# APPENDICES

Design Performance Criteria

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# DESIGN PERFORMANCE CRITERIA

## The Charrette Project Plan

In their assessment of the state of the global biosphere, the World Commission on Environment and Development concludes that many solutions to global environmental problems will be found at the site and community level of development. The UBC Chair in Landscape and Liveable Environments, the major sponsor for the Charrette Project, focuses on developing design responses that would make our sites and communities more sustainable.

Between September of 1995 and September of 1998 we intend to advance the objectives of the Chair by conducting a series of design charrettes. These charrettes are weeklong design projects where leading designers from our region and from around the world will work together intensively to illustrate practical solutions to the problems of site and community sustainability. Three charrettes are planned. Each charrette will test the same general principles of sustainability; but the three sites will have different contexts. This first charrette will test a site that is not yet urbanized; the second will test a highly urban centre city' site; the third will test a medium density site in a first ring suburb.

### Goal and Objectives of the Sustainable Urban Landscapes Design Charrettes:

**Goal:**

To demonstrate what neighbourhoods and communities could be like if they were designed and built in conformance with emerging local, provincial and federal policies for sustainable development.

**Objectives:**

1. Produce sustainable community design models for real British Columbia urban landscapes.
2. Illustrate the design consequences of meeting disparate and often contradictory sustainability policy objectives.
3. Illuminate the connection between sustainability and livability.
4. Show how sustainable design objectives are influenced and/or impeded by typi- cal community subdivision and site and traffic engineering regulations.
5. Create a setting where leading British Columbian designers can exchange ideas and viewpoints with outside experts in the field of sustainable design.
6. Produce design proposals that may provide patterns and prototypes for other Georgia Basin communities.
7. Broadly disseminate the results of the charrette through a variety of means and venues-to citizens, elected representatives, policy makers, and designers - and thereby influence future public policy and legislative initiatives.

### Performance Criteria for the 1995 Sustainable Urban Landscapes Design Charrette:

The emerging local, provincial and federal policies for sustainable development provide the basis for the following performance criteria. Major sources used by the charrette organizers to arrive at these performance criteria include: The British Columbia Energy Council, *Planning Today ror Tomorrow's Energy. An Energy Strategy ror British Columbia* (BCEc); BC Hyd ro, *Bringing Electricity to the Livable Region* (BCH); The City of Vancouver, *Cloudsor Change, Final Report of the City of Van- couver Task Force on Atmospheric Change* (cv); The Commission on Resources and Environment: *Finding Common Ground: A Shared Vision ror Land Use in British Columbia* (CORE); The Province of British Columbia: *Municipal Act Section 942 and Section 945 (Growth Management Legislation)* (mA); The Greater Vancouver Regional District: *Livable Region Strategy: Proposals* (LRS); BC Transit, *Transit and Land Use Planning* (BCT); City of Surrey, *City of Surrey*

*No. 1; Surrey; Existing Policies* (cs). These reports and regulations are available for each team's reference.

Policy directives included in these reports that have an obvious impact on site and community design have been converted into design performance criteria and are listed below in three categories: land and water; the built environment, and energy use. These criteria all support the goal of more sustainable neighbourhoods and communities; however, they are often con- tradictory when applied. For example, increasing housing density may negatively affect ground and surface water quality. These performance criteria should provide designers with a basic framework for design. Participants are encouraged to interpret and expand on these policies via the production of a specific design for the site. Each team's design for the *site* must reflect a clear vision for the *district* within the larger plan for the future of the City of Surrey.

## The Land and Water

The goal of British Columbian and Canadian public policy is to protect the ecological integrity of our land and rivers, both for their intrinsic value and for their value to present and future citizens. The charrette organizers assume that urban development that protects the ecological integrity of the land and water must start "from the ground up." The ecological health of the region is dependent on the ecological health of the sites that make up the region. For example, degraded storm water (non point source pollution) shipped 'off sites" into streams and tributaries is the major threat to the health of Georgia Basin salmon streams. The rivers and streams that empty into the Georgia Basin comprise the world's most important salmon producing system. Extraordinary efforts are required to protect this habitat. The charrette site includes active salmon spawning streams, tributaries to the Serpentine River to the south. For this and other reasons the site can be considered very sensitive to development. Figuring out where, how to, and how much to develop the site is consequently the greatest challenge.

I . *Environmental Protection*
Protect and enhance all environmentally sensitive and/or degraded areas and landforms.1

2. *Open Space Linkage*
   Preserve, create, and link urban and rural open space, including parks and recreation areas. Maintain and enhance public access to streams, where environ- mentally sustainable.[2]
3. *Open Space Quality*
   Identify and enhance special recreation opportunities within the site, i.e.streams, topographic features, natural areas etc.[3]
4. *Sanitary Systems*
   Consider the integration of district sewage treatment and sewage treatment marshes.[4]

## The Built Environment

The goal of British Columbian and Canadian public policy is to provide adequate, affordable, and appropriate housing for all citizens.

A more sustainable site and community design must integrate, not segregate land uses, income groups, and family types. Services and jobs must be located near homes and transit. Charrette participants are challenged to develop a plan that integrates and locates these various land uses.

The dominance of the automobile in our new urban landscapes must be significantly reduced. Destinations must be close and convenient before walking and biking can be viable alternative to the car. Charrette participants must produce designs that will connect people with their destinations so that the car is not the only option.

I . *Housing Equity*
   Provide a balance of housing types that meet the needs of a range of ages and lifestyles and are affordable to groups and individuals within a wide range of incomes. At least 20 percent (minimum of 720 units if 10,000 persons inhabit the site) of the housing shall be for persons with family incomes in the bottom third. Income statistics for Surrey residents are listed in the appendix, as are examples of market and subsidized housing types which are normally provided for this sector.[5]

*2. Special Needs Housing*
   Provide adequate special needs housing (seniors, disabled, family crisis victims etc., Surrey demographic information is in appendix).[6]

3. *Safety*
   for every dwelling unit. We are assuming 350 work spaces will be required for each 1,000 residents.[8]

5. *Integration of Land Uses*
   Create a mix of building and land uses, integrating residences, work, shopping, and services (community, professional, commercial and institutional).[9]

6. *Access to Transit*
   Ensure that most persons live and work close to transit and services to reduce dependence on the automobile, promote pedestrian activity, and bicycle use.[10]

## Energy Use

The goal of British Columbian and Canadian public policy is to reduce energy consumption and the pollution that this consumption causes, even while population continues to increase. Any progress toward a more sustainable future will requires large per capita reductions in the amount of energy required for building conditioning and transportation. Many of the gains to be made in this area lie in the realm of im- proved building technologies and improved vehicle efficiencies, and are thus outside the scope of this site and community design demonstration project; however, certain site and community design factors can powerfully affect the amount of energy required for building conditioning and transportation.

District heating can be practical at certain densities and site configurations. Solar access for winter warmth is significant in
our region, where the coldest winter days tend also to be the sunniest. West facing dwelling units (with the large expanses of glass common in our region) require summer air conditioning - even though our summers are quite cool. Urban forests can significantly influence energy use. Charrette participants are challenged to design the site with due regard for climatic imperatives.

Integrating land uses and accommodating pedestrians and bicycles saves energy. Designers should show how pedestrians
and bicycles are accommodated and how destinations are located within walking dis- tance of services, transit, and jobs.

1. *Solar Heat*
   Reduce building energy requirements by providing optimal solar orientation, solar access, passive solar heating, and day-lighting.[11]
2. *Energy Infrastructure*

site sewage tr6atmen t.[12]

3. *Alternative Energy*

Provide as appropriate, or maintain flexi- bility to provide in the future, energy service from alternative technologies such as community scale generating systems, district heating and co-generation .[13]

4. *Design with Climate*

Enhance community microclimate through design response to wind, sun, vegetation and precipitation **.**[14]

5. *Auto Trip Reduction*

Reduce number and length of commut- er and daily use automobile trips."[15]

6. *Auto Alternatives*

Provide safe, comfortable, barrier-free and direct pedestrian access to transit route. Provide a multi modal community route system that gives walking and biking priority over auto travel **.**[16]

Notes

1. CORE pgs. 14-18; MA 942.1 1; CSpg.10,28.

2. MA 942.1 1 (11); LRS pg. 43; CORE pg. 14,17.

3. CORE pg. 18; CS pgs. 10, 13.

4. CORE pg. 17; MA 942.1 1 (d); LRS pg. 42; CS pg. 10.

5. LRS pg. 45; CS pg. 31; CORE pg, 15; MA 942.1 1; BCEC App. pg. 1;CS pgs. 8,2

6. MA 942.11 (h), 945; CORE pg. 15.

*7.* CORE pg. 14; BCT pg. 13; CS pg. 19.

8. City of Surrey Planning Dept.; CV 46.

9. LRS pg. 44; CV pg. 46; BCH pg. 47; BCT pg. I 0; BCEC App. pg. 1.

10. CORE pg. 14; LRS pg. 44; MA 942.11 (b); BCT pg. 6, 1 1; CV pg. 46; CS pg. 16, 31: BCH pg. 47; BCT pg. 6.

11. BCH pg. 46; MA 942.11 (m); CORE pg. 14,16; BCEC App. pg. 2.

12. BCH pg. 46; BCEC App. pg. 2; CORE pg. 17; MA 942.1 1 (m).

13. BCEC App. pg. 5; BCH pg. 17; MA 942.11 (m).

14. BCH pg. 46; CORE pg. 16.

15. MA 942.11 (b); CORE pgs. 14, 16; LRS pgs. 43, 44; BCT pg. 3; BCEC App. pg. 2; CV pgs. 36, 46.

16. LRS pg. 43; CORE pg. 16; CV pgs. 34, 46; BCEC App. pg. 3; MA 942.11 (b), BCT pg. 13;CS pg. 16.

## Bibliography

Initials that introduce each reference correspond to initials in footnotes above.


BCEC
*Planning Today for Tomorrow's Energy: An Energy Strategy for British Columbia.* 1994. Vancouver, British Columbia: British Columbia Energy Council.

BCH
*Bringing Electricity to the Livable Region. 1* 994. Vancouver, British Columbia: BC Hydro

BCT
*Transit and Land Use Planning. 1* 994. Surrey, British Columbia: BC Transit Long Range Planning.

CORE
*Finding Common Ground: A Shared Vision For Land Use In British Columbia.* 1994. Vancouver, British Columbia: Commission on Resources and Environment.

CS
*City ofsurrey Official Community Plan Background Report No. 1; Surrey: Existing Policies. 1* 994. Surrey, British Columbia: City of Surrey.

CV
*Clouds or Change: FinalReport or the city or Vancouver Task Force on Atmospheric Change. 1* 990. Vancouver, British Columbia: City of Vancouver.

LRS
*Livable Region Strategy.- Proposals.* 1993. Burnaby, British Columbia: Greater Vancouver Regional District. (Also see *1995 Livable Roon Strategic Plan,* Approved in Principle by the GVRD Board of Directors, Dec 9, 1994)

MA
Bill 11 - *1995, Growth Strategies Statutes AmendmentAct,* 1995. 1995. Victoria British Columbia: Province of British Columbia Legislative Assembly and Minister of Municipal Affairs. (see also: *Growth Strategies Statutes and Amendment Act. E.xplanatory Notes.* 1995. Victoria British Columbia: Province of British Columbia, Ministry of Municipal Affairs.)

# THE DESIGN BRIEF

**Introduction**

This design brief should be the basis for your proposals. The charrette organizers have made every effort to ensure that the brief will promote comparability between the different teams without limiting your design discretion and expression.

You should assume that the plan you propose would take up to twenty years to carry out, and that during that time land ownership would naturally turn over to the land uses that you propose. You should assume that most existing site infrastruc- ture (i.e. streets [except King George Highway] bridges, sewer lines, etc.) would need reconstruction during this period, and could be realigned or reconfigured in conformance with your proposals.

Minimum and maximum population figures represent a range between high and very high when compared to the surrounding existing context.

The choice and relative proportion of dwelling types should be determined by each team. However, current market forces in Surrey strongly favour certain dwelling types over others (figures showing current City of Surrey market housing production by type are provided elsewhere in this binder). Some teams may conclude that achieving more sustainable sites and communities will require a radical departure from current market forces; these teams will favour a dwelling mix that the market does not presently support. Other teams may conclude that achieving more sustain- able site and community design does not necessarily conflict with market forces. A list of common dwelling types and the land required for the different types is included in the appendix.

The site is ecologically sensitive. Protecting the site, its fish habitat values in particular, should be the highest priority. Based on the information provided, charrette participants should decide how best to protect and perhaps enhance the ecological func-tion of the site. Accommodating up to 15,000 people on the site may impinge on this imperative. You are asked to make your best judgement in the face of this conflict.

The commercial space requirements listed below represent a range between high and very high when compared to other new communities in our region. These numbers suggest that most of the residents in the communities you propose will make their major purchases in the com- munity and/or that the community will attract customers from the surrounding areas.

Light industrial and office space require- ments support the City of Surrey's desire to provide one job for every worker (I 8-65 years old) within Surrey. The target of pro viding job sites for one worker per household recognizes that many workers who live in the district will be employed elsewhere.

Finally and perhaps most importantly, the site is an element in the larger urban landscape - a cell in a larger cultural and biophysical organism. The policies that inform the program for this site will guide urban development throughout the Province. Therefore, assume that adjacent sites would be compatible with your team's, and that eventually an urban pattern made up of many compatible sites would eventually result. Design teams should seek ways to include this larger context in their design process. Teams should also seek ways to express their idea of this larger context in their design proposal.

| | | |
|---|---|---|
| RESIDENTS | | |
| Total Site Area: | 400 acres | 1 60 hectares |
| Proposed Community Population ' | Minimum 9,000 | Maximum 15,000 |
| Proposed Total Dwelling Units | Minimum 3,200 | Maximum 5,400 |
| Residential Parking Standard | 1.25 spaces per dwelling unit -.25 spaces per elderly or special needs un it.2 Parking can be on street or in surface lots. | |
| Gross Residential Density | Minimum 8 DU per acre, 20 DU per hectare | Maxirnurn 14 DU per acre, 35 DU per hectare |
| OPEN SPACE' | Minimum 60 acres (24 hectares) of unpaved public recreation and open space areas. Consideration of all environmentally sensitive lands for inclusion in open space system. | Maximum unlimited. Open space to include community and neighbourhood common spaces, playgrounds, parks, sports fields, conservation areas, community gardens, bicycle and walking networks,and other open, spaces. |
| PUBLIC TRANSIT | One or two light rail stops on King George Highway are anticipated. The exact locations of these stops have yet to be determined and should be suggested. Frequent bus connections from King George Highway to Surrey City Centre and the Sky Train station are presently available.' | |
| COMMERCIAL | | |
| Commercial Space' | Minimum, 30,000 sq. ft. (2,800 sq. mtr.) per 1,000 population. | Maximum, 42,000 sq. ft. (3,900 sq. mtr.) per 1,000 population. |
| Commercial Parking Standard | 750 sq. ft. or 70 sq. mtr. (3 spaces) per I 000 sq. ft. retail. On street and off street parking.' | |
| LIGHT INDUSTRIAL/OFFICE | | |
| Light Industrial/Corporate Office Space | 25,000 sq. ft. (2,300 sq. mtr.) per 1,000 population. | |
| Service Office Space | 16,000 sq. ft. (1,500 sq. mtr.) per 1,000 population.' | |
| Light Industrial/Corporate Office/ Service Office Parking Standard | 400 sq. ft. or 37 sq. mtr. (1.5 spaces) per 1,000 sq. ft. (or 90 sq. mtr.) office/light industrial.' | |

| | |
|---|---|
| PUBLIC BUILDINGS | |
| Elementary Schools | Two schools at 35,000 sq. ft. (or 3,200 sq. mtr.) each, for 500 students, access to 8 acres (3.25 hectares) of outdoor recreation space (outdoor recreation space can count toward mini mum open space requirement). On street or off street parking for 25 cars." Adequate middle and high school facilities exist within one mile of site. |
| Child Care Facilities and Preschools | 2,560 sq. ft. (240 sq. mtr.) interior space, 4,800 sq. ft. (445 sq. mtr.) exterior play space per 1,000 dwelling units." |
| Community Centre and Library | One at 36,000 sq. ft. (3,340 sq. mtr.) - on street or off street parking for 32 cars. |
| Fire Hall | One at I 1,000 sq.. ft. (1,020 sq. mtr.). |
| Town Hall/Public Offices | 20,000 sq. ft. (1,860 sq. mtr.) for city and provincial satellite health, records, social, job training and other public functions. On street or off street parking for 25 cars. |
| Churches/Multi Faith Centre with Assembly Hall | One per 4,000 population at I 0,000 sq. ft. (930 sq. mtr.). On street or off street parking for 60 cars. Parking can be shared with non competing use." |

Notes

I

Minimum and maximum population, total dwelling units, and gross density figures are derived from a variety of sources that suggest eight dwelling units per acre is the minimum density at which a good range of commercial services can be economically provided. The higher figure is more in line with those who suggest that eight dwelling units per acre is still too low to sufficiently reduce energy and land consumption. Given the constraints imposed by the site, design teams must determine what population is appropriate for this site and how it should be deployed.

*2*

This number is one h6if the standard suburban residential parking requirement. One half standard is assumed to be appropriate for our purposes, given the "walking distance to services and transit" assumption underlying this charrette.

3

Minimum open space requirements are derived from current City of Surrey minimum standards, equivalent to minimum standards from Time Saver Standards for Site Planning. Breakdown is as follows: neighbourhood park, .6 ha per 1,000 pop; community park, .8 ha per 1,000 population; passive open space, .8 ha per 1,000 population. Maximum open space is unlimited. The proportion of the site that you decide to reserve as open space may be consequent to your assessment of the site's ecological sensitivity.

4

BC Transit intends to build a light rail line to connect South Newton to the Sky Train Station in Surrey City Centre. We anticipate that this rail line will be constructed at grade and be similar to the Portland, Oregon system. The rail line will be built within the existing King George Highway right of way. Minor changes to the rail line alignment may be proposed as part of your design proposal.

5

The minimum figure represents 70% of the 42,000 sq. ft. (3,900 sq. mtr.) per 1,000 persons commercial floor space ratio that exists in our region at this time. Since most new commercial space is now segregated into regional shopping centres, the amount of commercial space within walking distance of new dwellings is usually much lower than this figure. Given the 'walking distance to services" and 'access to transit' assumptions underlying this charrette, the 70% minimum figure was considered appropriate. The maximum figure represents I 00 % of GVRD average for the region of 42,000 sq. ft. per 1,000 persons. Using the higher number suggests that all consumer needs can and should be met in the district.

6

This number is one half the standard suburban commercial requirement cited in Time Saver Standards for Site Planning. The UDI standard for retail parking is 5 to 6 spaces per I 000 sq. ft. (93 sq. mtr.) of commercial space. One half standard is assumed to be appropriate for our purposes, given the .walking distance to services and transit' assumption underlying this charrette.

*7*

This number is generated as follows: assume one job per household (UDI) and 2.87 persons per household. The number of jobs for the entire district should be 350 per 1,000 population. Assume 35% of jobs are in corporate office/light industrial. .35 X 350 = 123 jobs. 123 jobs x 200+ sq. ft. (I 9 sq. mtr.) per worker = 25,000 ft. (2,300 sq. mtr.) per 1,000 population.

8

23% of 350 workers per 1,000 population = 80 persons at 200+ sq. ft. (I 9 sq. mtr.) per person = 16,000 sq. ft. (1,500 sq. mtr.) per 1,000 population.

9

This number is one half the standard suburban light industrial/corporate office parking space requirement cited in Time Saver Standards for Site Planning. The UDI standard is 3.5 spaces per 1,000 sq. ft. of office. One half this standard is assumed appropriate for our purposes given the 'walking distance to jobs or transit' assumption underlying this charrette.

I 0

Source, City of Surrey Schools.

I I

Source, City of Surrey Planning Dept.

12

This number is an estimate of the typical number of churches per 1,000 population in our region, including all denominations.

# DESIGN CHARRETTE ADVISORY BOARD

JAMES TAYLOR CHAIR IN LANDSCAPE AND LIVEABLE ENVIRONMENTS

The following individuals kindly agreed to serve as members of the Sustainable Urban Landscapes Advisory Board. This group met at key points to advise on all aspects of the project plan, to select the case study site,
to review and amend the design program, and to advise the Chair on appropriate follow up activities subsequent to the charrette event.

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# DESIGN CHARRETTE TEAM LEADERS

Joost **Bakker,** Architect
joost Bakker is a partner in Hotson Bakker Architects, with offices in Toronto and Van- couver Canada. The firm has received international recognition for such projects as the redevelopment of Granville Island in Vancouver and the Sanctuary Cove Resort in Queensland, Australia. He is a past mem- ber of the Vancouver Planning Commission and the Vancouver Heritage Commission. He worked with Professor Quayle on the award wining Greenways, Public Ways Re- port and is actively involved in the thesis program at the School of Architecture at the University of British Columbia.

**Cheryl Barton,** Landscape Architect
Cheryl Barton is the principal of The Office of Cheryl Barton in San Francisco, Califor- nia. Her work has been recognized with many awards including the ASLA Honour Award for the Sutro Historic District in 1993. Her design work and writings have been published in many North American design magazines and journals. Barton is a Fellow and Past President of the American Society of Landscape Architects.

**Catherine Brown,** Landscape Architect Catherine Brown is Coordinator of Special Projects and the Dayton Hudson Senior Fellow in Urban Design for the Design Center for American Urban Landscape at the University of Minnesota. Brown was a founding principal of the design firm CITY-WEST, who, in this capacity, directed a broad range of progressive urban design projects throughout the U.S.

**Patrick Condon,** Landscape Architect
Professor Condon currently holds the UBC Chair in Landscapes and Liveable Environ- ments at the University of British Columbia, From 1981 to 1983 he was the Director of Community Development for the City of Westfield, Massachusetts and from 1984- 1991 he taught landscape architecture at the University of Minnesota. He has won awards for his teaching and research and has published and lectured widely on sustainable urban design and landscape design theory.

**Roger Hughes,** Architect
Roger Hughes is an architect currently living and working in Vancouver, BC. His firm, Roger Hughes Architects, works on various institutional and residential projects. While working in London England he gained experience in the restoration of historic buildings for re-use as housing. His work has been recognized nationally by many awards programs. Sustainable high density housing is one of Roger's special areas of expertise. Mr. Hughes frequently serves the School of Architecture at the University of British Columbia as an invited critic.

**Ken Greenberg,** Architect
Ken Greenberg is a partner with the Toronto firm Berridge Lewinberg Greenberg Dark Gabor where he specializes in the rejuvenation and intensification of inner city areas and the creation of denser mixed use communities on the urban fringe. Along with many international involvements, Green- berg is currently preparing a Development Framework for the Capitol City riverront along the Mississippi in St. Paul, Minnesota. He has taught and lectured widely in North America and Europe and has contributed to many professional journal, books, and publications in the field of urban design.

**Doug Kelbaugh,** Architect
Doug Kelbaugh is Professor of Architecture and Urban Design at the University of Washington and principal in Kelbaugh Associates in Seattle, Washington. His designs have been published in over 100 books and magazines and featured in many

exhibitions world wide. Professor Kelbaugh has taught and lectured at many schools of architecture throughout the US andEurope. He co-edited *The Pedestrian Pocket Book,* co-chaired four national and interna- tional conferences on energy and design, organized over a dozen national and international design charrettes and consulted on private and public development projects locally and abroad.

Jennifer **Marshall**, Architect
Jennifer Marshall is a principal in Marshall Fisher Architects. She is actively involved in architectural education and has been teaching design studio at UBC since 1988. Her chief interests lie in the areas of urban design, housing, and architectural ideas. She has won many awards during her career, particularly for her sensitive architectural restorations.

Stacy **Moriarty**, Landscape Architect
Stacy Moriarty is president of Moriarty/ Condon Landscape Architects and Planners Ltd, in Vancouver, BC. She has an interna- tional practice, with project experience across the United States and in British Columbia. Ms. Moriarty has won many awards including the Rome Prize in Landscape Architecture from the American Academy in Rome. Her writings, drawings and projects have been featured in numer- ous exhibitions and articles in North America and abroad.

William **Morrish,** Architect
William Morrish, director of the Design Center for American Urban Landscape, holds the Dayton Hudson land grant chair in urban design in the College of Architec- ture and Landscape Architecture at the University of Minnesota. He has taught, lectured and published extensively in the fields of architecture, urban design, and related topics. As well, he was a co-founder of the urban design firm CITYWEST. Moura **Quayle,** Landscape Architect
Moura Quayle is a Professor in the Landscape Architecture Program at the University of British Columbia. She is actively committed to urban landscape advocacy work by lobbying for greenway programs and residential street renovations. Her in- volvement in City of Vancouver's Urban Landscape Task Force has won her many awards locally and internationally.

Murray **Silverstein,** Architect
Murray Silverstein is a founding partner in Jacobson Silverstein Winslow Architects in Berkeley, California, where his work in and around the San Francisco Bay Area has won a number of awards. In addition to his work as practitioner, he has authored and co-authored books and articles including *A Pattern Language,* which has gained world-wide recognition. Silverstein has also taught and lectured in architecture at a number of Universities throughout the U.S.

Ron **Walkey**, Architect
Ron Walkey is an Associate Professor in the UBC School of Architecture. He has ex- pressed his passion for building and for cities in many important pilot projects such as the False Creek South district in Vancou- ver. In this project, and in the important Britannia Services Centre project, also in Vancouver, Professor Walkey conclusively demonstrated the value of *Pattern Lan- guage* (Alexander et. al.) to the design process. Professor Walkey has published widely, most recently in *Dwelling, Seeing. and Designing.- Toward a Phenomenological Ecology.* Edited by David Seamon. 1993. Albany N.Y.: S.U.N.Y. Press.Bill **Wenk,** Landscape Architect
Bill Wenk is president of Wenk Associates Inc., a planning and landscape architecture firm based in Denver, Colorado. He is a member of the American Society of Land- scape Architects, and is a member of the Conservation Funds National Forum on Non-point Source Water Pollution. His firm's work along urban rivers and streams has been recognized nationally and inter- nationally for its environmental responsi- bility, and for the integration of urban and natural systems.

Carolyn **Woodland**, Landscape Architect Carolyn Woodland is president of Hough Woodland Naylor Dance Limited, a Toronto- based environmental planning and design firm. She also teaches landscape architecture at the University of Toronto, and con- tributes to many publications and articles on topics of ecological design, open space planning and waterfront development. Her environmental urban site planning projects have won numerous awards and attracted international attention. She is a co-author *of Restoring Natural Habitats,* published in association with Toronto's Waterfront Re- generation Trust.

Don **Wuori,** Landscape Architect
Don Wuori is a principal in the firm Philips Wuori Long Inc. in Vancouver, BC. The firm's work focuses on the planning, design and implementation of waterfront public parks, and open space, urban design, public art, and mixed use developments. His award winning projects have been recognized by organizations locally as well as nationally.