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LIVABLE WINTER CITY ASSOCIATION

L'ASSOCIATION POUR L'ANIMATION DES VILLES EN HIVER

NEWSLETTER

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c/o Ms. Xenia Zepic,
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The Municipality of Metropolitan Toronto,
City Hall, East Tower, 11th Floor,
Toronto, Ont., M5H 2N1

Oct. 1, 1984

Editor, Jack Royle
Western Editor, Val Werier

EXCHANGE OF LETTERS AFFIRMS L.W.C.A. ROLE IN WINTER CITIES '86
INTERNATIONAL FORUM

To Mayor Laurence Decore, City of Edmonton, from L.W.C.A., July 3....

"On behalf of the Livable Winter City Association, we would like to express our interest in and support for the Winter Cities '86 International Forum. The L.W.C.A. is a non-profit corporation established by individuals and organizations with a wide variety of backgrounds, with the intent to promote the use of weather and climate information in the structuring, layout, design, architecture, etc., of Canadian cities and towns. We hope to promote a positive 'frost belt' image, to encourage Canadians to enjoy all the benefits of the Canadian winter and to minimize its dangers, inconvenience and discomforts, especially in urban settings.

"We hope to accomplish some of these objectives by co-hosting the Symposium with the City of Edmonton and the Canadian Federation of Municipalities. Our responsibilities will include the selection of its structure, content, and participants. The proposed delay from 1985 to 1986 will allow us greater flexibility in identifying and inviting international-calibre speakers and special theme sessions.

"Other concurrent activities, such as the Trade Fair, competitions and Winter Festival, will only serve to enhance the Symposium and encourage increased participation and attendance. The City of Edmonton will be initiating a series of winter experiences which will not soon be forgotten.

"We look forward to our mutual efforts over the months to come and to a most productive, innovative and enjoyable Symposium and Forum."

Signed for L.W.C.A. by J.C.Royle, co-founder and director and honorary co-chairman of Winter Cities '86 International Forum; Pat Chen, Chairman of the Board of Directors; and Joan Masterton, Chairman of the Symposium Program Committee. (Ms. Masterton has since relinquished this position because of a change of duties within Environment Canada.)

A MESSAGE TO THOSE INTERESTED IN THE LIVABLE WINTER
CITY ASSOCIATION AND MOVEMENT....

To carry on with numerous projects, with implications across Canada and around the northern world, the LIVABLE WINTER CITY ASSOCIATION needs your support and involvement. Your dividend for completing and forwarding (with cheque) the form below will be a flow of information about projects, people, trends and ideas in an important movement that is spreading rapidly. You gain an opportunity to "get in on the action", to help launch new chapters, to rub shoulders with "Livable Winter City 'doers'" in private and public sectors. You get an inside track on important challenges and opportunities.

Use this form to renew your subscription -- or subscribe for the first time -- to NEWSLETTER, and to join -- or renew your membership-- in the LIVABLE WINTER CITY ASSOCIATION.

(Detach, complete and forward;)

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From Mayor Decore to Livable Winter City Association, Aug. 13:

"On behalf of the citizens of Edmonton, I welcome your expression of support for Winter Cities '86 International Forum..."

"The renewal of your interest in hosting the Symposium, with the City of Edmonton and the Federation of Canadian Municipalities, will ensure country-wide professional involvement. Your work will do much to ensure a successful Forum.

"The recent endorsement, by the (Edmonton) Executive Committee, of a Winter Cities '86 Corporation and the objectives of the International Forum is an indication of the City's commitment to making this Winter City a 'truly unique northern city'. Together, we will welcome the world once again.

"I want to acknowledge receipt, as well, of a letter from you, Mr. J. Royle, dated 1984 07 17 concerning the Shenyang Conference and the possibility of inviting Mayor Itagaki (of Sapporo, Japan) to Edmonton. This letter predated by a few days a letter from Mayor Itagaki, dated 1984 07 23, discussing the matter of sending a delegation of Mayors, who will attend the Shenyang Conference, to Winter Cities '86. Mayor Itagaki also indicated that he is going to Portland, Oregon, in September (Ed. Note -- Portland is a 'sister city' of Sapporo) and that he would like to visit Edmonton if time allows.

" I have taken this opportunity to extend an invitation, from both of us, to Mayor Itagaki asking him to visit Edmonton in September..."

On the same date, Mayor Decore also wrote to Mayor Itagaki of Sapporo, saying in part:

"This City (Edmonton) was honoured to have been able to participate in the successful First Northern Intercity Conference held in Sapporo in 1982. I endorse the initiatives that were discussed by my predecessor in office, Mayor Cec Purves, at this first conference. I extend this endorsement to include the Second Northern Intercity Conference in Shenyang, China, in 1985. I will be pleased to receive an invitation to attend the Shenyang Conference. I believe that sharing information on commonly experienced northern city problems is a valuable activity.

"The Edmonton International Forum, Winter Cities '86. will focus on current cold weather research, as well as technological and lifestyle developments worldwide. It will be of specific interest to northern specialists and professionals, such as architects, engineers, builders and cold climate researchers. The Edmonton Forum would, I believe, also be of interest to Mayors, elected officials and administrators from small and large urban centers in all northern countries. The initiatives developed at the government level, as in the First Northern Intercity Conference, could be shared with a wider audience of northern experts during this event.

"It is in this regard that I support the idea of having a small delegation from the Shenyang Conference 1985 come to the Winter Cities '86 International Forum in Edmonton...."

These excerpts from letters serve to update L.W.C.A. members on progress being made in preparations for the International Forum. To explain some references, the City of Shenyang, China, has announced plans for a second Northern Intercity Conference, following up on a similar conference held at Sapporo in 1980 on the initiative of Mayor Itagaki. The Shenyang Conference is to be held in September, 1985, and will be attended by mayors. or their appointees, representing selected northern cities.

DIRECTORS APPROVE FORMATION OF TORONTO CHAPTER

L.W.C.A. Directors, meeting in Metro Toronto Planning Dept., boardroom on Aug. 17. appointed new directors, approved formation of a Toronto chapter, and took other steps to broaden and strengthen the organization.

The enlarged Board of Directors now consists of: (* indicates new appointee) Patrick Chen, Ottawa City Planning Dept., chairman; Chris Bradshaw, Planner, Ottawa-Carlton Region, Ottawa; Arni Fullerton*, Planning Director, Edmonton Central Region; Byron Johnson, environmental consultant, Ottawa; Vladimir Matus*, Urban Designer and Planner, Hamilton; Roland Nogue, Director/Co-ordinator, Winter Cities '86 International Forum; Sheila Pepper, Recreation Planner, Ottawa; Prof. Norman Pressman, School of Urban and Regional Planning, University of Waterloo, Waterloo, Ont.; John C. Royle, writer-researcher, Palgrave, Ont.; Joan Masterton, Climatologist, Atmospheric Environment Service, Toronto; Ernest Balmer, President, Hallmark Hotels Ltd., Toronto; Ms. Xenia Zepic*, Senior Planner, Metropolitan Toronto; and Al. Sutton, * Vice-President, Hallmark Hotels Ltd., Toronto. Thus the Directorship now has representatives from Edmonton, Waterloo, Hamilton, Toronto and Ottawa and includes climatologists, academics, planners, consultants, journalists and developers indicating significant broadening geographically and in professions represented.

Unanimous approval was given to establishment of a Toronto chapter with Ms. Xenia Zepic serving as interim chairman pending formal organization and election of officers. A meeting for these purposes was called by Ms. Zepic for Sept. 20. At that meeting a bylaws committee was formed to prepare draft bylaws for the new chapter and to report to a further meeting Oct. 10. Greg Ross was named chairman of the bylaws committee. Other members: Charles Simon, George Przybylowski, George Stockton, Al Sutton and Vladimir Matus.

With incorporation procedure now complete and with L.W.C.A. having been granted charitable status, date for an annual national meeting was set at Nov. 2 at 9.30 a.m. in the 2nd floor boardroom of Ottawa City Hall. Vladimir Matus was chosen chairman of the national membership committee, Al Sutton as chairman of a special committee on finance and funding.

CHEN SPEAKS TO ATLANTIC PROVINCES LANDSCAPE ARCHITECTS

Patrick Chen, L.W.C.A. Chairman, will lead a Seminar on the Livable Winter City theme Oct. 19 from 9 a.m. to 4.30 p.m. for Atlantic Provinces Association of Landscape Architects at University of New Brunswick Memorial Hall auditorium. For information, telephone Wayne Burley (506) 453 2509, or Dan Glenn (506) 455 2473.

"RESHAPING WINTER CITIES"

CANADA'S FIRST WINTER CITIES BOOK SOON OFF THE PRESSES

"Reshaping Winter Cities -- Concepts, Strategies and Trends" will be the title of the first-ever published-in-Canada book on policies, strategies and concepts for making winter cities more livable in winter. Printing has already started. Copies will be available early in 1985.

Edited by Prof. Norman Pressman, University of Waterloo, as a spin-off from the National Student Competition on "livable winter cities", the book contains contributions by Pressman, Hans Blumenfeld, Eberhard H. Zeidler, Walter Kehm, Zenia Zepic, Guy Gerin-Lajoie and John Royle, all judges of the student competition, with a foreword by Peter Broberg of Sweden a noted architect who has pioneered new concepts in climate-responsive development.

The contents present the special views of each of the authors as to recommended approaches, design concepts and policy development for reducing stress and improving overall comfort and livability in urban environments. In a field critical to Canada, "Reshaping Winter Cities" will offer for the first time a collection of ideas and experiences constituting a useful tool for exploring problems and implementing public policy.

The book will be sold through the Livable Winter City Association. Full details on costs and distribution will be given in the next issue of NEWSLETTER to appear Dec. 1.

WINTER CITIES' SLIDE KIT POPULAR WITH GEOGRAPHY CLASSES

L.A.Swatridge, Education Officer, Central Ontario Region, Ontario Ministry of Education reports a slide kit prepared by Don Wicks, high school geography teacher of Port Colborne, Ont., with help from the Livable Winter City Association, has proved to be exceptionally popular. The three kits maintained to be rented out to geography teachers so that duplicates can be made by them have been continuously back ordered for as much as three or four months. Title of the kit is: "How Canadian Cities and Communities Turn Winter to Advantage." The kit includes 30 slides and a prepared commentary. The slides were selected and the commentary written by Mr. Wicks. An announcement to the effect the slide kit existed, carried in L.W.C.A. NEWSLETTER, attracted several requests, including one from England.

Mr. Swatridge agrees he could use additional kits because of the good demand. Does he believe the kit and commentary could be updated? "I think what we could really use is a good sequel with about 30 slides and a commentary," he declared.

Anyone wishing additional information may write Mr. Don Wicks, 136 Delhi st., Port Colborne, Ont., L3K 3K9 or Mr. L.A.Swatridge, Central Ontario Region, Ontario Ministry of Education, 2025 Sheppard ave., E., Willowdale, Ont., , Ste. 3201, M2J 1W4.

GUEST EDITORIAL

THOUGHTS ON THE LIVABLE WINTER CITY ASSOCIATION

By Raymond Moriyama

(Raymond Moriyama, architect-planner well-known for his discernment and sensitivity, turned his thoughts to the Livable Winter City Association near the conclusion of an address he delivered to the "Winter Cities' Colloquium" held at Carlton University, Ottawa, in conjunction with Ottawa's "Winterlude" celebration last February. Due to missed NEWSLETTER issues, we have not previously had opportunity to bring these excerpts to our readers, but believe they are so pertinent and constructive from the point of view of the association every L.W.C.A. member and supporter will want to read them. Mr. Moriyama and his firm, Moriyama and Teshima, Architects and Planners, have been responsible for numerous notable projects, including Ontario Science Centre, Buffalo Main Street Mall, Meewasin Project, Saskatoon, Metropolitan Toronto Central Library, Scarborough City Centre and Science North, Sudbury. A brief summary of the main portion of his talk was carried in a previous NEWSLETTER. A second "Winter Cities' Colloquium" is to be held, again in conjunction with Ottawa's "Winterlude" in Ottawa Convention Centre. Feb. 2, 1985.)

Official formalization of the Livable Winter City Association deserves a joyous welcome. It points the way to Canadian thinking, ideas and solutions that are indigenous and appropriate to our land and people...

It is not enough to idealize, plan, design and visualize a future if we cannot achieve it because political, economic, social and psychological dynamics have not adequately been simulated and taken into account...

Based on our experience, creating more livable winter cities is going to require, not only a fundamentally different attitude toward our climate, but since much of the work is dealing with public space, such as streets, parks and sidewalks, much more thought has to be given to social and economic development. There must also be a willingness for all involved to work together, to use public and private capital and resources in innovative ways, and to gain public support by involving the people who will be using these environments.

In simple terms, our experience tells us that to get complex, multi-facilitated projects built, the work process must not only appear to be open, but, in fact, must be open and responsive to the concerns and input of the community and various concerned groups.

Thinking of the challenges facing the Livable Winter City Association, I would like to suggest the following:

RECOGNIZE the marvelous diversity in Canada -- the land, the people, the climate -- unified by the fact we are all Canadians and all live in the northern zone;

RECOGNIZE the beauty of the four seasons; not just the negative aspects of our winter that we must somehow solve technologically;

RECOGNIZE all that is "free" -- the bioclimatic factors, the winter winds, the summer winds and breezes, the sun angles in all four seasons, the rain and snow, color of the sky varying in different parts of the country; live the hours as they pass aware of all that is happening in the natural environment; observe the clouds (cloud cover averages 60 percent of daylight hours in Toronto); Be sensitive to these natural processes.

PAUSE AND THINK about the little things that are really big things -- sun pockets, winter gardens, how you stand and speak to friends on the street, the taste and enjoyment of nature's changing moods;

RECOGNIZE that we have a lot to learn from the Indians and Inuit: Recognize that Canada has a national policy of multiculturalism and bilingualism. This country is a microcosm of the world, one step beyond the melting pot of U.S.A.

RECOGNIZE that there is a choice between low technology and a high technology answer, choose the side of low energy consumption.

L.W.C.A. might think about setting itself up as an evolving organization, flexible and evolutionary. This approach might take time and be risky, but the results might be more productive and exciting.

There are questions about decentralization -- formation of chapters; about international affiliation. It is said, " Think universally, but act locally." There is the question of funding. Many organizations place too much dependence on government. Private funding is usually healthier. Your members are likely to be a range of people with diverse backgrounds and disciplines. This is also healthy and hopeful.

L.W.C.A. faces a multitude of tasks and opportunities. Research is needed in many areas, whether the Association sponsors it, or merely encourages it. Data banks and inventories need to be built, catalogues and project lists created. Your Student Competition, the International Forum to be held in Edmonton in 1986 and this Colloquium in Ottawa are to be commended and will be followed by other projects. Communication and publicity must receive strong emphasis. In all undertakings, I suggest it is important to involve the public and to get feedback.

What does L.W.C.A. stand for? To me it is about co-ordinated understanding of people and nature.....

L.W.C.A. is about development, also conservation and preservation;

L.W.C.A. is about philosophy, ideals, also about the simple things of life.

L.W.C.A. is about sensitive responses to human needs; is not about simple-minded large projects that desensitize and downgrade the individual.

I visualize L.W.C.A. as a potential giant with his head high in the sky and his feet rooted in our Canadian soil. I believe such a giant will contribute immeasurably to the destiny of Canada and rightfully earn a place in the history of the world.

FEATURE ARTICLE

ENERGY-CONSCIOUS HAMILTON, ONT., LEADS IN DEVELOPING CLIMATE-DESIGN PLANNING TOOLS

Livable Winter City Association members and other Canadians who have recently travelled abroad report that Canada is well ahead of most northern nations in evolving climate-design and energy-conserving technologies and systems. Hamilton, Ont., (Metro area population approx. 550,000), through its Planning Department, has established strong leadership in this field with a number of major research projects and publication of more than two dozen reports, with others in preparation. Specialized, unique environmental planning tools -- devices for simplifying the use of sun, wind, temperature and ground slope data -- were developed and have attracted worldwide attention.

Hamilton's concentration of heavy industry helps to make the city more energy sensitive. Its sprawling steel and machinery plants are massive energy consumers, and their workers, many organized and benefitting from the guidance of able union leaders, are alert to any change that takes a bite out of their wages.

The 1972-73 energy shock jolted Hamiltonians and their city council into realization of the crucial importance of energy in their lives and livelihoods. Suddenly the Planning Department found eager interest in programs that had previously been difficult to sell -- concepts featuring environmental and energy concerns blended with other community goals.

In 1975, Vladimir Matus, holder of a number of degrees in engineering, architecture and urban planning from universities on both sides of the Atlantic, joined the staff as head of the newly-established energy and urban design section.

Hamilton Planning Department, reported to have the smallest staff in proportion to population of planning departments in major Canadian cities, set out under the guidance of Victor Abraham, Director of the local Planning division, to make best possible use of its resources. Planning Director Abraham was known for his innovative approaches in administration and was determined to respond energetically to the energy-conservation design and planning challenge. Matus was given a technician as assistant and asked to work up planning guidelines that would reflect Hamilton's concerns about energy while also helping to improve quality of life.

First focus was on the downtown area. Initial studies disclosed the city's core was still in good condition although beginning to show signs of decay. The Planners' first thought was that more flexibility and opportunity for innovation must be introduced in order to bring new life and interest to the area.

They decided that economic and market forces must not be throttled but be allowed to function freely to the greatest degree possible; only developments with apparent harmful impact on the surroundings, or violating long term and general objectives, should be discouraged.

Land use classifications should be made less arbitrary; decisions on density should be left as much as possible to the developers. However, density would not be allowed to be so great as to overload existing streets and services.

Energy conservation and climate design would be emphasized. Access to sunlight would be protected; the landscaping and general appearance of the streetscape would be emphasized and developers and builders would be encouraged to build with the four season climate in mind, especially making provision for energy conservation and human comfort in winter, the longest season.

As the implications of the energy crunch became clearer, certain facts were more generally accepted. Improved density became popular as it was realized that downtowns are, by virtue of their infrastructure and massed concentration of structures, more energy efficient than thinly spread suburban bedroom colonies. The pre-O.P.E.C. row house with single glazed windows but situated in the downtown heat island was found by studies to be more energy efficient than a super-insulated dream house in suburbia, isolated from its neighbours and prey to the winds and vagaries of the Canadian climate,

Often, it was observed, usage, traditions, other socio-cultural factors and sometimes the needs or desires of the free market place could obscure energy imperatives and issues.

Lacking boundless resources, Hamilton planners chose to focus on major energy leaks. The challenge was set out in the words: "Is it possible to make the presently most efficient urban forms more efficient without major surgery?" followed by a second question: "Is it worth doing?".

Setting about finding answers to these questions, the Planners gave increasing attention to the new neighbourhoods springing up around the city. In 1980, a major report: "Planning for Low Density -- A Solar Approach," summarized a series of projects undertaken over the previous three years and introduced the concepts of "shadow templates" and "An Ecochart of Hamilton".

The "Ecochart" is an ecological portrait giving a conventional representation of the land surface, including the slopes of the terrain, man-made features such as streets and buildings, and natural features, such as water and vegetation. This data is combined with climatic data -- temperature, sun angles and shadows, wind direction and velocity, degree days, humidity and precipitation. Climate data is shown for each month of the year as averaged over a ten to thirty year period.

The terrain data and localized climatic data, such as winds and precipitation, pertain only to one specific location. But solar data which applies to Hamilton, situated on the 43rd parallel of north latitude, also applies to every other locality situated on or near that same parallel. Thus, some portions of the "Ecochart", as developed by Hamilton, can be used by a large number of cities and communities circling the globe.

The major report, "Planning for Low Density -- A Solar Approach", reviews basic design principles relating to solar energy, also earth sheltering, the use of "envelopes" and "shadow templates". "Envelopes" are "castles in the sky" imaginary structures to provide an outline in order to limit the dimensions of buildings to make sure their shadows do not fall across neighbouring structures during the precious hours of the day when sunlight is strongest. "Shadow templates" are described as "the simplest tool for determining the size and direction of shadows cast by any natural or man-made object."

A full set of templates accompanies the report. They are 8½" by 11" transparencies surprinted with coefficients for solar angle and length of shadows at 9 and 10 a.m., noon, and 2 and 4 p.m. on the 21st day of each month throughout the year. They may be overlaid on scaled drawings and by referring to the coefficients give instant readings of shadow extent and shape. As with the solar information on the "Ecochart", these "shadow templates" may also be used around the globe in communities situated, like Hamilton, on or near the 43rd parallel of north latitude.

The report also contained detailed instructions and indices for preparation of "shadow patterns" for all possible contours and slopes of terrain and instructions as to how these may be used in sub-division planning. Buildings situated on north-sloping land will obviously cast longer shadows than buildings on south-sloping land.

Increasingly, the report implies, it makes sense to design a sub-division including its houses as one energy-efficient package. To design each house separately in order to take best advantage of sun, shadow, wind and slope adds to cost. Matus told a meeting of Urban Canadian Planning Directors: "We have discovered the advantage of the energy efficient car. We are in the process of learning how we benefit from living in an energy-efficient home. In the very near future we are going to recognize the advantages of living in energy efficient communities."

Letters commending the report or asking for copies were received from all levels of government in Canada, from professionals, planning departments, and universities in Canada, U.S., Europe and from as far away as Guadalcanal in the Solomon Islands. This interest spurred Hamilton's planners to still greater efforts.

A grant of more than \$100,000, received from Ontario Ministry of Energy and Ontario Ministry of Municipal Affairs and Housing, made possible the compilation of a three-stage research project and report, larger and more detailed than any previous report. Published late in 1982, it was entitled, "Design Criteria For Energy-Efficient Neighbourhood Planning."

The Prologue to the first section of the three-part report affirms the direction to be taken; "Our sources and use of energy, together with associated costs, will inevitably result in massive changes in the manner in which future land is planned...., planning policies and building design must ensure that the amount of energy used for a given function is reduced."

The report debunks some widely held misconceptions. Many people look on energy conservation as a sacrifice rather than as sensible provision for the future; mixed land use, with commerce, possibly industry, institutions and residential in close proximity is too generally looked on as lowering living standards; too few of us are aware that buildings that use energy inefficiently are more subject to deterioration. Says the report:

"The barriers are largely attitudinal in nature. There are no design or technological barriers to building energy-efficient neighbourhoods."

Some of the chapter headings indicate the scope of the report: "Environmental Forces and Land Forms"; "Land As A Solar Collector -- The Skydome and Sky Window"; "New Neighbourhood Development Policies"; "Wind Control for Neighbourhood Planning"; "Municipal Powers in Land Use Control". There is also a "Designers' Notebook" instructing how to calculate many climatic variables and to use the numerous tables and charts included with the report.

To chart variations in "the lay of the land", the Hamilton planners evolved a technique they labelled, "Land Form Description". By this procedure, "contours", the conventional topographical representation, is translated into a pattern of squares. The size of a square represents a degree of slope. Added color coding or arrows indicate orientation, or relationship to the sun. In a further step, areas with similar characteristics are clustered into "cells". These are alphabet-numeral coded using indices such as "N5", "E3", or "S10" with the letter indicating the direction and the number the degree of slope. Such detailed information on land slope has bearing on land use, density, road or street alignment and space heating mode.

"Design Criteria For Energy-Efficient Neighbourhood Planning -- Stage Two", published in 1983, was an attempt to demonstrate specifically how to put to use the large amount of working information contained in the first volume.

A block of land, some 200 acres in area, "on top of the mountain" in Southern Hamilton is theoretically prepared for sub-division following the steps outlined and using the tools described. Land slopes are determined and graphically portrayed using different densities of shading instead of color. A rough approximation of a recommended street alignment is drawn in according to contours of terrain and planning for maximum solar gain for individual houses.

Several street plan alternatives are then presented and considered in terms of their energy efficiency, attractiveness to home owners, number of building lots, and suitability for recreation and transportation. The "Quadrant", "Closed Loop", "Broadway", and "Meander" variations are compared and then an actual sub-divider's proposal is presented. Minor adjustments, suggested to the sub-divider are shown and the reasons for them given. Finally two other equally acceptable street plans are depicted.

The importance of climate is touched on in the preamble: " The winter sun is our most precious natural asset. We should capture it as much as possible. In northern countries, we need it as a source of our physical and psychological well being.....A sheltered atrium space is a concept which can stretch the warm season throughout most of the year, particularly if it is combined with a mobile glass roof and mobile shades.

"Cold climate requires that we make the south side of the house the living side of the house.....On the north side.....we should locate activities which are heat producing, have low occupancy, or require low lighting. Bedrooms should be on the eastern side where they receive the morning sun and have the coolest evening temperatures..... The entrance should be located on the sheltered side of the house..... Solar receiving areas should be painted in dark colors.....The south side should, if practical, have an attached greenhouse or sun porch..... Southern windows should be large, northern windows minimal..... Southern exposures should be shaded by deciduous trees, or overhangs, or both.

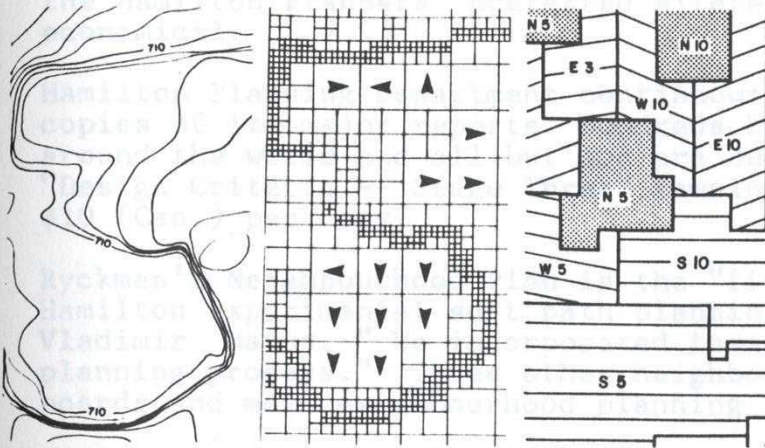
"By utilizing simple, soft technology means, we are being introduced to living more closely with (being tuned to) our environment. We are being reconditioned to the economics of greater self reliance."

Looking to the computerized future with changing roles for the family, for women, for the elderly: "We are told land use plans should integrate living, working, and recreation.....in other words, mixed land use.....Certainly planners cannot professionally go on using prototype designs that ignore the trends and complexities of neighbourhood life."

"Design Criteria For Energy Efficient Neighbourhood Planning -- Stage Three ", published this year, is a direct application of the concepts and working tools previously described in the planning and development of an actual neighbourhood known as "The Ryckman's Neighbourhood". This development is located in south-central Hamilton, is rectangular and encompasses 79 hectares or about 195 acres. Application of the new planning procedures and approach did not supersede existing planning programs but rather added a new layer of sophistication.

Added planning steps included: A review of the implications of the "Ecochart"; preparation of the Slope Descriptive Synthesis (S.D.S.); Delineation of "Cells" (of slope orientation and gradient); Derivation of concepts and instructions related to land use, density, street alignment and space heating mode.

Four design alternatives were developed for the area, to be scrutinized by a public participation process. These four alternatives represent compromises among such factors as land ownership, sub-surface conditions, developmental pressures, ecological concerns, archaeological sites, housing market conditions, costs, municipal services, public transportation, etc.

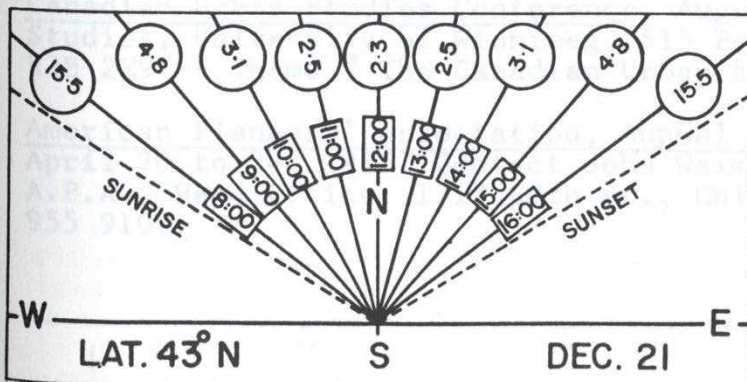
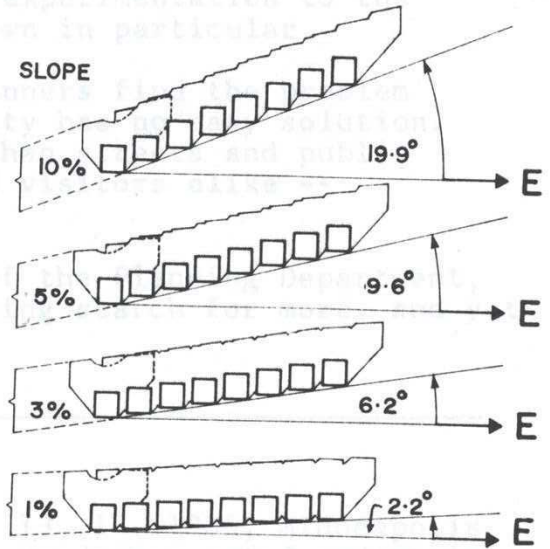


Steps in Development of Land Form Description -- left, conventional contour map; centre, Slope Descriptive Synthesis, with grid and arrows superimposed -- square size indicates degree of slope; right, "Cell" pattern showing slope gradient and orientation, e.g., S10 indicates south-facing slope of 10°. Horizontal lines in sketch at right are optimal street alignment directives.

How Shadows Are Affected By Slope -- Upper right design shows shadows cast by line of detached houses at 10° eastern slope requiring diversion of street alignment by 19.9 % through east-west to provide optimal solar access to all houses.

FOR 43° N LATITUDE

SLOPE % EAST	STREET ALIGNMENT ANGLES
10	19.9
5	9.6
3	6.2
1	2.2



Shadow Template -- Transparent overlay used to discover shadow size and direction. This template shows coefficients for hours from sunrise to sunset on 43rd parallel of north latitude for Dec. 21. Transparency is placed over scaled drawing. Shadow length equals height of structure multiplied by coefficient.

University of Regina (Saskatchewan) Faculty of Engineering donated time on its computer to evaluate comparative costs of the four alternative Ryckman proposals using a unique program with the ability to evaluate and compare in detail construction and maintenance costs of municipal services. By year's end the results of this analysis will hopefully be available indicating whether the Hamilton Planners' preferred alternative is also most economical.

Hamilton Planning Department continuously receives requests for copies of its major reports. Hundreds have been sold in Canada and around the world and all but one are out of print. A few copies of "Design Criteria -- Stage Three" remain unsold and are available at \$10 (Can.) per copy.

Ryckmen's Neighbourhood Plan is the "first real application" of Hamilton experimental soft path planning methodology, declares Vladimir Matus, "We incorporated these methods into the standard planning process." Three other neighbourhoods are on the planning boards and more neighbourhood planning is scheduled for 1985.

Future challenges include the incorporation of computer-assisted interactive graphics and the elimination of tedious and complex drafting. Inevitably the department intends to apply the results of a decade of research, development and experimentation to the medium and high density areas, and downtown in particular.

As in other Canadian cities, Hamilton Planners find the problem of creating an inviting and enjoyable city has no easy solution. But the city has no more precious asset than streets and public areas that are a delight for citizens and visitors alike -- throughout all four seasons of the year.

For the Energy and Urban Design Section of the Planning Department, the future promises a continuing painstaking search for more, and yet more, answers.

COMING EVENTS OF INTEREST

A Conference On Skyways and Tunnels April 13, 14, 1985, Minneapolis dealing with "comparative perspectives on grade-separated pedestrian systems in U.S. and Canadian cities" Contact, Walker Art Center, Vineland Place, Minneapolis, Mn., 55403.

Canadian Urban Studies Conference, August, 1985 Institute of Urban Studies, University of Winnipeg, 515 Portage ave., Winnipeg, Man., R3B 2E9 -- Theme " The Canadian Urban Experience , Past and Present.

American Planners' Association, Annual Conference, Montreal, April 20 to 24, 1985. Contact John Waxman, Conference Manager, A.P.A., Head Office, 1313 60th st., Chicago, Ill Tel: (312) 955 9100.

NEW UNIVERSITY OF WESTERN ONTARIO WIND TUNNEL, NEW URBAN BYLAWS, BRING NEW FOCUS ON WIND DISCOMFORTS

A new wind tunnel, constructed at University of Western Ontario, permits more sophisticated studies of surface wind patterns and effects than was previously possible in Canada. Advanced aeronautical wind tunnels have existed throughout the world to be used in development of new aircraft conformations but these have been found to be of little use in studying urban wind patterns.

Meanwhile a number of Canadian cities have passed bylaws requiring wind studies for large new structures. "Canadian cities have gone much further than those in U.S. toward doing something about wind discomfort," according to Urban Innovation Abroad, May, 1984 issue.

U.W.O has had a smaller and less efficient wind tunnel, used to test wind resistance of a number of large urban structures around the world, including the C.N. Tower in Toronto. This testing facility was called Boundary Layer Wind Tunnel 1. The new tunnel, called Boundary Layer Wind Tunnel 11, has special equipment to create the wind patterns found in urban centres.

National Research Council, Ottawa, in its Low Speed Aerodynamics Laboratory, has under way a major study that will provide an unprecedented quantity of data on wind patterns against which future urban development projects can be tested. Some Canadian cities have been sued for injuries caused to people by surface winds. One example was Toronto where a family of four was blown off a podium beside City Hall and suffered severe injuries. Canadian cities that have enacted bylaws requiring wind testing for large new structures include Toronto, Calgary and Edmonton.

UNIVERSITY OF MANITOBA STUDYING COLD CLIMATE AGRICULTURE

University of Manitoba Department of Plant Science has received a grant of some \$402,000 from the Natural Sciences and Engineering Research Council to explore ways of improving the productivity of agricultural crops grown in Canada's prairies. "Severe climate is the most significant limiting factor facing Canadian agriculture", states a U. of M. news release.

BICYCLE PROBLEM LARGELY IGNORED BY WINTER CITIES

Snow and cold make biking a seasonal activity in northern countries while in most other regions use of bicycles is increasing dramatically. In Europe, Japan, California and New York, more and more people are riding bicycles to transit depots where they park them in order to take commuter trains to work.

In Japan, special multi-storey steel bicycle parking garages are springing up at transit terminals. Cost of such parking space was between \$260 and \$870 Canadian per space. User fees of \$9 to \$10 per month partly covered costs and government subsidies and assistance, such as provision of free lockers, made up the difference.

In U.S., according to Urban Transportation Abroad, about 43 percent of families own bicycles, about the same percentage as in Japan and Europe. U.S. lags in use of bicycles for access to public transportation partly because bicycle theft is more common in U.S., than in Japan or Europe. "The investment of more than \$100,000,000 over the past 20 years to promote automobile access to transit in U.S. has not been accompanied by even modest investments in secure bicycle parking", says a recent U.T.A. report.

U.S. has tended to prefer allowing riders to take their bikes with them on transit vehicles. Bike-on-rail and bike-on-bus plans have been adopted by some subway, commuter and bus systems. Special racks or trailers have been the most common arrangement. Santa Barbara, Cal., is reported to have lured some 26,000 additional passenger riders to the transit system in 1980 with bike trailers hitched to busses. Denmark and Northern Germany have bike-transit user volumes among the highest in the world, yet have fairly severe conditions of snow and cold in long winters.

Canadian winter cities appear to have given little thought to ways by which bike-transit use can be increased. However, Patrick Chen, Livable Winter City Association chairman, claims he rides his bike all winter long in Ottawa.

NOVA SCOTIA'S "MAINSTREET PROGRAM"

Excerpt from letter received from C. John Thorpe, Co-ordinator, Mainstreet Program, Nova Scotia Department of Development.

"We have an extremely effective program that seems to have halted the deterioration of our downtowns. The Provincial Department of Development, through the Mainstreet Program, has created the atmosphere for revitalization and provides funds toward physical improvements, acquisitions, management, consultants and promotion. Each community controls its own destiny through its own management structure. Consequently, physical improvements are usually unique and complementary of a certain town centre.

"The majority of towns have populations of around 3,000 and are limited in their ability to fund major developments. Most phase improvements over a number of years. At this time I cannot suggest any project that is outstanding in its attention to providing protection to customers from severe winter conditions. There are, of course, downtowns with awninged sidewalks, the large warehouses and department stores that have been converted into mini malls, the sky pedways in Halifax, and urban covered shopping centres.... Many communities have long range plans to develop sheltered or enclosed walkways tying in several businesses....

"I would appreciate hearing more of the progress made by your Association and would welcome receiving copies of your NEWSLETTER."
