Creating compact complete communities by mixing land uses and using land more efficiently

Zoning was invented to keep incompatible land uses separated so that residents would not have to live with industry in their back yard. It has helped to maintain the viability of industry because it is clustered in discrete locations and saved from complaints about its operations, as well as increase residential property values. However, zoning has gone too far. In many communities it has been used to create monocultures of single use neighbourhoods. These neighbourhoods have no central core or diversity of housing and commercial types, and lack the vitality that traditional small town neighbourhoods possessed. This type of zoning also supports sprawl as communities grow primarily outwards.

Smart growth aims to create compact complete communities where access to services from residences is a five-minute distance on foot. Corner stores and neighbourhood commercial centres are supported by density clustered around the commercial centres. And density means something different for every community. For most towns, density means townhouses,



duplexes, secondary suites (suites in existing houses or accessory buildings) and low-rise apartments. This creates a diversity of housing types that allows individuals to meet their housing needs in the same neighbourhood throughout different life stages.

Smart growth strategies that achieve this goal include:

- mixing housing, jobs and green infrastructure in neighbourhoods and on some sites;
- sharing public facilities;
- using land more efficiently by building in existing neighbourhoods;
- creating housing diversity and commercial viability through sensitive densification that does not compromise the character of the neighbourhood; and
- shaping development through design guidelines.



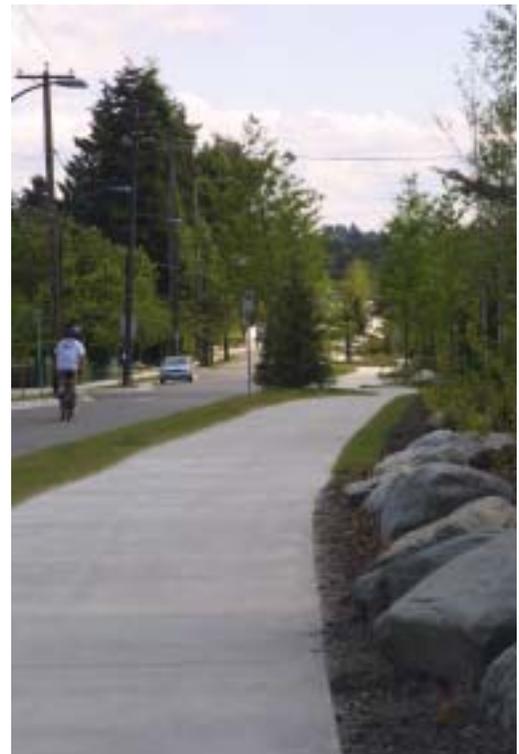
Increasing transportation choices through land use decisions



Government and private spending for transportation is weighted overwhelmingly in favour of road infrastructure. However, building more roads does not get rid of traffic congestion. Studies continue to show that when additional road capacity is created, it is immediately filled.⁴ The issue is how to increase the mobility of people and goods, and the accessibility of transportation. Municipalities are moving towards tailoring transportation plans to specific neighbourhoods needs and creating land use patterns that make non-automobile transportation efficient. This includes creating adequate densities to support public transit and tailoring road widths and parking requirements to actual use. It also means managing the demand for roads by placing equal investment in the infrastructure for non-automobile transportation.

Smart growth strategies that achieve this goal include:

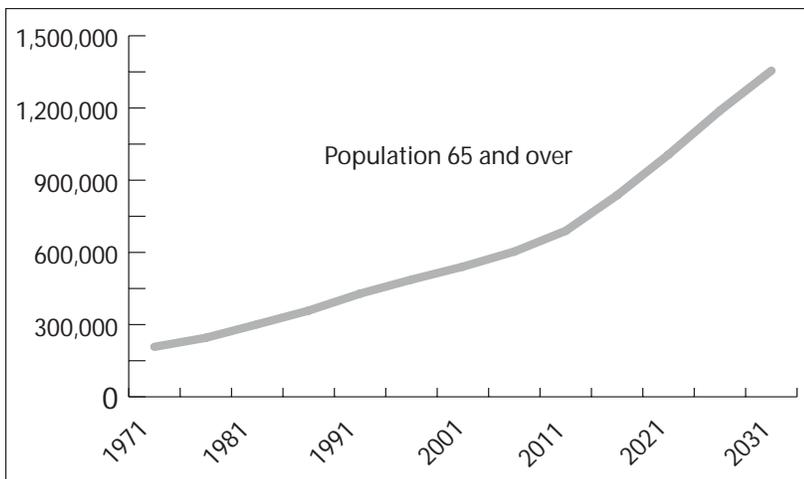
- creating multiple-use roadways;
- linking transportation modes;
- tailoring speed limits and road widths to uses;
- scaling parking requirements to neighbourhood needs; and
- managing transportation demand.



Creating inclusive neighbourhoods by ensuring that a diversity of housing types are accessible to a wide range of people of different age groups, family types and incomes

The most stark example of the lack of diversity of housing options in communities are the large number of elders who must move to a different neighbourhood when they sell their

single family home. While 40 percent of BC residents are renters, less than 13 percent of the housing stock built in the last 20 years was rental accommodation.⁵ Integrating different housing types into all neighbourhoods creates resident stability and increases affordability. Municipalities also recognize that they cannot rely on the market to build the full range of desirable housing types, and are using a variety of tools to create affordable market and non-market housing.



Increases and projected future increases in BC's population of seniors (65+ years)

Smart growth strategies that achieve this goal include:

- supporting secondary suites;
- promoting rental housing;
- using density bonuses to acquire affordable housing; and
- managing a housing trust fund.

Maximizing the enduring benefits of developments by using resources wisely on sites and in buildings that are tailored to specific neighbourhood conditions

Each community, neighbourhood, and site is unique. To reflect this diversity and incorporate the green infrastructure into communities, municipalities are tailoring development standards to site-specific conditions. This unique treatment increases the attractiveness of developments by providing amenities on site and nearby, and decreases long-term operating costs for owners and municipalities. This trend is particularly evident in the high performance building field (energy, water and resource efficient buildings) where the uptake of green building technologies and the Leadership in Energy and Environmental Design (LEED) building rating standard has been exponential in BC over the past three years.

Smart growth strategies that achieve this goal include:

- clustering development on sites to maintain the functioning of the green infrastructure;
- tailoring development permit conditions to site conditions;
- encouraging the redevelopment of brownfield sites;
- greening industrial lands; and
- adopting green building standards.



Supporting municipal goals through cost recovery by ensuring that development cost charges and other taxes and fees reflect the true cost of different types of growth

The application of development cost charges and property taxes can be more finely tuned to reflect the actual use, based on location and building technology, that a development makes of municipal infrastructure.

Municipalities may recover part of the costs for roads, parks, sewer and water infrastructure that new developments incur for a municipality. Across BC, most municipalities charge these development cost charges (DCC's) on a per unit (for residential development) or square foot (for commercial development) basis. These calculations rarely take into account whether the development can take advantage of existing infrastructure, or the actual use the development will make of municipal infrastructure. This is also true for tax and fee calculations aimed at recovering some of the cost of services. The costs of development and ongoing servicing to a municipality are less if existing infrastructure can be used and if the new buildings incorporate green technologies. DCC's and property taxes can reflect these differences in cost, and encourage more efficient development.

Smart growth strategies that achieve this goal include:

- changing development cost charges to reflect the true cost of infill (building where services are already in place) versus greenfield development (building on undeveloped and unserviced land) and high performance versus conventional buildings.
- ensure that DCC's reflect the declining infrastructure costs to a municipality as the density of development increases

Promoting smart growth throughout the development process by reforming administrative processes and addressing liability issues

Many developers are reluctant to try innovative projects because community backlash and slower municipal approvals means increased planning costs and a chance that the project will be refused. Some municipalities are addressing these concerns by encouraging developers to consult with the community before bringing an application forward. Some are taking an integrated project management approach to more complex developments so that approvals can be worked out collaboratively. By requiring ongoing monitoring of new technologies and approaches, municipalities can build up a body of knowledge that will decrease liability concerns over the long term.

Smart growth strategies that achieve this goal include:

- gaining community support for projects before significant investment has been made;
- adopting integrated project management approaches;
- using additional development information to tailor permit conditions;
- developing monitoring partnerships; and
- clarifying liability issues.

Some municipalities are encouraging developers to consult with the community before bringing an application forward.

Benefits of Smart Growth

This package of strategies that makes up smart growth is comprehensive and daunting. However, most of it is not theory – smart growth is supported by cumulative economic, social and environmental benefits that justify changing how development occurs, and investing in new approaches to build a community.

One study of the land and infrastructure needs for the Central Okanagan over the next forty years found that conventional residential development would require 20,645 acres and cost \$1.57 billion to service. Using a more compact development scenario, the total acreage needed could be cut in half, and cost \$1.04 billion to service.⁸

Smart growth strategies to development are often cheaper than conventional suburban development because they make use of existing serviced land and green infrastructure. They also support more people living in serviced areas, which decreases the cost of infrastructure per household and increases the viability of transit and commercial services. At the same time, smart growth provides many social and environmental benefits by integrating affordable housing throughout neighbourhoods and managing urban development for green infrastructure functions.

Smart growth decreases development costs

A popular perception exists that smart growth costs more – it requires developers and municipalities to do more to make urban areas look nice and green. In many cases, this is untrue. Smart growth focuses on using resources more efficiently and changing how development takes place on the site to minimize the need for infrastructure and maximize the nearby amenities. In fact, suburban development patterns require more infrastructure per capita than do smart growth approaches.⁶

Narrower residential streets and other innovative development standards can save between \$4,000 and \$6,000 per unit, and also reduce stormwater runoff and encourage traffic safety.⁷

One study from the University of British Columbia demonstrated that infrastructure in a smart growth subdivision would cost \$12,000 per unit less than in a conventional subdivision. Likewise, the diversity and clustering of housing decreases land costs and the amount of paved surfaces (see table below).

The study was based on the potential development of two similar 4.25 hectare (ten acre) sites in the City of Surrey

where the average interior home size for both sites was the same. The conventional design included 41 single family homes (four dwelling units per acre). The smart growth design had 111 units comprised of 37 single family, 54 duplex, and ten single family with suites (six to ten units per acre).⁹ Both developments had similar total impervious area (50 percent), but the smart growth option's effective impervious area was only 10 percent because of the range of infiltration strategies (putting water back into the ground) used on the site. This methodology has been used throughout the US to quantify the infrastructure costs of new developments.¹⁰

Per Unit	Conventional Subdivision	Smart Growth Subdivision	Total Difference
Infrastructure	\$23,521	\$11,006	Over \$12,000
Land Cost	\$76,829	\$28,243	Over \$48,000
Cost of Houses of Equal Size	\$220,350	\$178,873	Over \$40,000
Amount of Paving	2,464 square feet	660 square feet	Over 1,800 s.f.

High performance buildings also decrease the per unit load on civic infrastructure by using less water and flushing less down the sewer, thus delaying replacement costs. High performance buildings can also be more marketable because of their unique features. The developers of the mixed-use building 2211 West 4th in Vancouver relied on on-site signage, word of mouth and personalized marketing, saving an estimated \$650,000 in advertising and \$850,000 in real estate agents' leasing and sales fees. Eighty-five percent of the units were leased or sold before the development was completed.¹¹

Smart growth decreases municipal service costs

Increased urban runoff in the Abbotsford area resulted in flooding on both residential and agricultural properties. The City approved the construction of a series of storage basins on the upper urban tributaries to Fishtrap Creek to temporarily store excess urban run-off. The storage basins and surrounding vegetation also remove 60 percent of the suspended solids in the water, and the area is used as a 20 hectare park. Draining 3047 hectares of urban uplands and agricultural lowlands, the District considers the \$5 million investment in the Fishtrap Creek Wetlands to be considerably lower than what flooding prevention would have cost.

Compact development costs less for municipalities to service than does conventional suburban development.

Smart growth also takes advantage of largely unquantified services provided by ecosystems by preserving and enhancing the green infrastructure. Municipalities and developers can take advantage of these services, often at lower costs than hard infrastructure.

Examples of ecosystem services and saving include:

- **Pollution abatement and heat attenuation** – The tree canopy in Portland, Oregon absorbs approximately two million pounds of pollutants from the atmosphere each year. This service is worth an estimated \$4.8 million (US). Conversely, over the past 25 years the Puget Sound region has lost 37 percent of its tree canopy and high vegetation. This cover would have removed approximately 35 million pounds of pollutants annually, a value of \$95 million;¹² and
- **Stormwater management** – The lost tree cover in Puget Sound has resulted in a 29 percent increase in stormwater flows during peak events. Replacing the lost retention capacity with reservoirs and engineered solutions would cost \$2.4 billion (\$2 per cubic foot).¹³ Infiltration techniques and natural stormwater management can decrease runoff in urbanized areas to only ten percent.

Smart growth developments are significantly cheaper to service than low-density development. A study in the Greater Toronto Area found that more compact development cost municipalities 30 percent less than a spread out development pattern.¹⁴ Residential development in rural areas costs more to serve than it generates in tax revenue. Farms generate \$1 in revenue for every \$0.21 of services needed, but rural residential uses generate only \$1 for every \$1.20 in services used.¹⁵

Finally, smart growth developments have higher relative value of homes to the replacement cost of infrastructure than do conventional developments. This results in an increase to the municipal tax base while infrastructure replacement costs remain the same as for conventional developments.¹⁶

Smart growth decreases long-term operating costs

Particularly in the area of high performance buildings, smart growth decreases operating costs significantly by reducing the energy, water and resources used in the building.

The windows in the Engineering Lab Wing at the University of Victoria insulate 400 percent more than standard insulating glass windows. This high insulation value eliminated the need for a perimeter heating system and mechanical cooling, and enabled a smaller heating system. The amount of natural daylight has decreased the need for electric lighting during the day. Operating savings amount to \$36,000 per year (723,000 kilowatt hours), and the project was completed \$1 million below budget.¹⁷

High performance buildings also provide a more comfortable work environment that increases worker productivity and work quality, and decreases absenteeism (see sidebar).¹⁸

Based on a 1990 US national survey of large office buildings, gross office-space rent cost \$21 per square foot. Of that amount, electricity costs \$1.53 per square foot and accounts for 85 percent of the total energy bill. In comparison, office workers cost \$130 per square foot. A small increase in productivity can offset a company's entire annual energy cost. Corporations ranging from power to insurance companies have realized reductions in energy costs, increases in productivity and one to two year paybacks through lighting, heating and cooling retrofits.¹⁹

Smart growth creates more affordable housing

Numerous studies in the US and Canada have found that non-market housing located in single family neighbourhoods do not decrease property values. A ten-year study in seven BC communities showed that social housing projects had no negative effect on the sale price of single family detached homes. In all cases, average sales prices increased substantially since the non-market homes were constructed.²²

Creating a range of housing types and tenures ensures that residents with all income levels have housing choices in their home neighbourhoods throughout different phases of life. Integrated into existing neighbourhoods, this diversity of housing is more affordable than the predominant housing type on the market, the detached single family dwelling.

In addition, studies have shown that smart growth strategies such as urban containment and encouraging infill do not increase housing prices. The primary determinant of housing prices is the rate of population growth and market demand from that growth, not land constraints.²⁰

Sprawl actually increases housing prices over time. Even though land prices are higher in urban centres than at the periphery, because land is cheaper in suburban locations the lots and houses tend to be larger. If a community is growing predominantly through suburban expansion, building larger homes on larger lots at the urban fringe means that the per unit cost of housing increases even though the land costs are lower.²¹ This can sway the total housing stock in favour of larger single family homes in suburban locations, and away from more affordable types such as apartments and townhouses. Finally, suburbs reduce the demand for residential and commercial properties in the core of a community.

Smart growth increases property values

Cohesive, attractive developments located close to a variety of amenities increase overall property values. Between 1985 and 2001, commercial property values in the downtown core of municipalities in California that are participating in the Mainstreet Program increased by 167 percent.²³ This results in an increase in property tax revenues flowing to municipalities. Proximity to green space and the presence of trees on site also means houses sell more quickly.²⁴

Smart growth creates safer neighbourhoods

A sense of community dramatically reduces crime. Community spirit and a desire to be involved in a neighbourhood decrease violent crime by up to 40 percent.²⁵ Smart growth neighbourhood designs such as mixing uses, corner stores, pocket parks, community gardens, traffic calming and front porches encourage residents to interact with one another and develop a shared sense of responsibility.

Smart growth attracts footloose, new economy businesses

The decision of where to locate new firms is increasingly dependent on quality of life considerations. Indeed, quality of place, particularly natural, recreational and lifestyle amenities, is crucial in attracting knowledge workers and industries.²⁶ Owners and workers desire access to vibrant commercial centres and a healthy natural environment. Firms within a sector tend to be clustered in locations based on staff and entrepreneur preferences, environmental factors, land costs and infrastructure requirements. Many firms prefer downtown locations.²⁷

Studies across North America and in BC have shown that proximity to natural green space increases property values by 15 to 30 percent.²⁹

The Okanagan-Similkameen Regional District has recognized this link between quality of life and the new economy by adopting a regional green economic development strategy.²⁹

Smart growth supports local economies

California's Main Street program has yielded astounding benefits to participating municipalities over the past 15 years. While median population growth in the towns since their Main Street program was designated was 20 percent:

- The net number of jobs increased 31 percent;
- Retail sales increased 105 percent;
- Commercial property values increased 167 percent;
- Storefront vacancy rates declined 76 percent;
- Retail and office rental rates increased 65 percent and 71 percent, respectively;
- The value of public improvements (buildings and infrastructure) made in each community was more than \$2.2 million;
- The value of private building improvements in each community was nearly \$3.9 million;
- For every dollar a community invested in its Main Street program operations, \$7.13 was invested in public and private improvements;
- The number of local Main Street program volunteers increased more than 200 percent;
- The cost per job was \$4,551 (total money spent operating a local Main Street program divided by the number of net new jobs).³³

Most downtowns in small and mid-sized communities cater to smaller locally-owned businesses. Concentrating commercial development in central business districts allows businesses to have access to a wider range of services and to each other. Employees are not stuck in traffic traveling to and from dispersed meeting sites. Commercial cores also encourage chance interactions and sharing of ideas that spur innovation and new partnerships.³⁰

Economic impact analyses have demonstrated that \$100 spent in a locally owned store generates \$45 in local economic return while \$100 spent in a non-locally owned stores generates only \$13 return.³¹ Smart growth supports the better rate of return and the diversity that locally owned businesses bring to a community by focusing on downtown revitalization and the development of neighbourhood commercial centres.

Smart growth also provides an answer to greyfields – the declining regional malls and power centres that are glutting some communities. A 2002 market analysis of the emerging trends in real estate showed that big box powercentres, regional malls, and suburban office space have less development potential than apartments, community shopping centres and downtown office space.³² Smart growth both encourages the redevelopment of commercial cores and the creation of mixed-use neighbourhoods on greyfield sites.

Smart growth enhances the working land base

By containing urbanized areas and supporting buffers between working lands (agricultural, forested, and industrial) and other uses, smart growth secures the viability of the working land base. Farmers, foresters and manufacturers cannot operate effectively directly adjacent to houses. Neither can they remain viable when rural residential uses result in land speculation and inhibit normal activities on working land.

Smart growth enhances the existing natural and built assets of communities

Most inland towns and cities were built because of their proximity to a waterway. This natural feature is often the commercial hub, and acts as the core of the community. Over time, the built environment in these older centres has also become the focal point of the community. As aesthetic features, and as the geographic places that anchor a community, natural and built history is invaluable.

The Agricultural Land Reserve comprises less than 5 percent of BC's landbase. However, it supports BC's \$2 billion in annual farm receipts and prevents cities and towns from sprawling onto working lands.

Smart growth makes transit and other non-automobile transportation modes viable

“...density tends to increase land use accessibility and transport diversity, resulting in shorter trip distances and shifts to other modes such as walking and transit. Although streets in higher density urban areas may experience more [maximum traffic volumes], implying serious congestion problems, urban residents spend less time delayed by congestion because they have closer destinations and better travel options. As a result, per capita (as opposed to per-vehicle trip or per-driver) congestion delay tends to be greater in lower-density, automobile-dependent areas such as Los Angeles and Houston than in higher-density areas such as New York and San Francisco, because low density areas have more per capita vehicle mileage.”³⁸

More people take the bus, walk and bicycle to work when proximity of, and convenience to transit and work is high. In smart growth towns and cities, residents live close to work and play, and spend less than half the time in vehicles than do residents who live in sprawling communities.³⁴

Smart growth does not create more traffic jams. More dense cities such as Portland, Oregon have less traffic congestion than do sprawling cities such as Atlanta, Georgia.³⁵ Density does not increase congestion.

Smart growth creates safer streets

Smart growth includes a grid street pattern with “queued” residential streets (parking on both sides where automobiles take turns driving down the middle). Studies have demonstrated that residents are four times more likely to be hit by a car on wide curving suburban streets than they are on traditional narrower grid pattern residential streets. The most significant factors in frequency of accidents are street width and street curvature. As street width widens, accidents per kilometer per year increases exponentially, and the safest residential street width is 24 feet.³⁶ The most dangerous places to walk are metropolitan areas marked by newer, low-density developments, where wide, high-speed arterial streets offer few sidewalks or crosswalks.³⁷

Smart growth supports healthy children

Over the past year, significant media attention has been drawn to the increasing numbers of unhealthy and inactive children in North America. Sedentary lifestyles are partly to blame for this trend, including parents driving children to school and most other activities. Smart growth land use patterns create walkable neighbourhoods where transportation infrastructure caters to pedestrian and non-automobile modes of traffic. Neighbourhood schools are valued over larger community schools. With more crosswalks, walking and biking routes, and slower speeds on residential streets, smart growth approaches support active children.

Smart growth protects drinking water supplies

The rapid increase in the total amount of impervious or non-porous surfaces in urbanized areas, such as houses and roads, is contributing to water quality and quantity problems.³⁹ Concentrating growth, enhancing the green infrastructure, protecting the working land base, and increasing the amount of water infiltrated back into the soil maintains natural hydrologic flows that municipalities rely upon for drinking water.

Smart growth builds social capital

The urban myth that infill and density are the cause of social problems and crime has been debunked by many studies.⁴⁰ In fact, residential densities are now lower than they were 30 years ago, and it is low-density residential developments that are blamed for a reduction in social engagement and community cohesion. Less opportunity exists for interacting with neighbours because fewer public spaces are available to foster such interaction, and more time is spent on commuting and traveling in cars.

Researchers with the Human Early Learning Partnership at UBC have mapped neighbourhood risk factors for children and the location of where most children live in communities across BC.⁴¹ Their results show that families with children are concentrated in commercial districts and transportation zones, rather than in neighborhoods that have amenities, such as parks, that provide important support for early childhood development. Their primary policy recommendations are to integrate affordable housing into all neighbourhoods and provide greater access to transit and other amenities in lower-income neighbourhoods.⁴²

In 1991, motor vehicles were subsidized in the Lower Mainland by about \$2.7 billion. Public motorized transport was subsidized by about \$360 million.⁴⁷

Smart growth neighbourhoods can achieve 90 percent infiltration of rainwater, and generate 40 percent less automobile trips than a conventional subdivision.⁴⁸

Smart growth designs that include sidewalks, town centres, narrower residential streets, parks, and mixed uses, encourage social interaction. Walkable spaces and meeting others on the street are key components of building neighbourhood relationships.⁴³

Finally, residents who live near greenways live in their houses longer than residents in neighbourhoods without greenways. Green space helps to promote neighbourhood stability and a greater sense of community.⁴⁴

Smart growth supports a healthy environment

Enhancing the green infrastructure, creating compact complete communities and supporting the working land base helps restore the environment in many ways. Smart growth preserves habitat by limiting urban sprawl, and by protecting natural spaces in developed areas. Smart growth also ensures the continued functioning of ecosystems. Less than 10 percent impervious coverage in a watershed has a negative impact on stream habitats, and 30 percent imperviousness significantly damages fish and stream habitat.⁴⁵ Decreasing the amount of impervious surfaces supports healthy water cycles and fish habitat. Finally, with 42 percent of greenhouse gas emissions coming from cars and trucks, more people taking transit and walking means less air pollution.⁴⁶

Challenges of Smart Growth

These examples from BC and North American demonstrate that creating more compact complete communities not only saves taxpayers money, it brings many other social, economic and environmental benefits to communities. However, municipalities are still faced with the difficult decisions inherent in managing change. These challenges include updating bylaws and standards, supporting non-automobile transportation, addressing liability issues, and assisting the community to acquire the needed knowledgeable to support smart development.

Smart growth requires changes to bylaws and engineering standards

Some technical standards go beyond protecting public health and property. They are overly expensive and impede green development. Likewise, zoning and other bylaws prevent the mix of uses and diversity of housing types that create complete communities. In sum, we have created so many inflexible regulations and engineering standards that common sense approaches to building communities are often illegal. Many resources exist, including this *Guide*, to assist local governments with changing bylaws and standards towards a smart development approach.

Smart growth requires a shift away from relying solely on the automobile for transport

Cars are only one ingredient in the transportation cocktail, but public funding for transportation has overwhelmingly supported the movement of people by cars. Smart growth emphasizes building non-automobile transportation infrastructure into land uses. This includes connected pedestrian and bikeways with end-of-trip services, and decreasing the demand for road space by decreasing subsidies to the automobile and ensuring that non-automobile modes have comparable funding. The result is more walkable, pleasant, and connected neighbourhoods.

Smart growth may require different risk management

Most smart growth strategies are proven, particularly those related to zoning and community design. Some that involve engineering standards and green buildings are not as well-accepted. The many projects underway in Europe and BC offer templates for different road standards, stormwater management systems, and green building design. As with all projects, local governments are required to assess the risks involved in new designs and mitigate those risks through professional undertakings and monitoring.

Smart growth needs a knowledgeable development industry, municipal culture and citizenry

Changing how development happens is difficult. The lack of public knowledge about new technologies creates uncertainty for development approvals and market risk for developers. In some communities, municipal officials and developers perceive that only single-family detached housing is acceptable and marketable. Citizens are inherently adverse to changes next door, and are unfamiliar with good design that makes complete communities vibrant. Working together more often, through Official Community Plans, charrette and development review processes will increase the understanding of what makes good neighbourhoods and facilitate the change to smarter growth.

Conclusion

Smart growth is a comprehensive and complex approach to how we develop communities. Municipalities across BC provide excellent examples of smart growth in action, and these strategies are supported by economic, social and environmental benefits. Access the *Smart Bylaw Guide* to explore these best practices, standards and bylaws.

www.wcel.org/issues/urban/sbg

Resources

1000 Friends of Oregon: www.friends.org

Better Environmentally Sound Transportation:
www.best.bc.ca

CivicInfo: www.civicinfo.bc.ca

Federation of Canadian Municipalities: www.fcm.ca

International Downtown Association:
www.ida-downtown.org

James Taylor Chair in Landscapes and Livable Environments
UBC: www.sustainable-communities.agsci.ubc.ca/about.html

New Rural Economy:
www.landcentre.ca/lcframeweb.cfm?ID=5382

New Schools Better Neighbourhoods: www.nsbns.org

Pedestrian and Bicycle Information Centre:
www.walkinginfo.org

Project for Public Spaces: www.pps.org

Smart Growth BC:
www.smartgrowth.bc.ca

Smart Growth America: www.smartgrowthamerica.org

Smart Growth Network: www.smartgrowth.org

Sustainable Communities Network: www.sustainable.org

The Land Centre: www.landcentre.ca

US Green Building Council: www.usgbc.org

Victoria Transport Policy Institute: www.vtpi.org

Walkable Communities Inc.: www.walkable.org

West Coast Environmental Law: www.wcel.org

Endnotes

- ¹ “Richard Florida, *Competing in the Age of Talent: Quality of Place and the New Economy* (2000)
- ² Don Chen, Executive Director, Smart Growth America
- ³ New Jersey Future, Proposed Development Scorecard p.1 http://www.njfuture.org/articles/development_card.pdf
- ⁴ Peter Hills, “What is Induced Traffic?” *Transportation*, Vol. 23, No. 1 (1996). pp. 5-16; Todd Litman, “Generated Traffic; Implications for Transport Planning,” *ITE Journal*, Vol. 71, No. 4 (2001) pp. 38-47. www.ite.org
- ⁵ Ministry of Community, Aboriginal and Women’s Affairs, Rental Housing Planning Guide (2002). http://www.mcaaws.gov.bc.ca/housing/rentguide/guide_2002.pdf
- ⁶ P. Blais, *The Economics of Urban Form: Appendix E, Greater Toronto*, 1995. See also *Future Perth: Cost of Urban Form Working Paper No. 2*, (2001).
- ⁷ Ministry of Housing and Ministry of Municipal Affairs (Ontario), *Alternative Development Standards: Making Choices* (1995).
- ⁸ A. Ramlo, *Change Management: A Framework for Community and Regional Planning* (2000).
- ⁹ James Taylor Chair in Landscapes and Livable Environments Technical Bulletin No.2 (2000). Case Study: Status Quo Standards versus Alternative Standard, East Clayton – two alternative development site standards compared. http://www.sustainable-communities.agsci.ubc.ca/bulletins/TB_issue_02_ADSeedit.pdf. See also http://www.sustainable-communities.agsci.ubc.ca/projects/ADS/HTML_Files/ChapterThree/Comparison_Matrix_II.htm
- ¹⁰ For example, *The Cost of Providing Government Services to Alternative Residential Patterns* (1993). <http://www.smartgrowth.org/pdf/CoPGStARP.pdf>
- ¹¹ D. Curran, *Economic Benefits of Natural Greenspace Protection* (2001). <http://www.smartgrowth.bc.ca/downloads/Economic%20Benefits%20of%20Natural%20Green%20Space%20Protection.pdf>
- ¹² American Forests, <http://www.americanforests.org/resources/rea/>
- ¹³ American Forests, *Regional Ecosystem Analysis: Puget Sound Metropolitan Area* (1998). http://www.americanforests.org/downloads/rea/AF_PugetSound.pdf
- ¹⁴ P. Blais, *The Economics of Urban Form: Appendix E, Greater Toronto* (1995). See also *Future Perth: Cost of Urban Form Working Paper No. 2* (2001). <http://www.planning.wa.gov.au/publications/futureperth/workingpapers/paper2.pdf>
- ¹⁵ American Farmland Trust, *Residential Growth in Loudoun County Density-Related Public Costs* (1986).

- ¹⁶ James Taylor Chair in Landscapes and Livable Environments Technical Bulletin No.2 (2000). Case Study: Status Quo Standards versus Alternative Standard, East Clayton – two alternative development site standards compared. http://www.sustainable-communities.agsci.ubc.ca/bulletins/TB_issue_02_ADSedit.pdf
- ¹⁷ Personal communication, Terry Williams, Williams D’Ambrosio Architects (1999).
- ¹⁸ City of Seattle, Sustainability Studies, Sustainable Buildings www.cityofseattle.net/light/conservesustainability/studies/cv5_sp.htm.
- ¹⁹ J. Romm and W. Browning, Greening the Building and the Bottom Line: Increasing Productivity Through Energy-Efficient Design (1998). <http://www.rmi.org/images/other/GDS-GBBL.pdf>
- ²⁰ See, for example, Arthur Nelson et al, The Link Between Growth Management and Housing Affordability: The Academic Evidence (2002). <http://www.brook.edu/dybdocroot/es/urban/publications/growthmang.pdf>
- ²¹ Robert H. Freilich & Bruce G. Peshoff, The Social Costs of Sprawl 29 Urban Lawyer 183 (1997).
- ²² Ministry of Community, Aboriginal and Women’s Services, *Impact of Non-Market Housing on Property Values* (2000). www.mcaaws.gov.bc.ca/housing/00_Jan_PropVal.html
- ²³ Eichenfield & Associates, Strategies for Revitalizing our Downtowns and Neighborhoods: Evaluating California Main Street Programs (2002). http://www.lgc.org/freepub/PDF/Land_Use/reports/evaluating_main_street1.pdf
- ²⁴ Petit, J. (1998), *Building Greener Neighborhoods: Trees as Part of the Plan*, (Washington, D.C.: American Forests; Home Builders Press, National Association of Home Builders).
- ²⁵ Local Government Commission, Land Use Planning for Safe, Crime-free Neighborhoods (2002). http://www.lgc.org/freepub/PDF/Land_Use/focus/plan_safe_neighborhoods.pdf
- ²⁶ Federation of Canadian Municipalities, Bridging the Innovation Gap: Count Cities In (2002). <http://www.fcm.ca/newfcm/Java/gap.pdf>
- ²⁷ Paul Sommer and Daniel Carlson et al, Ten Steps to a High Tech Future: The New Economy in Metropolitan Seattle (2000). http://www.ceosforcities.org/research/2000/high_tech_future/high_tech_future.pdf
- ²⁸ Deborah Curran, Economic Benefits of Natural Green Space Protection (2001) <http://www.smartgrowth.bc.ca/downloads/Economic%20Benefits%20of%20Natural%20Green%20Space%20Protection.pdf> ; Moura Quayle & Stanley Hamilton, Corridors of Green and Gold (1999).

- ²⁹ Westland Resource Group, A Strategy to Achieve Green Sustainable Economic Development in the Okanagan and Similkameen Valleys (2003). http://www.rdos.bc.ca/pdf/cao/gsed/GSED_Final_Strategy.pdf
- ³⁰ E. Glaeser "Learning in Cities" National Bureau of Economic Research Working Paper 6271 (1997) <http://ideas.repec.org/p/nbr/nberwo/6271.html>
- ³¹ Civic Economics, Economic Impact Analysis: Local Merchants vs. Chain Stores (2002). http://www.civiceconomics.com/Lamar_Retail_Analysis_Executive_Summary.pdf
- ³² Lend Lease Real Estate Investments and Price Waterhouse Coopers, Emerging Trends in Real Estate (2002) (Chapter 5 - Property Types in Perspective) [http://www.lendleaserei.com/LLREI/Downloads.nsf/SWLD/ET_2002_CHPT5/\\$file/ET2002-chapter5.pdf](http://www.lendleaserei.com/LLREI/Downloads.nsf/SWLD/ET_2002_CHPT5/$file/ET2002-chapter5.pdf).
- ³³ Eichenfield & Associates, Strategies for Revitalizing our Downtowns and Neighborhoods: Evaluating California Main Street Programs (2002). http://www.lgc.org/freepub/PDF/Land_Use/reports/evaluating_main_street1.pdf
- ³⁴ Todd Litman, Transportation Cost and Benefit Analysis – Land Use Impacts (2002). <http://www.vtpi.org/tca/>
- ³⁵ Texas Transportation Institute, The 2002 Urban Mobility Report (2002) <http://mobility.tamu.edu/ums/>
- ³⁶ Peter Swift et al, Residential Street Typology and Injury Accident Frequency (1998). <http://members.aol.com/Phswi/Swift-street.html>
- ³⁷ Surface Transportation Policy Project, Mean Streets 2002: Pedestrian Safety, Health and Transportation Spending <http://www.transact.org/report.asp?id=202>
- ³⁸ Todd Litman, Transportation Cost and Benefit Analysis – Congestion Costs (2002). <http://www.vtpi.org/tca/tca0505.pdf>; Surface Transportation Policy Project, *Easing the Burden: A Companion Analysis of the Texas Transportation Institute's Congestion Study* (2001). www.transact.org
- ³⁹ American Rivers, NRDC, Smart Growth America, Paving Our Way to Water Shortages: How Sprawl Aggravates Drought (2002). <http://www.epa.gov/region8/water/pavingourway1.pdf>
- ⁴⁰ For a summary of the research, see <http://www.friends.org/issues/density.html>.
- ⁴¹ Clyde Hertzmann, Director, Human Early Learning Partnership of BC, University of British Columbia. Leave No Child Behind! Social Exclusion and Child Development (2002) www.earlylearning.ubc.ca/resources_slides_ch.htm
- ⁴² C. Hertzmann et al, Early Development in Vancouver: Report of the Community Asset Mapping Project (2002). http://www.earlylearning.ubc.ca/pub_map.htm

- ⁴³ Richard Untermaun and Anne Vernez Moudon, *Street Design: Reassessing the Safety, Sociability and Economics of Streets*, University of Washington (1989).
- ⁴⁴ Moura Quayle and Stanley Hamilton, *Corridors of Green and Gold* (1999). <http://www-heb.pac.dfo-mpo.gc.ca/publications/pdf/241452.pdf>
- ⁴⁵ Ministry of Water, Land and Air Protection & Environment Canada, *Stormwater Planning: A Guidebook for British Columbia* (2002). <http://wlapwww.gov.bc.ca/epd/epdpa/mpp/stormwater/stormwater.html>
- ⁴⁶ Ministry of Water, Land and Air Protection, *State of the Environment Report* (2002). <http://wlapwww.gov.bc.ca/soerpt/pdf/ET2002Oct221.pdf>
- ⁴⁷ Greater Vancouver Regional District, *The Cost of Transporting People in the British Columbia Lower Mainland* (1993).
- ⁴⁸ Patrick Condon and Jacqueline Teed, with Chris Midgley, *Sustainable Urban Landscapes: Neighbourhood Pattern Typology* (2002). <http://www.sustainable-communities.agsci.ubc.ca/projects/typology.htm>