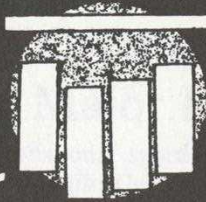


LIVABLE
WINTER CITY
ASSOCIATION



ASSOCIATION
POUR L'ANIMATION
DES VILLES EN HIVER

Livable Winter

NEWSLETTER

VOL. 4 NO. 3

June 1986

WINTER CITIES FORUM / SHOWCASE 88 OFF AND RUNNING WITH ASSURANCE OF SOVIET PARTICIPATION

By Arni Fullerton
Western Canadian Editor

With its international trade show, WINTER CITIES SHOWCASE 88, leading the way, Edmonton's major world class, Winter Cities Forum and Showcase 88, is off to a flying start. Edmonton Northlands, the very large exhibition organization, has produced a splendid brochure. Two representatives of Northlands have just returned from a 17 day tour of Scandinavia and middle Europe. They have hired a full-time consultant in Frankfurt, Germany, to assist in marketing the concept. Their reception was extremely good particularly in Norway, Finland, Germany and Austria. They have signed their first commitment -- a major block of space reserved by the Soviet Union -- and they feel other Eastern European countries will also participate. The event will be held February 15 to 19, 1988.

Centre stage, in the overall event, Winter Cities Corporation, is planning to hold the Third Northern Intercity Conference of Mayors, the series of conferences initiated by Mayor Takeshi Itagaki of Sapporo. We expect representatives from at least one hundred cities and perhaps more than this if representatives of cities participating in the Winter Olympics in Calgary take time to attend the concurrent event in Edmonton.

Along with the Exposition and Mayors' Conference will be a major technical conference with strong emphasis on the economic opportunities in Winter Cities. Present plans are to focus on four areas: climate and energy, urban structure and planning, transportation and personal/social implications.

As special events, we plan to expand the "Historical Cold Weather Clothing Exhibit" that was a hit at Forum 86 and drew requests from across North America for its display. We plan to expand on the children's participation and exhibits which were a popular feature of the 86 event.

National Film Board is pressing ahead with the early research and development phase of a promotional film on winter cities tying into the 88 event. Canadian and American national architectural bodies plan to produce a major document as a follow-up to the R/UDAT (Regional Urban Design Assistance Team) process which was completed in five days following Forum 86. There is also talk of an urban design and technology competition.

Winter Cities Corporation has also committed six percent of its budget towards a "Legacy Component". This would involve establishing a permanent research, development, and demonstration centre which would also be home base for a permanent secretariat for the International Winter City Advisory Committee, formed in Edmonton during Forum 86.

Various community and cultural groups have again approached Winter Cities Conference Corporation with interest in participating in the 88 Forum events.

Winter Cities Conference Corporation has been advertising for a general manager to direct the production of the 88 events. This was a position I previously held but I will be relinquishing only part of my responsibility. At my request the Board of Directors has limited my duties, allowing me to remain

on the Board as liaison with the Livable Winter City Association, of which I am a Director, also to continue as a consultant and as Director of Research and Development, to flesh out the "Legacy Component". The balance of my time will be spent reestablishing my professional practice in architecture and planning. In the latter activity I have already received my first commission: to design an agrarian village in Saskatchewan with special attention to the needs of retired farmers. Since my goal is to design truly warm, comfortable and stimulating winter city architecture, I am quite excited about this opportunity.

Pamela Freeman will continue as Winter Cities Conference Corporation Manager of Administration.

If readers would have suggestions for our program in 88, we would be delighted to receive them.

(Ed. Note -- As has been said, but certainly not often enough, Arni Fullerton was the key instigator and implementer of the remarkable Winter Cities Forum 86 which took Edmonton by storm in February. We wish him success in his new career.)

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We Breathe New Life Into Old Towns

Many small and medium sized communities are now experiencing the demise of their downtown core. This is usually brought about as a result of the increase in suburban housing and shopping developments or a community's dependence on a single industry experiencing difficult times.

Hallmark Designed Communities specializes in developing and implementing plans for the revitalization of community cores experiencing urban decay. Our designed communities bring old towns back to life by combining municipal facilities + libraries, health centres, and offices with new shopping and cultural facilities such as theatres or auditoriums. The result is a rejuvenated downtown core with a central focus, a truly livable and vibrant community.

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We also plan, design and implement new communities required to service the needs of resource corporations engaged at remote locations.

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All Of Norway Joining With Tromsø To Make Winter Cities 90 A Major Event

By Joel Rieder

Beautiful, lively Tromsø, capital city of North Norway and a city of energy and ambition, culture and industry, is eagerly pushing forward plans and ideas in preparation for its role as host for Winter Cities International Forum and Exposition in 1990.

Tromsø, largest city in land area in Norway, is at 70° North latitude yet due to the Gulf Stream has mild summers and a year-round ice-free deep sea harbour. The midnight sun appears from May 23 to July 21.

The city of 48,000, "Gateway to the Arctic", is at the forefront of an ever-increasing interest in Arctic oil, fishing, hunting and other commercial ventures. Tromsø, the largest fishing town in Norway, is a base for North Atlantic fisherman and a station point for all major Arctic expeditions. It contains the most northern university in the world, is a center of underwater technology for off-shore drilling, and has advanced electronics and bio-technological industries. It is also a well-known tourist attraction with splendid summer and winter scenery and a center for winter sports, with first-class accommodations and easy communications and air connections to Oslo.

1990 has been earmarked for a national Norwegian investment effort, starting with Winter Cities '90 (tentatively set for February and March). The conference's organizational model includes Housing, the Tourist Industry (tourism, culture and sport), Research and Innovation, and Exporting and Internationalizing. The development of northern housing will play a key role.

The preliminary programme involves: energy supply and saving; alternate energy forms; northern climatic building conditions; acclimatized housing; daylight and declimatized zones; dark polar nights and light Arctic summers; artificial lighting; physiology and "artificial" environments; cultural impulses and ethnic conditions; and vegetation.

Several supplementary arrangements are also planned: an exhibition of northern family houses; a "Polar Night" festival with classical music; medical seminars; "World Aqua Tromsø '90" - exhibition and seminar on aqua culture and fish farming; vari-

ous international sporting events, including a World Cup Ski Event; special presentations at the Northern Lights Planetarium; and excursions to Spitsbergen and Murmansk, Tromsø's sister city in the U.S.S.R.

Winter Cities '90 will center in the Polar Sport Trade and Fair Center, 5km. from downtown Tromsø and containing the largest exhibition hall in Norway. Next to this will be a new hotel and a variety of shops, car rental, a post office, banks, restaurants, squash courts, bowling and parking. A second, smaller Sports/Fair Center, 2km. away, is available if needed.

Much of the conference will also take place in a unique complex built inside a mountain in the center of Tromsø, scheduled for completion in

1988. This includes emergency shelters suitable for exhibitions, trade shows and concerts, as well as tennis courts, parking and a technical/historical museum.

Also scheduled for completion by 1990 are a large hotel and conference center on Tromsø harbour, and an Arctic Center, 15 km. from downtown, where the World Cup Ski Event will take place.

The fourth Northern Intercities Conference of Mayors will be held in concert with Winter Cities '90. Tromsø is also hoping for a large representation from Eastern Europe. Plans are underway and excitement is rapidly building towards what looks to be a very exciting, interesting and productive Winter Cities Conference in 1990.

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Editorial Committee: Eva Vertesi, Grace Strachan, Joel Rieder.

PRESIDENT'S OVERVIEW

LWCA Planning Two Student Competitions Plus Other Major Events

By Xenia Zepic,
National President.



To serve our readers and members, our national executive has decided the national president should prepare a brief statement for each NEWSLETTER issue discussing major issues facing our organization and outlining plans for future events and programs.

With many years of practice in urban planning, I am aware of the risks and uncertainties in planning. However, looking back on the successful first three years of LWCA, I am confident our goals will be realized.

This year began with two major events-- Winter Cities Forum 86 in Edmonton and the follow-up workshop "Curing the Common Cold" in Toronto. From many complimentary comments and letters I have received from Canadians and from Scandinavians during my recent speaking tour in Norway and Sweden, I am certain both events were great successes, contributing to greater international recognition for LWCA.

Interest in our movement is growing rapidly at home and overseas. LWCA chapters are being formed in Scandinavia and U.S. "Winter Cities 90" in Tromsø is going to be a very large world scale event with major involvement by the Norwegian government as well as by the Tromsø city authorities and business community. University of Tampere, at Tampere, Finland has chalked up a world "first" by including the subject, "Winter Planning" in its curriculum. "Climatology and winter design" has been offered

as a post graduate course at University of Stockholm, Sweden.

LWCA is a Canadian organization and is being look to in all northern countries to give leadership in the effort to improve livability in northern communities. For this reason we are in the process of establishing a Board of Governors that will include distinguished Canadians and possibly also some well-known and influential Scandinavian, U.S., and Japanese winter city leaders.

With all our achievements and progress, our membership is still growing slowly and our funds are inadequate for the many projects we are planning. Our success depends on the day-to-day involvement and enthusiasm of our members as much as on glamorous public events. Nevertheless we are pushing ahead with plans for several projects expecting funds will be forthcoming when we need them.

LWCA is planning two student competitions-- one national, the other international in scope-- both of which will be offered to universities across Canada in the spring of 1987. One of these will be design-oriented in the field of landscape architecture and urban design. The other will be tailored for post-graduate students (M.A. and Ph.D.) in the areas of social, medical, political and economic sciences. Entries of both competitions will be published by LWCA. Next issue of NEWSLETTER will contain more information regarding these competitions. Our first published book, "Reshaping Winter Cities" has been selling consistently with little effort to promote it. Some 50 copies were taken to Siberia by Hon. David Crombie for distribution there.

LWCA will continue to be involved in the major international conferences, Winter Cities Forum and Showcase in Edmonton, Feb. 15 to 19, 1988 and in Tromsø, Norway in 1990. Our chapters in Ottawa, Toronto and Edmonton are now at work preparing programs for the coming year.

I invite you all-- even in the heat of summer-- to "think Winter" and to forward to me in care of this Newsletter any imaginative ideas or proposals you may have to offer to LWCA so that we may have under preparation a full and varied program before next winter's first snow.

New Clothing Can Prevent Hypothermia Summer And Winter

By Prof. Susan Watkins, Department of Textiles and Apparel, Cornell University, Ithaca, N.Y., Consulting Editor, Clothing.

While the word "hypothermia" brings to mind harsh, winter weather, in fact, it can be just as prevalent in the summer months. Hypothermia occurs when the body loses heat so rapidly that it can no longer produce heat for normal body function. Violent shivering, drowsiness, speech impairment, loss of coordination and inability to think clearly are among the signs that the body is suffering from hypothermia and needs to increase heat production. It is quite common for an individual to become hypothermic even after starting out on a 90°F (35°C) day. When the sun goes down, the environment cools down rapidly. In addition, when wet and windy conditions are involved, as they are, for example, when boating or in a downpour, cooling may occur much too rapidly for the body to offset with its own heat production.

The key to preventing hypothermia is to protect the body from extremes of temperature change, and in particular, to keep it dry. Anytime the skin is wet, the body attempts to get rid of that surface moisture by bringing body heat to the skin surface to vaporize the moisture. While this body reaction is ideal for evaporating the perspiration you produce when it's hot outside and you need to cool off, it can be dangerous when conditions change and you really need to conserve heat.

The dilemma this situation presents, (when you want to be engaged in summertime hiking, sailing or any other activity where environmental conditions may change rapidly, is) how to find clothing that is comfortable whether it's warm or cool, windy or still, rainy or dry. Summer rainwear is a particular problem for many active people because, in order to keep out rain, most items of rain gear also keep out air, and become, in effect, "sweatboxes" in hot summer weather. Yet, forsaking raingear and allowing clothing to become wet could lead to the real danger of hypothermia if the cont'd on page 5

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temperature dropped dramatically over a short period of time, or if the wind chill factor suddenly caused the effective temperature to be considerably lower.

Microporous fabrics have begun to enjoy tremendous popularity because they solve this dilemma. They provide rain and wind protection AND breathability. The pores in microporous fabrics are too small for a droplet of water to penetrate, but they will allow air and water vapor to pass through. This means that moist air near the skin surface may be pumped out of the garment as the body moves, yet rain will be kept from entering the garment. Micropores are added to fabrics in a variety of ways. Probably the most familiar microporous fabrics are the Gore-tex laminates. Gore-tex is a plastic film related to Teflon. It is made up of microscopic fibers that are laid together in a butt and bonded together at intervals. This extremely thin film is laid between breathable lining and outerwear fabrics and bonded into three layer "sandwich." Because each Gore-tex fabric laminate actually consists of three layers and requires the extra laminating step, it is considerably more expensive than typical single-layer outerwear fabric. However, many backpackers and other outdoor enthusiasts feel that the comfort and protection it offers, both in summer and winter weather are well worth the extra cost. There are several other brands of microporous films on the market. One manufacturer has developed two microporous films-- Matrex and Imtrex to provide two levels of protection for different storm classifications.

There are several other methods of creating micropores in fabrics. Entrant is a Japanese product which is formed by applying a tough, highly elastic coating to the inside of a variety of fabrics. The micropores in Gamex are created chemically and mechanically with the use of very fine, densely packed yarns. BionII is a skin-like, extremely stretchable microporous fabric coating, much like a surgeon's glove which can be applied even to stretch fabrics. Several manufacturers, including the makers of Gore-tex are now incorporating the capacity for stretch into their microporous fabrics.

Regardless of the method used to create micropores, garments made from these waterproof, breathable fabrics can play an important part in protection from hypothermia in two ways. First, they keep rain and wind from in-

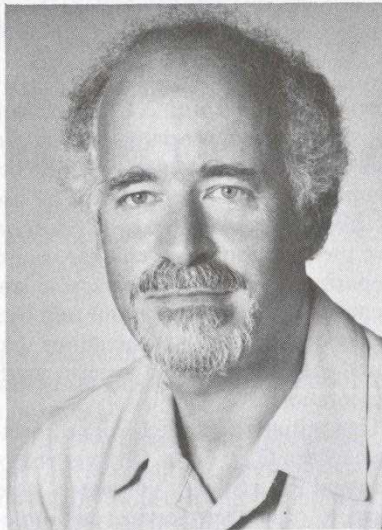
vading the basic insulation provided by clothing. Second, they keep body moisture from building up on the skin surface, and thus, more likely to be warm. In other words, people who have them available are less tempted to simply allow their clothing to get wet in a summer rainstorm. Hypothermia can occur regardless of the season, and it can be even more insidious in the summer because it is so unexpected. Keeping clothing dry and protected from wind is the best defense.

Interestingly enough, solving the summer rainwear problem also pro-

vides a solution to many winter outerwear problems. If you buy rainwear with enough room to accommodate winter clothing underneath, garments made of breathable microporous fabrics are perfect for cold weather as well. They help keep insulation dry from both the outside and the inside, by protecting layers of insulation from rain and snow, AND allowing body heat and moisture built up inside to be released. Buying loose, may be a smart investment that can reap benefits into the winter months as well.

1986 - U.N. / ECE Research Colloquium Summary Report

By Prof. Norman Pressman



During the period of the 15-19 February 1986 while the Winter Cities Forum was unfolding in Edmonton, the United Nations- Economic Commission for Europe held its research colloquium on the theme of "Livability of Human Settlements in Winter Climates". Delegations were represented from Canada, U.S.A., Norway, Finland, Denmark/Greenland with Dr. Karlfritz Leonhardt of Geneva presiding. William Griggs of CMHC chaired the meetings and with chief rapporteur, Prof. Norman Pressman (also Director, International Liaison of the LWCA), and the assistance of Jocelyn Frazer (co-rapporteur), they jointly prepared the draft report and summary remarks which will be published by the United Nations.

Presentations were made by approximately two dozen international personalities who are experts in "cold-climate habitability" touching issues and dilemmas at the macro-, meso-,

and micro-levels of settlement patterns. National case-study experiences were communicated in the areas of adaptation of urban form to human needs, northern value systems, technology impact, settlement policies, programmes and projects, socio-economic development and future scenarios for a broad range of high-latitude nations. Finally, a research agenda was formulated as an outcome of the discussions.

It was concluded that the severity, duration and exposure to harsh climates affect livability in human settlements. The intricate relationships between these factors is not yet fully understood in terms of the ways in which existing policies should be restructured to permit designs to be more sensitively planned and executed at all scales. What became clear, however, was that a wide spectrum of interventions must be introduced which serve to minimize harsh climatic forces.

The exchange of experiences and measures already implemented - some of which have been evaluated - is extremely valuable to member countries wishing to improve their environments especially during the lengthy winter season. More than simply sharing information, a ECE group of participants suggested that it was critical to act upon the results of policy research conclusions. Unique pilotprojects and demonstration experiments - subventioned by governments - should be undertaken and evaluated for effectiveness in achieving their stated objectives.

In his summary remarks, Prof. Pressman put forward his seven "I's":
1. INFORMATION - to understand the issues. 2. INTEGRATION - of so-

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cial, political economic and cultural factors. 3. INVOLVEMENT - with the problems and issues at all levels. 4. INTERACTION - amongst all participants and actors. 5. IMAGINATION - to develop responsive, sensitive solutions. 6. INNOVATION - to push through new frontiers. 7. IMPLEMENTATION - to realize action and tangible improvements.

The four key themes which were singled out for active exposition were those of approach and definition of problems, adaptation of settlements, planning and design, and shelter/habitat. These themes emphasized systematic insight into the problems as well as creativeness in developing approaches to making settlements more livable from a variety of perspectives and evolving from the needs of different user groups.

It is hoped that future research colloquia will be organized in which actual assessments of success and failure of case-study projects in member nations can be transmitted.

This colloquium was the first of its kind ever to be held - at an international level - and was extraordinarily successful. We are all grateful to the U.N./ECE Committee for Housing, Building and Planning for having agreed to sponsor such an important event.

Planning in Cold Climates:

A Critical Overview of Canadian Settlement Patterns and Policies

Urban Communities Series No 1
Urban Studies University,
of Winnipeg

By Norman Pressman & Xenia Zepic

In the spring of 1986, the Institute of Urban Studies launched a new publication series, the Winter Communities Series. In this first paper, Norman Pressman and Xenia Zepic, two "livable city" experts explore development policies, strategies, concepts and trends that are intended to ameliorate the Canadian urban environments, providing a particular emphasis on problems arising during the lengthy and harsh winter season. The effect of climate on urban form and developments reveals some of the errors which have been made in the past Canadian towns and cities, from both social and physical viewpoints.

Conference Planners are Afraid of Winter Weather !

By Charlotte Matthews

Have you ever noticed how the dates for conferences, annual meetings and seminars are bunched together? Many meetings seem to be scheduled for five out of the twelve months. The favoured months are: April, May, June in the spring and September and October in the fall. Why is this so?

One answer is: winter weather conditions frighten conference planners. The experience and spirit of our ancestors seem to be lost.

Yet, there are occasions when conferences take place in winter. For example, The Livable Winter City Association holds successful conferences in

the midst of winter. These conferences take the best from the past and link it with the technology of the present.

No doubt the hotels and travel industry would welcome more business in the 'off-months.' Winter conferences could be a joy instead of a dread.

There are some questions that need answers. What are the strategies? Does the host city assure snow removal and safe driving conditions? Do the conference participants wear clothing suited to winter conditions? Are public attitudes about winter weather based on fact or fantasy?

Toronto Chapter Preparing Slides and Text Presentation Also Speakers' List

Meeting May 8 Toronto Chapter took steps towards preparing a standard half hour slide presentation with accompanying text to be available for use by LWCA speakers who get calls to give presentations. The chapter is also preparing a list of members who are prepared to give presentations and lists of service clubs and organizations that would be interested to receive such presentations.

This initiative resulted from a meeting between G.D. Fryer, Chapter chairman and Peter Shore. Volunteers were asked to offer their services to implement the program.

The following committees were formed: To prepare a roster of LWCA speakers: Xenia Zepic, Alina Matus, Stewart Cohen; To prepare a standard presentation with slides and text: Eva Vertesi, George Stockton, Vladimir Matus, Peter Shore; To prepare a list of service clubs and organizations and to contact them in order to arrange presentations, Steven Blevins.

National Speaker Referral Service

Stewart Cohen, of Application and Impacts Division, Canadian Climate Centre, National Executive Secretary announced he had offered his services to LWCA national as a referral person for anyone across Canada who might want a speaker. His address: Atmospheric Environment Canada, 4905 Dufferin St., Downview, Ont., M3H 5T4, Tel: (416) 667-4702.

Polar Bears: Avoiding Conflict

Polar bears can be unpredictable and extremely dangerous. If you see a polar bear at a distance, never approach it; make a wide detour, or leave the area at once. If this is not possible, wait until he moves away - always leave him an escape route. Never harass a bear. Never go near a bear cub. Leave your dog at home. And always be careful with your garbage.

If you encounter an aggressive bear, remain calm; polar bears have been known to bluff. Don't run - you'll only invite pursuit. Look around - if there's no escape, you could "play dead", protecting yourself as best you can; you may only receive minor injuries. It takes nerve, but it has worked, and resistance is useless anyway.

(From "Northern Science Network Newsletter", August 1985, pp. 16-17)

LAF Announce Awards

The Landscape Architecture Foundation has presented the 1985 LaGasse Medal, their most prestigious award, to William P. Mott, Jr. and Martin J. Rosen. Mr. Mott, a California landscape architect, oversees existing U.S. National Parks and future acquisitions. Mr. Rosen of San Francisco is president of the Trust for Public Land, a non-profit organization to preserve open space from over-development.

PLAN NOW TO ATTEND
LWCA ANNUAL MEETING
NOV. 10, TORONTO CITY HALL



Peter Broberg with model of New Esle

"WE MUST CREATE A BALANCE BETWEEN OUR BIOLOGICAL MAKEUP AND THE HARSH NORTHERN CLIMATE"

... Peter Broberg

By Joel Rieder

Man evolved in the warm dry climate of East Africa, and as he multiplied and spread he moved to less pleasant climatic regions, using technology to create membranes to mediate between himself and surrounding bad weather. Three membranes- clothing, fire (heating system) and building (structure) evolved to protect Man. A large investment has been made in improving the indoor quality of our houses, but the heated building create cities which were only partially usable during bad weather, and led to the privatization and isolation of urban life.

"We must begin the task of making our cities usable all-year round." Future cities must be compact, complete and complex; small scale, functionally integrated urban units seem to be a stable human dream, as opposed to the collection of large scale and functionally separated individual buildings we now call our cities. In an integrated city, functions overlap and blend, confront and stimulate, fostering a pulsating urbane human life. Cities must rise above the problems of seasonally bad weather, thus making the creation of a climate-protecting layer, or fourth

membrane, of utmost importance. One way to do this is by encapsulating urban space.

The development of climate-protecting encapsulating membranes followed the model of the penetration of the facade, with window size expanding to enclose the entire facade, then the entire building in glass. The next step is to pull the transparent layer away from the building to create its own enclosed urban room, which can be used to unite and connect city spaces once again. The capabilities of glass can be exploited to create mixed-function urban rooms, and a truly integrated urban city.

New Esle is a model of the principles for planning an integrated all-year urban complex in a small southern Scandinavian town, with the primary goal being to give the project a city life. Instead of considering the houses themselves in a summer situation, the starting point was the winter situation, planned around the empty spaces between the houses.

The city model begins with the encapsulated room - a year-round street placed in an east-west orientation, to provide a definite sunny side for

planning purposes. Community activities are located on the ground floor, and common areas extend outward to connect the street, house and outdoor. Within this framework are placed shops, schools, daycare, offices and restaurants, with the remaining portions being allocated to rental and owner-occupied dwellings. Even the housing is arranged in zones, to allow private areas to be away from the 400 meter long enclosed street, which becomes both a continuous greenhouse and passive solar collector.

In our harsh northern climate, we have become highly technological human beings. Our cities must be planned, organized, climatized and built to support a lifestyle which reaches back to our genetic origins: systematic, scientific and creative experimentation, both forward and backward moving, is a necessity. We must create a balance between our warm genetic heritage and our actual surroundings - to create an urban milieu in harmony with our biological makeup, in creating fully integrated winter cities for all-year use.

"The conflict of interest between Man and technology is closely con-

POPULATION SHIFT TO WARM CLIMATES PICKING UP SPEED

Newest World Population Data Sheet, produced by population Reference Bureau Inc., of Washington, D. C., shows the concentration of the world's people in warmer climate belts is gaining momentum.

The previous edition (1985) projected population of the more developed nations, located mostly in the middle and upper temperate zones, to climb from 1,174 millions to 1,351 millions between 1985 and the year 2000. This would be an increase of 177 millions, or about 16 percent. In the same period, population of the less developed nations, mostly located in the warmer climate belts, was projected to jump from 3,671 millions to 6,409 millions (from 2,629 millions to 3,666 millions excluding China.) This would add up to an increase of 2,738 millions or about 74 percent.

The 1986 edition, just in, projects total world population to more than double from now to the year 2100 (80 years later than the long term projection of the 1985 edition). Here are the figures: 1986, 4,942 millions; 2100, 10,445 millions.

More developed nations are predicted to see their total population increase from 1,180 millions to 1,417 millions in that period, an increase of roughly 20 percent, (16 percent in 35 years vs 20 percent in 114 years). Less developed nations are projected to grow from 3,762 millions, an increase of 5,266 millions, or some 140 percent.

The northern nations, Canada, Scandinavia and U.S.S.R. are projected to see their total population grow from 328.4 millions in 1986 to 431.2 millions in 2100, an increase of 103.8 millions or 31 percent.

The picture is of a slowing down in the rate of world population increase but a sharp widening of the population gap between warm climate nations and cool or cold climate nations. Of course the projections are really guesstimates and could be altered drastically by a number of unknowns such as cataclysms, man made or natural.

Some questions come to mind:

When will governments begin to pay attention to these now-occurring population swings in their planning and policies?

Does technology have preference for a particular climate belt? cold or hot?

What relationship is there between population masses and markets; between larger populations and labor costs? if market size increases and labor costs decrease with population growth, northern nations would seem to face increasing disadvantages in these areas.

What more hopeful long term economic and industrial strategies do northern nations have than to take advantage of their northern situation, and to put their severe climate to work for them?

And, following on the previous question, how can northerners hope to discover ways to put their climate to work for them if they never start looking?

As Winter Cities Showcase 88 brochure declares: (see page one) "The Northern Option, Our Ace in the Whole."

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TROMSOE ---- NEW STAR IN THE NORTHERN SKY

With rare vigor and imagination Tromsø, a small city in Northern Norway (article on page 3) is setting out to make itself a big city in the northern world. Led by a few determined and ambitious city executives and backed by Norwegian national bank and government departments, this far northern city is showing is all how to move aggressively into a role of northern leadership. Henceforth Tromsø will

be known around the world and it is difficult to foresee how much economic activity, how many tourists, and how much benefit generally will come to Tromsø through its determination to play host to the northern world in 1990 with a major conference and exposition. Some substantial benefit has already been derived with the decision to construct new hotels and to enlarge dramatically its tourist and convention

facilities.

Other cities around the northern world may well find Tromsø's example inspiring if they, too, are looking for ways to shake off doldrums and make rapid progress. (There are a limited number of dates still available for the holding of Winter Cities conferences between now and the end of this century.)

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nected to Mankind's development, history and future. Is Man the master of or slave to technology?" In the last thirty years, scientists and philosophers have erased the picture of a technology in opposition to the humanistic and organic. The organism exploits technology, and technical systems become more and more biotechnical and organic. "Evolution in the future appears to be determined by a techno-organic integration."

(Through errors in the printing process the wrong photograph was used with an

article in our previous issue reporting on Peter Broberg's address to Winter Cities Forum 86. Broberg is one of Sweden's most innovative architects and has thought deeply about "how much technology is the right amount" in developing northern structural and urban adaptations. At Landskrona, a small city in southwest Sweden he has designed and built two housing developments, Tarnan and New Esle, in which glass is used to encapsulate the street creating a climate controlled year-round oases available to all residents.)

LWCA Annual Meeting Announced for Nov. 10

National President Xenia Zepic announces the annual meeting of LWCA will be held Nov. 10 in a committee room in Toronto City Hall. The business meeting will commence at 5 p.m. and will last two hours with reports, presentation of resolutions and election of officers. A wine and cheese social gathering will follow. All members are strongly urged to attend.

"Winterizing" Small City Houghton, Michigan Brings Major Boost To Economy

Patrick J. Coleman, Director of Planning and Development for Houghton (pronounced Ho-ton) a small city in Northern Michigan with 7,000 population, tells how steps to improve the city's winter livability produced "positive and unique solutions" and substantial return on investment.

He writes: "Dealing with winter issues is just one of the major challenges of downtown revitalization in these old copper and iron mining towns, and requires special planning efforts."

Houghton is a "winter city of the first order," declares Coleman. "Our snowfall of 240 inches this year and Michigan Technological University's Winter Carnival, which attracts thousands of visitors to view fabulous snow sculptures, reinforces this distinction."

"The program has resulted in over \$10 million in new development and historic renovation projects," says Coleman.

By funnelling a constant flow of traffic through the stores -- and more so in bitter or snowy winter weather -- new patterns in retailing have been created. Merchants line the walkways with impulse purchase items. Once out-of-the way corners, now adjacent to "doors between stores" turn into boutiques or snack stands. It was necessary to construct fire screens and barriers for certain of these doors and to create ramps so that shoppers can move from one level to another.

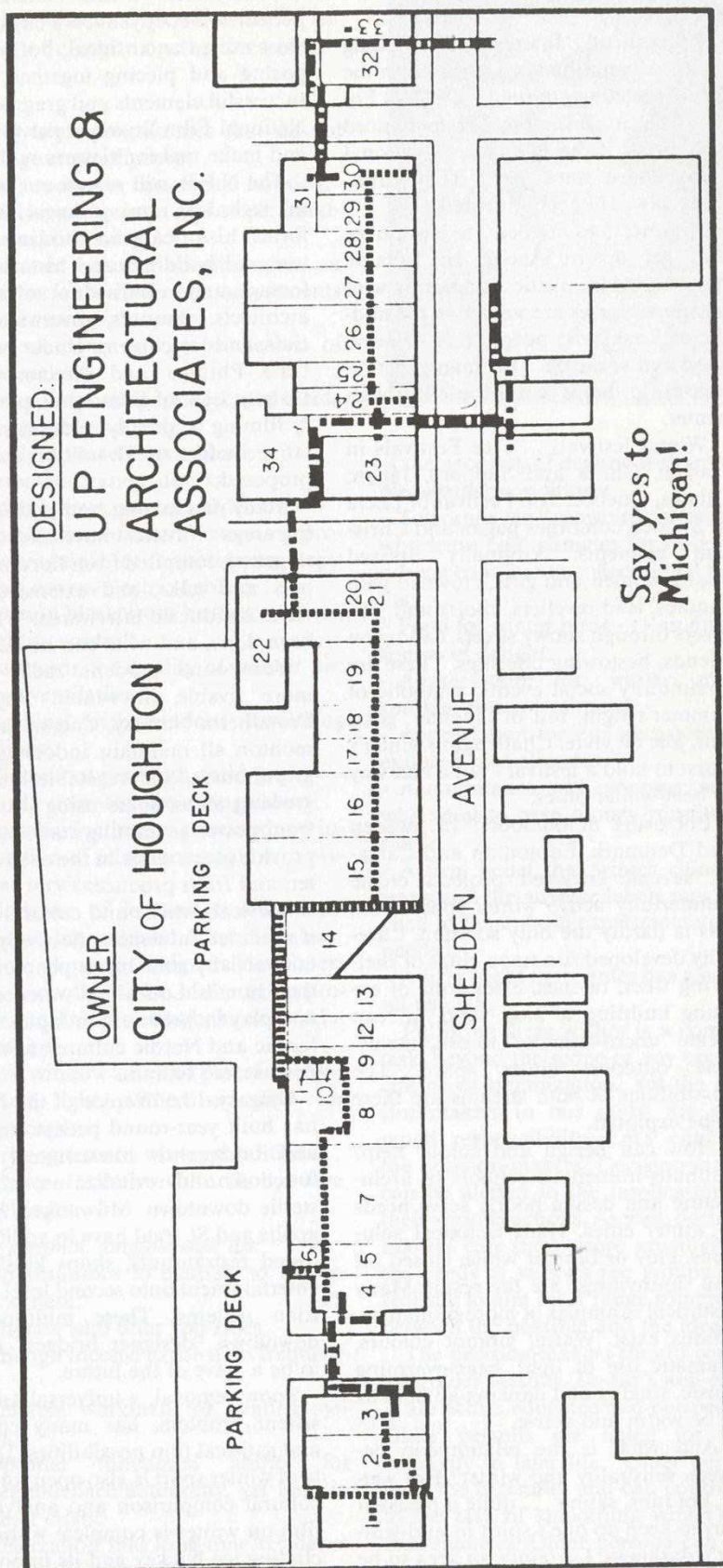
Through linkages and barrier-free access and by recognizing people's need for comfort and convenience Houghton, declares Coleman, "turned our constraints into benefits."

Key to the improvement is a system of interior walkways linking most major commercial structures in the downtown area. An unusual feature is that the walkways move through the stores passing from one store to another through skyways or ramps but in some cases simply through "doors between stores", newly constructed doors opened through the walls. The facility is known as Sheldon Centre interior walkway system and connects five downtown blocks. It has had the effect of bolstering the downtown economy in the face of competition from suburban malls.

Houghton has a steep hillside topography that previously limited winter-time access. Now, several new hillside

parking decks are accessible by a covered street. The downtown is decorated for the winter season with lighted trees

on the main street, evergreen boughs, and special light treatments on key buildings.



SHELDEN CENTER INTERIOR WALKWAYS PROJECT

EDMONTON NATIONAL FILM BOARD TEAM COMMENCES WORKING ON WINTER CITIES FILM

By Joel Rieder

Excitement! Interest! Fascinating ideas! All continue to surface from the fertile breeding ground of LWCA's Forum '86 in Edmonton. Experienced journalists from Canada's National Film Board were there. They came. They saw. They commented.

"Farmers go to bed in November and get up in April." In Iceland, horsemanship in cities is a family winter sport. Horses are stabled in the middle of Reykjavik; people ride to work, shop and socialize. This man-beast relationship helps get people through winter.

Winter festivals . . . Ice Festivals in Harbin, China and Sapporo, Japan; Ottawa, Quebec. The Festival of Lucia in Sweden combines pagan and Christian elements. Virginally dressed young women and girls, crowned with candles, lead revellers, choirs and gift-givers through snowy streets, calling on friends, bestowing offerings. These are community social events, symbolic of summer's light, full of laughter, good will, joie de vivre. Challenging winter's worst to hold a festival - not a bad way to beat winter blues.

Enclosure or outdoors? In Sweden and Denmark, Edmonton and Calgary, several enclosed projects create wonderfully active winter spaces. But this is hardly the only solution. Carefully developed sun traps, rings of sheltering trees, ravines, extensions of existing building to stop wind, all can create "micro-climates" to generate usable outdoor winter space. The possibilities of both streams are there to be explored.

How can design and colour help? Bauhaus-influenced schools of architecture and design poorly serve needs of winter cities. Hard technical solutions, grey or blue or white, closed off and uninviting, are the result. Many historical examples of more human solutions exist. Warm, vibrant colours, dramatic use of light, heart-warming music, singing and dancing all help us to be warm and active.

And what is the relationship between sensuality and winter? Hot water, hot tubs, sauna . . . quite a pleasant way to keep up one's spirit in mid-winter's darkness. Certainly an area to be investigated.

What has resulted is a spellbinding,

visionary idea - a film visualizing the perfect winter city. Such a city does not exist except as an ideal, but by juxtaposing and piecing together existing successful elements and fragments, the National Film Board hopes to present and make real for viewers such a city.

The N.F.B. will search out solutions in technical and cultural adaptive forms, historically in paintings, literature, old buildings and historical film footage, and in individual solutions by architects, planners, government officials, and lay citizens. Under producer Dale Phillips and director Reevan Dolgoy, both of Edmonton, preliminary filming is already underway. A tentative budget of \$1 million has been proposed.

Many fascinating and widely ranging areas of interest have already been targeted, compiled from Forum '86 papers and talks, and extensive interviews conducted afterwards. What has been done, and what can be done.

Year-round gardens make a city more livable in winter. Reykjavik, Trondheim Norway, Calgary and Edmonton all maintain indoor gardens, greenhouses, and vegetable and fruit-growing areas, some using waste heat from power generating stations. These provide green oases in the dead of winter, and fresh produce.

Musical, artistic and cultural events, if scheduled in winter, effectively maintain activity and bring people out of their homes. Lots of hot water to bathe and play in, prevalent in Japanese, Icelandic and Nordic cultures, also enlivens winter's tedium.

Calgary, like "Venice of the North", has built year-round pedestrian paths and bridges to interconnect urban functions and revitalize an otherwise sterile downtown. Milwaukee, Minneapolis and St. Paul have in addition allowed restaurants, shops kiosks and entertainment onto second level pedestrian systems. These multi-purpose downtown "designer bridges" appear to be a wave of the future.

Snow removal, a universal and persistent problem, has many comedic and satirical film possibilities. Diversity of winter sport is also open for cross-cultural comparison and analysis; no film on winter is complete without including ice hockey and its importance in northern cultures. Oslo takes full advantage of its winter condition by en-

couraging cross-country and even downhill skiing for urban transportation.

How winter affects different age groups and age-related activities could also be explored. The elderly in Scandinavia and China still manage to keep active in winter. Also relevant are psychological effects of winter - seasonal affective disorder, or SAD. How do we cope with mid-winter blahs? Colour and technology in clothing, (portable heating elements), using indigenous materials for building, solar design, and maximizing natural light for psychological and economic benefit are all pertinent. Other less obvious strategies have also surfaced, such as Larry Wang's discovery that a caffeine derivative reduces human heat loss by 50%.

Covered cities and atria are natural possibilities. Planner Peter Broberg of Sweden advocates enclosing urban space, and has been involved with several projects. Many examples of atria for winter living exist throughout Europe. Architects and planners will be featured for their role in moderating harsh weather through design. Taking nature as a starting point has been successfully applied in many Scandinavian cities, resulting in active downtowns in winter. Sapporo in Japan could also be shown as one of the first cities with a plan for winter.

The film will be both comparative and critical, showing what works and what doesn't. Cultural analysis is essential. Historical comparison is inevitable. We must realize winter can create not only comfort and harmony, but also industry. Indoor winter activities, festivals, ski resorts, technical innovations etc., can all have positive economic benefits.

But it is the dream which stirs the soul. The pulling together of fascinating and diverse examples from around the globe, from provocative and compelling people who all share a common goal. A vision quest. The creation of an ideal winter city, a cold-weather Utopia. If the National Film Board succeeds in this venture, they will be putting onto film the aspirations of not only the Livable Winter City Association but also everyone everywhere concerned with appropriate and exiting urban winter design.

An older person's wish list for winter

By Charlotte Matthews

Charlotte Matthews is a gerontologist, speaker, writer and community leader who lives in Sarnia Ont., and attended Winter Cities Forum '86 in order to advance her research into the effect of climate on the lives of senior citizens.

Some wishes are for impersonal or tangible things; they suggest amenities specific to the built environment. Other wishes are for personal or intangible things; they are in realm of the philosophical.

In many ways, a winter wish list by older persons is the same as for any other age group. Most older persons want to remain an integral part of society. Many are reluctant to ask for special privileges. However, aging involves much swimming against the stream. Aging brings in its wake a number of predisposing conditions that make winter conditions a common issue. For example, fear of a fall on ice is ever-present. Older persons have a keen awareness of the catastrophic consequences of a fall. Some older persons may be consumed with anxiety. Isolation and behaviour changes may follow. Opportunity for interaction may be narrowed at a time when interaction is needed most.

Aging is a balancing act. On one hand an older person strives to remain independent; on the other hand there is the need to maintain interpersonal relationships. The process of aging often leads to some closing out of life's options. Yet there is an attempt to avoid such a closing out. It is a tenuous task. Winter harshness either links or tears apart behavioural and spacial relationships.

Because aging may involve threats to identity, an environment must be sustained to assist the older person towards a positive identity. As well, concerns should be directed to deterrents to mobility, those things that limit the older person's life space. The older person's balancing act must transcend climate.

The impersonal, tangible wish list:

- Ice removal by non-corrosive means;
- Safely and security devices that demonstrate the inexhaustible inventiveness of the human mind;
- Innovative housing designs to reflect the requirements of older persons; cluster housing; low-cost retrofit;
- No wind tunnels; protected walkways;
- Adequate outdoor lighting at night;

- Television programmes that do not insult your intelligence;
- Party rooms in congregate housing;
- Bright passageways and steps; hand-rails on both sides;
- Entrance areas to accommodate an older person's slower eye adjustments to darkness/brightness;
- Bus shelters; bus stops cleared of snow and ice;
- Boxes for posting mail located inside of congregate housing;
- Easily operated snow blowers;
- Automatic garage doors;
- Greenhouses, winter gardens;
- Elimination of exterior steps, or, protection against ice formation on steps: simple covers/electric cables;
- No cold blasts from heating systems; humidity control;
- Standards for quality of indoor air: filters, ventilation;
- Clothing with modern insulating qualities;
- Winter footwear with solid grips;
- Easily operated fire extinguishers;
- Communications maintained: no interruption of telephone, mail or newspaper services;
- Riddance of journalists who denigrate winter and laud other climates;
- More planners, designers, developers who know the basics of the aging process and environment/behaviour relationships;
- Low window sills and places to enjoy natural light, winter sun and the streetscape;
- Driving tests in winter conditions;
- Winter festivals: cultural, sportive, for all ages.

The personal, tangible wish list:

- Opportunities to connect to the social system;
- Friends who offer you rides;
- Enough income to use taxis frequently;
- Reliable workmen for heating systems;
- Optimal functional ability for independence/autonomy, yet help in time of crisis;
- Realization that long-time residence in a community helps to build informal support systems.
- Ability to show a tougher face in view



of the necessity of dealing with inevitable weather conditions;

- Tolerance for "snowbirds" (traitors!) who leave cold climates for long periods yet continue to collect social benefits;
- Food for winter birds - - - an endless source of delight;
- Appreciation for winter magic: sparkle, glitter, freshness;
- Appreciation for our ancestors who endured cold climates.
- Acquaintance with younger people who want to earn money running errands.
- A firm belief that winter cities can transcend the adverse labels now attached to them; bold experimentation is needed.
- A firm belief that winter has a beauty all its own.

Fulfilling these wishes is a complex task, beyond the scope of any one discipline or organization. Yet the decision-makers in our midst are given much responsibility. Let's challenge the decision-makers. Decision-makers can be alerted to the implications of their various actions. As well, decision-makers can show more sensitivity to the needs of various age groups. It is realistic to aim for a range somewhere between the possible and the ideal.

The decision-makers should consult with older persons. To-day's well-elderly are active, educated and perspective. Older persons are noted for their creativity in later life. Older persons have the ingenuity and can contribute to the task of smoothing winter's inconveniences. Older persons can join in and help to erase the repressive image of winter. The wish-list is a beginning.

LWCA NETWORKING — SURVEY FOR MEMBERSHIP DIRECTORY

(For publication in future directories appearing in LIVABLE WINTER NEWSLETTER).

NAME:
(FIRST) (MIDDLE) (FAMILY)

MAILING ADDRESS:
(NO.) (STREET) (CITY)
.....
(COUNTRY) (POSTAL/ZIP CODE)

BUSINESS FIRM:

TELEPHONE:
(BUS) (RES)

● CIRCLE TO INDICATE YOUR MAJOR FIELD OF TRAINING AND EXPERIENCE:

- | | |
|--|--|
| ☐ ANTHROPOLOGY | ☐ INTERIOR DESIGN |
| ☐ ARCHITECTURE | ☐ LANDSCAPE ARCHITECTURE |
| ☐ ARTIST | ☐ MEDICINE |
| ☐ CLIMATOLOGY/METEOROLOGY | ☐ PSYCHOLOGY |
| ☐ ECONOMICS | ☐ PSYCHIATRY |
| ☐ EDUCATION | ☐ PUBLIC ADMINISTRATION |
| ☐ ENERGY CONSERVATION | ☐ SOCIOLOGY |
| ☐ ENGINEERING | ☐ URBAN AFFAIRS |
| ☐ ENERGY CONSERVATION | ☐ URBAN DESIGN |
| ☐ GEOGRAPHY | ☐ URBAN & REGIONAL PLANNING |
| ☐ HUMAN FACTORS | ☐ OTHER |

● CIRCLE UP TO THREE TO INDICATE YOUR AREA(S) OF INTEREST:

- | | |
|--|--|
| ☐ ARTIST | ☐ HOUSING |
| ☐ AESTHETICS | ☐ HUMAN FACTORS |
| ☐ AGING | ☐ OFFICE PLANNING |
| ☐ CHILDREN | ☐ PARTICIPATION |
| ☐ CLIMATE/WEATHER INFORMATION | ☐ PERCEPTION/COGNITION |
| ☐ COMMUNICATION | ☐ PLANNING |
| ☐ DESIGN METHODS | ☐ POST OCCUPANCY EVALUATION |
| ☐ ENERGY | ☐ PRISONS |
| ☐ ENGINEERING | ☐ PROGRAMMING |
| ☐ ENVIRONMENTAL PROCESS | ☐ RECREATION |
| ☐ ENVIRONMENTAL STRESS | ☐ SCHOOLS |
| ☐ FIRE SAFETY | ☐ SOCIAL IMPACT ASSESSMENT |
| ☐ FUTURISM | ☐ SOCIAL BEHAVIOUR/PERSONAL SPACE |
| ☐ GRAPHICS | ☐ TRANSPORTATION |
| ☐ HANDICAPS | ☐ URBANISM |
| ☐ HOSPITALS | ☐ INDUSTRIES |
| | ☐ OTHER |

● PLEASE WRITE A 100 WORD STATEMENT ON YOUR CURRENT PROJECTS OR RESEARCH.

TECHNOLOGY - The Great Facilitator

Excerpts from address to Winter Cities Forum 86 given by Prof. Edmund Happold of Bath, England. Prof. Happold lectures at the University of Bath and is Senior Partner of Buro Happold consultancy. Report prepared by Grace Strachan.

A couple of years back, Frei Otto of Frei Otto Atelier, Stuttgart, Germany and ourselves in Buro Happold, on the strength of our "Arctic City Project" in the mid 60's, were asked to help Arni Fullerton examine the problem of housing a mining community in Alberta. The community was needed to process the oil sands - comparable to coal mining and was expected to exist for one to two hundred years. To achieve a balanced community, living conditions require improvement. If it is not the wind chill in the winter, it is blackfly in the summer.

We looked at several levels of solution.

There is the traditional atrium-building with a winter arcade between. An urban solution in a rural situation.

The second solution, and one much favoured by Frei Otto, was the extended tent city. This concept a development of our big cable net tents, can have a mixture of solid, insulated skin to the roof, or windows or openings. Here since it is easily openable at the edges, is the flexibility which comes from the possibility of natural ventilation and easy access and egress.

This additive "village" enables the creation of different types of environmental control zones each adapted to specific kinds of space usage.

The third solution is the most technological one. It takes the City in the Arctic concept, which has been developed in the last twenty years in a series of covers to sports halls in America, and provides a double skinned, cable reinforced air-supported roof.

The detail design came in response to a study of the psychological needs.

Firstly the roof should be as nearly transparent as possible so that the spectrum and flow of light should be similar to the outside and the sky and stars should be visible.

Secondly there should be clear views out towards the horizon on all sides: south to the sun, north to the northern lights, east and west to the sunrise and sunset.

Thirdly the roof and supporting

structure should be free from visual noise and disruptive elements of high contrast which would attract and disturb the eye.

Fourthly the internal space should be large enough to be a "free field" where one is no longer conscious of enclosure. Yet coupled with this there should be a feeling of protection.

With the Sun only rising 9° above the horizon it was desirable that the south, south east and south west sides should be steeply sloped to improve the angle of incidence of both direct sun and reflections from snow. This fitted well with the concept of a horizontal ring beam carrying in compression, the tensile forces from the membrane and which would support the membrane above the ground during installation and in the event of a collapse.

The sloping walls below the ring beam would contribute 50-60% of the solar gain in November, December and January.

The main forces are wind and snow. The lower part of the dome is subjected to positive pressure and the rigid cladding- glass or solid- of the sloping wall, is desirable. Above, the roof deflects into a shape similar to that of the wind pressure diagram, tends to support the roof by its uplift and to blow off snow. Facilities for heating the roof surface are provided but the region is, in fact, semi-desert with little rain or snow fall.

Design life is 100 years though, of course, maintenance is required and facilities for repair of the membrane are provided.

The first cladding option considered was a 15 metre centre cable system with Teflon coated glass fibre cloth, as used on many of the big sports domes, as the outer covering and a thinner slightly porous sound absorption liner within.

Whilst this material is translucent it is deficient in the UV parts of the visible spectrum. This deficiency was viewed as serious and it made us turn to considering polymeric films whose transmission across the spectrum of perceived light is actually better than

glass. The two possibilities which we had been looking at in the UK in the context of football stadia were, firstly, to use an FEP film/glass fibre grid weave laminate which exists but not at that time commercially. With cables at 6m spacing it would also have had an inner lining. The second option was to use a 50cm cable net with a cladding of Tefzel and FEP foil in double skinned pillows.

Alas the collapse of the oil market caused the project to be dropped but we took the lighting aspects of the concept forward for a town centre development in the UK where they wish to cover the existing market place. This development has moved slowly but one of the German manufacturers has now built a conservatory to keep tropical birds and alligators in at Arnhem in Holland. It seems to perform very well.

Of course, our bubble idea is still relatively crude and needs further work. But one cannot help but attempt to assess the implications of the various possible solutions.

In modern towns in temperate zones, the supremacy of the motor has all but eliminated human occupations of the city space. Yet here we must consider how to achieve it successfully again.

The top-lit atrium is an old idea. I suppose the Pantheon in Rome was an early version, there are some nice examples in the U.S.A.. It is not the early examples one has doubts about but as the building type develops because they are commercially owned spaces, they shrink, they are controlled- one is not really there except to buy something or to pass through. They are not free space.

The shopping malls can do better. The covered street can be free space for everyone - but its relationship with outside is tenuous, it is only where you see out that you feel the seasons of the year. Then I suppose the life of the public space reflects both inside and outside - perhaps to recapture some lost communal experiences. Hopefully the structure is not noticeable - except as a symbol for civic pride.

THE MEEWASIN VALLEY AUTHORITY: AN INVESTMENT IN THE FUTURE

By Michael Hough
Hough, Stansbury + Associates

From the air there are two impressions of Saskatoon that will strike the visitor as his plane makes its final descent to the airport.

The first is one of a densely wooded city, a clearly defined urban entity set in the immense prairie landscape of central Saskatchewan. The second is the south Saskatchewan River winding its way through the city, its parks and open spaces seemingly keeping the urban fabric of streets, residential areas and institutions at bay. The river projects a distinct and immediate image of a natural prairie environment linking city to farmland, one that is quite different from eastern cities where the recognition and understanding of the concept of "Urban River" has evolved quite differently.

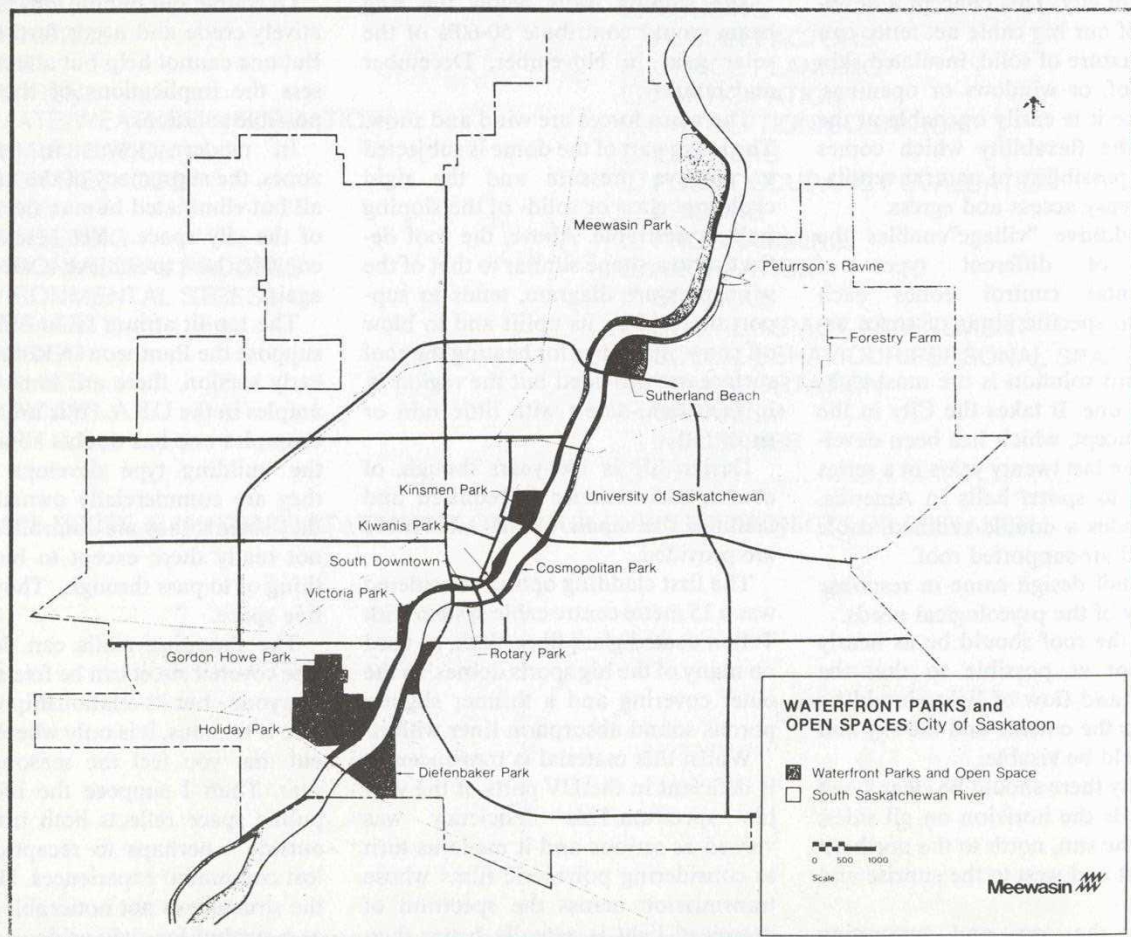
For anyone interested in urban form and how landscape has affected and helped shape cities as places, the presence of such a natural landscape within an urban area so obviously influencing the way Saskatoon has grown, tells

us something about its history, the values and political climate that have shaped it. Indeed, the city has had a long tradition of open space preservation. The temperance colonizers who settled Saskatoon in 1884 dedicated the river banks as public land and set the pattern of connected linear open spaces along the river for the future. In the early 1970's, however, when Saskatoon was growing fast, people began to voice concern that development would encroach on this open space. This led to a recommendation by the city's Environmental Advisory Council that a comprehensive study of the river valley be done as a first step in the preparation of a riverbank area plan. Moriyma and Teshima architectural firm of Toronto were subsequently appointed to prepare a 100 year concept plan, which when completed in 1978 offered many innovative ideas for conserving the valley. It was significant for the broad direction its objectives gave to the valley's future, which included:

- the conservation of natural and heritage resources of the Meewasin Valley;
- the improvement of water quality;
- enlarging understanding of the valley through education and research;
- reinforcing urban-rural links;
- advancement of recreational opportunities.

The plan also recommended that an autonomous agency be formed to co-ordinate the different jurisdictions involved. And so in 1979 the Meewasin Valley Authority was created by Act of the Legislative assembly of Saskatchewan which included four participating parties; the province, the City, the University of Saskatchewan, and the rural municipality of Corman Park (which later opted out of the partnership).

As an agency concerned with land conservation, valley improvement and public education MVA's responsibilities are to implement the 100 year plan, and the first step has been the implementation of a five year plan (1982 - 1987) which includes a number of



programs.

1. Resources Conservation Program dedicated to protecting and restoring the natural and heritage resources of the valley. Aspects of the program include the protection and rehabilitation of buildings of historic merit, archaeological sites and other significant events that have shaped Saskatoon's history. Tipperary Creek, just north of the city is an example. Now owned by MVA it is an archaeological treasure containing a medicine wheel, teepee rings, campgrounds and buffalo kill sites- some spanning 8000 years of prairie life. It has the potential to become a major attraction for interpreting Plains Indian history and culture. The improvement of water quality of the south Saskatchewan River is another aspect of this program. Studies of river flow, landfill, launching and docking facilities are among the research studies that have been undertaken by the Meewasin Valley Authority.

2. Design and Development Program in which unit master plans, management strategies, conservation policies and interpretive programs are given substance and form. A number of waterfront parks for summer and

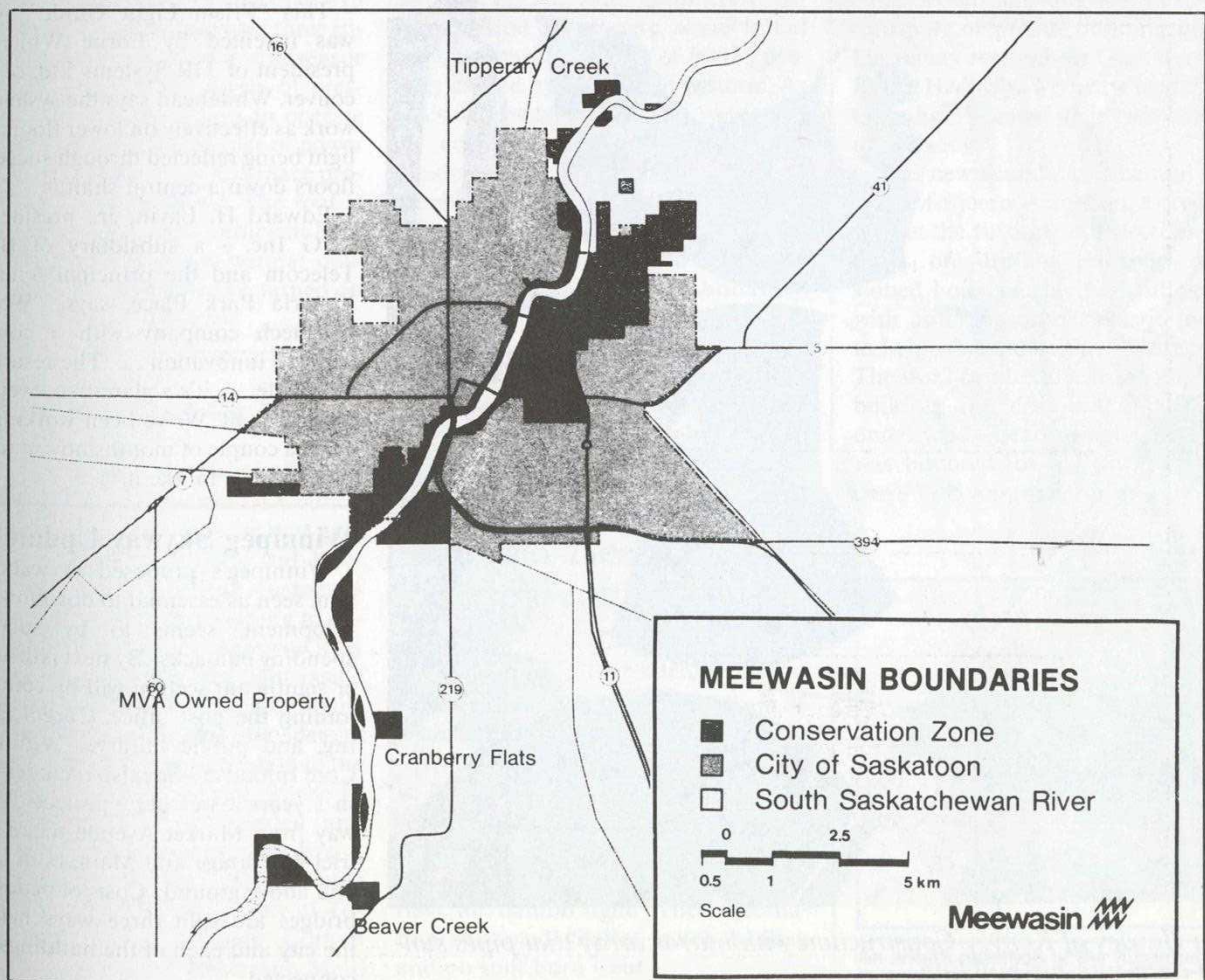
winter use have already been developed with others in the design stage. A major water edge pathway for walkers, skiers and cyclists - the Meewasin Valley Trail - is now in use. In addition a redevelopment plan has been completed for the south Downtown area, which will guide future development of the south end of Saskatoon's business district as an urban waterfront. A Design Advisory Committee ensures the highest degree of design excellence.

3. Public Affairs Program whose principal goals are to increase awareness and understanding of the valley's resources and to obtain public input and support for Meewasin and its work. A number of interpretive points of interest have been installed along the river that explain the valley's natural features, wildlife and cultural history. The Beaver Creek education program for children features an interpretive centre and self-guided trails which are open also to the general public. In addition, MVA has initiated community-based special events to encourage public use of the river corridor, such as the annual winter festival, litter clean up campaigns and so on. These programs clearly express MVA's aims for the river as a public resource to be en-

joyed year round. The public has a responsibility, therefore, to participate in maintaining the river in a state of health and beauty for everyone who uses it.

Two other programs are part of MVA's mandate to provide co-ordination and direction for the many facets of its work. A Planning and Development Review unit provides the overall direction and context for Meewasin projects and ensures that development proposals within MVA's jurisdiction are compatible with the overall plan. An Administration and operations program ensures that the financial resources of MVA can be allocated in the most efficient and effective manner for the greatest public benefit.

For the first five years of the 100 year plan, all this represents a remarkable achievement. But the most impressive aspect of the project is the long term commitment that the people of Saskatoon have made to the city and its natural heritage. The view from the air of this landscape, with its pattern of natural riverfront winding its way through the city, clearly expresses this commitment to the land and to enhancing the quality of life for generations to come.



First Solar-Lighted Office

The world's first solar-lighting office system has been perfected in Victoria Park Place, North York, Ontario. Konvey Construction Company Ltd., developers of the five-storey, 76,000 sq. ft. building, and the federal Department of Energy, Mines and Resources financed the \$200,000 project.

Inside a rooftop "greenhouse", mirrors track the sun and reflect and concentrate its rays down eight-inch square holes into an acrylic light pipe. A computer aims the mirrors, controls supplementary lighting, and monitors energy savings. The internal prismatic surface of the light pipe reflects light along the office ceiling below - lengths can be joined to over 60 feet, and can turn corners to provide diffuse and glare-free natural light, at the same level of illumination as a two-bulb fluorescent fixture of equal length.

For even illumination at night or on cloudy days, each light pipe is fitted with two supplementary electric halide lamps, whose colour spectrum closely matches the sun. Peripheral areas continue to be lit by fluorescent lights.

This "Prism Light Guide" system was invented by Lorne Whitehead, president of TIR Systems Ltd. of Vancouver. Whitehead says the system will work as effectively on lower floors, with light being reflected through successive floors down a central shaft.

Edward H. Lavin, Jr., president of CTG Inc. - a subsidiary of British Telecom and the principal tenant at Victoria Park Place, says: "We're a high-tech company with a commitment to innovation . . . The results are favorable . . . it's a glare-free, even and natural light. We've been working under it a couple of months now, and everyone seems to like it."

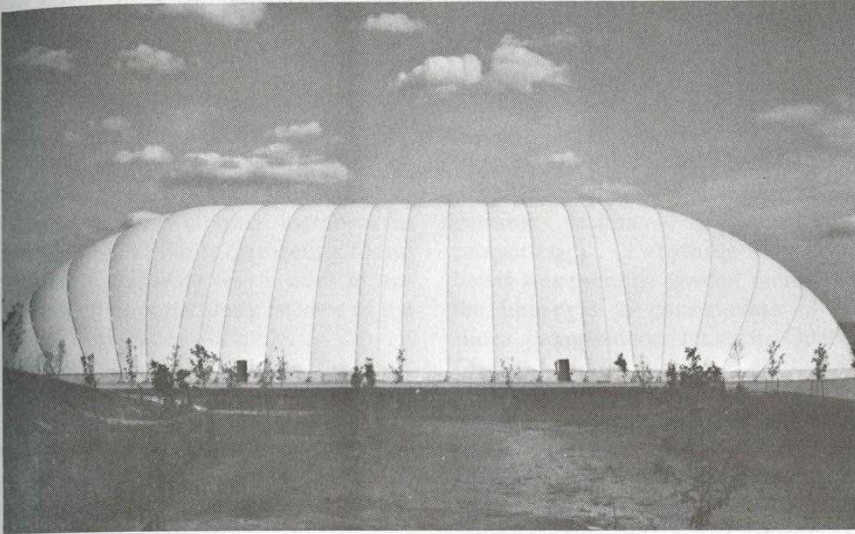
Winnipeg Skyway Update

Winnipeg's proposed skywalk system, seen as essential to downtown development, seems to be surviving spending cutbacks. By next fall, another significant section will be complete, joining the post office, Cargill Building, and public library. Winnipeg's Core Initiative Plan also includes within 5 years a weather-protected walkway from Market Avenue theatre district to Portage and Main, both below and above ground. Costs of pedestrian bridges are split three ways between the city and each of the buildings thus connected.



John Hawley of Konvey Construction with mirror array that pipes sunlight deep into his building.

Largest Fabric-Covered Golf Driving Range



Golfers of Kitchener, Ont., can practice their shots regardless of snow and cold in Pioneer Sportsworld a large fabric structure that rises the equivalent of seven stories in height. It is said to be the largest covered golf driving range in North America.

The structure is 200 feet wide by 350 feet long and encloses an area of 61,416 square feet. The structure uses three inflation fans controlled by a windsensor to provide for various levels of pressure. It has standby power to operate the fans automatically in case of power failure or pressure drop. A furnace provides heat when required. The roof is translucent and admits sufficient light on bright days to allow normal daytime visibility. Lights can be turned on at night or when required.

The fabric structure stand 66 feet high when inflated and is anchored to a concrete beam that stands four feet above ground. In 1985 a large truck airlock was added, allowing the facility to be used for trade shows or major events.

David W. Buckley of Yeadon Fabric Structures Ltd., the contractor, explained that there were some initial difficulties with the type of fabric, possibly caused by a severe snowstorm. As a result new types of fabric were used for end sections. One of these was Yeadon's special 28 oz. fabric from Germany. The other was Shelter-Rite, 28 oz. fabric obtained from U.S. Netting is hung from one end to prevent golf balls from hitting the fabric roof.

Retractable Roofs for Malls

Toronto architect Henty Petroff, speaking at the International Council of Shopping Centres, says the next generation of shopping malls will have retractable roofs: "Your customers won't have to pass up shopping to enjoy the nice weather, because you'll be able to bring the nice day right inside the mall". Also forthcoming on malls will be fabric roofs and the idea to "outsulation" - adding insulation to the exterior of an existing mall, whose fiberglass cover can be molded and sculpted to upgrade and revitalize a building's appearance. At the same conference, Ronald McCarthy of Toronto's Moorhead Fleming Corban and McCarthy (West Edmonton Mall)

remarked: "The mall of tomorrow has to be a leisure and entertainment centre. . . and the leisure and entertainment theme must be the main focus of the mall".

Praise for Health Science Centre

Charlotte Matthews
Sarnia, Ontario

Tours of the Winter Cities Forum 86 revealed that Edmonton had many jewels. The crown - jewel is Eberhard H. Zeidler's Health Sciences Centre. This Walter C. MacKenzie Centre is magnificent, functional, pleasing. I was mesmerised by the scale, the materials, the natural light. The combination suggested vitality, much healing and no staff burn - out !

Superlight Concrete Developed in Sweden

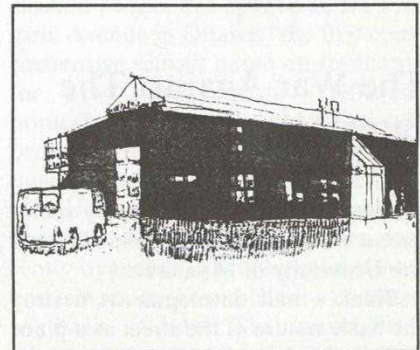
(From Public Innovation Abroad)

Swedish researchers have come up with a concrete that weighs two thirds less than the conventional kind. In combination with a new foundation method using injections of cellular plastic, the Swedish method allows structures that literally can float to be built safely on waterlogged land. Sponsored by Gothenburg's Chalmers University of Technology, the prize - winning development makes it possible to build "Noah's Ark-Style" on swampy land where conventional building methods cannot be employed.

The first building of this type, dubbed "Chalmers Ark" has gone up on a university - owned peat bog.

The super - light concrete, known as X concrete is based on a mix of pumice and tiny polystyrene balls a combination that accelerates drying while inhibiting water penetration from the outside. X concrete weighs as little as 800 kilo per cubic meter against 2,400 kilo for conventional concrete. Sandwich constructions currently under development weigh as little as 65 kilo per cubic meter, allowing for inexpensive transport of prefab building blocks. University researchers Olav Berge and Bengt Hedberg, who invented X concrete, have formed their own company to market it.

The new foundation method is the work of Bjoern Ringesten, a civil engineer at the Institute of Geotechnics. It relies on drilling precisely dimensioned holes in clay and filling them with non - absorbent plastic material to help consolidate the building load. The work can be done from outside the building and does not require going under load - bearing walls. Ringesten was honored for his work with Sweden's 1985 top prize for inventions.



An artist's rendition of the "Chalmers Ark."

How Long Is Your Winter?

Figures obtained from Environment Canada indicate that Canadians generally experience substantially more days in the year with mean temperatures below freezing, than with daily mean temperatures above 20° Celsius (about 68° Fahrenheit).

Below chart shows average annual mean temperatures for some representative Canadian cities, also the number of days in the winter season when the average daily means remain continuously below 0° and the number of days in the summer season when average means run continuously above 20°C.

City (Airports)	Av. Annl, Mean	Winter Days Continuously Below 0°C	Summer Days Continuously Above 20°C
Ottawa	5.7°	128	34
Toronto	7.3°	112	35
Montreal	6.2°	123	43
Halifax	6.6°	104	0
Kingston	6.7°	115	27
Thunder Bay	2.3°	150	0
Timmins	1.1°	158	0
Edmonton	3.1°	147	0
Victoria	9.5°	0	0
Kamloops	8.3°	92	39
Prince George	3.3°	139	0
St. John's, Nfld.,	4.8°	119	0
Eureka, Ellesmere Is.,	-19.7°	281	0

Ottawa Chapter Thinks Cool in the Summer

The Ottawa Chapter of LWCA held its 1986/87 planning meeting on June 26.

Chapter committee members are busy designing publicity packages to attract new members from the Ottawa area. They are also working on a Community Television Series to be aired in the Winter of 1986/87.

In the near future a survey will be conducted in the Ottawa area to obtain input from members about future programming.

Ottawa LWCA chapter will lead a symposium at a international conference in May 1987 in Ottawa held by the International Environmental Design Research Association. Arrangements are being handled by Byron Johnson, chapter treasurer (613) 233-9245.

The War Against The Street

(excerpts from a talk given by socio/urban commentator William Whyte at the University of Manitoba.)

Blank - wall developments destroy the basic nature of the street as a place with "a brisk social life of its own, a place of retailing - stores, windows with

displays, signs to attract your attention, doorways, people going in and out of them ".

Currently, there are two trends - the rediscovery of the city in revitalizing downtowns. and the war against the street. There are six sources of destructive blank walls: suburban malls transplanted downtown, parking garages, convention centres, mega - structures, telephone buildings and government buildings. Fear of the city as a dangerous place, resulting in "mega - mall" construction, has been extremely unhealthy to city life.

Whyte feels medium - sized cities, possessing a new desire to rebuild their downtowns yet lacking self - confidence, are in greatest danger. They need to reassert themselves as market cities, rejecting shopping centres. A possible solution has three simple measures: first, all stores should be accessible from the street; second, require 100% retail activity as street level; and third; require all windows by clear glass. Another desirable measure could be to limit single frontage to 25 feet or less.

The admirable trend of downtown revitalization can easily be cancelled by transferring suburban fortress mentality to the inner city. Architects and planners must be aware of the importance of not falling prey to this contradiction.

(from " City Magazine ", Winnipeg, Manitoba, Spring 1986, pp. 8 - 9.)

FORUM 86 REACTION

Selections from Letters Received by Arni Fullerton

" On behalf of the Planning and Building Department (City of Edmonton), I would like to thank you for the energy you directed to Winter Cities 86. There is no question that the winter city movement has gained credibility throughout the world as the result of your vision, enthusiasm and perseverance. . . . "

Bruce Duncan, General Manager
Edmonton Planning and
Building dept.

* * *

" One of the keys to your excellent conference was that you really understood the subject you were dealing with which so many conference planners do not."

Dr. William C. Rogers, Minneapolis

* * *

"It was clear that you succeeded exceedingly well in bringing together an excellent group of people and in organizing interesting and substantive sessions. I hope you will continue to pursue the "Winter Cities" idea. . . . "

Peter Oberland, Director
Centre for Human Settlement,
Vancouver

* * *

Edmonton Chapter Launches "Local Project Contest"

Eric P. Jokinen, chairman, Edmonton Chapter LWCA, reports his chapter has launched a competition to bring forward ideas for projects that chapter might undertake.

With many things needing to be done to improve winter livability in Edmonton, the chapter members in discussions at the June meeting found difficulty choosing which ones to undertake first particularly in view of the limited resources available.

It was decided to invite members and others who might be interested to put forward ideas as to tasks that needed to be done. The ideas would be evaluated and the most suitable one, or perhaps two or three, would be chosen. Persons submitting these winning proposals would receive awards.

The chapter would then proceed to undertake, or sponsor, these winning projects, carrying them forward to the

point where they would become self sustaining. Once developed to the stage where further support from the chapter would be unnecessary, other projects further down the list would be undertaken.

Projects might come under social, cultural, technical or educational categories anything from some better treatment or special facility for the homeless to construction of ice slides patterned on those in Quebec City.

A special committee was chosen to organize the competition. Member are: Gerry Wright, Pamela Freeman, Michael Sandford, Debby Kronowicz-Martin and Ian Baizley. Ideas entered will be evaluated and a selection made early in July so that chapter resources could be fully mobilized to undertake the projects by the time winter sets in.

Display Advertising Now Accepted

Livable Winter Newsletter will now accept display advertising - readers may have noticed the Hallmark Designed Communities advertisement on page 2.

Rates are as follows:

Full Page b and w	\$200.00
Half Page b and w	125.00
Quarter Page	75.00

For further information, please contact Publisher, Livable Winter Newsletter, Ste. 501, 40 Old Mill Rd., Toronto, On., M8X 1G7

**PLAN NOW TO ATTEND
LWCA ANNUAL MEETING
NOV. 10,
TORONTO CITY HALL**

ICC Environmental Strategy

The Inuit Circumpolar Conference (ICC) Executive Council has decided to create a comprehensive Arctic Environmental strategy as part of the overall ICC Arctic policy in accordance with a decision reached at the 1983 ICC general assembly in Frobisher Bay, NWT. Goals will be: To promote a common attitude, understanding and sentiment for fragile Arctic Environments and protection of Inuit culture; to analyze existing laws and regulation for the Arctic and compare these with ICC intentions; to analyze past and current cases of environmental disturbances with respect to Inuit concerns; to lay out guidelines for Arctic development that gives due weight to Inuit subsistence economy and Arctic environment protection; to examine ways of stimulating Inuit economic development; to work with the UN and others in creating guidelines for environmental safety and Inuit survival; to present proposals to the responsible governments regarding Arctic protection; and to lay out groundwork for future research and action.

(from "Northern Science Network Newsletter", August 1985, pp 18 - 19)

Urbanism and Environment in Arctic Quebec

(The following is a summary of case studies of the villages of Kuujuaq and Tasiujaq by B. Blanc and K. Boisvert. Université de Montréal, Québec, on the production in 1982 - 83 of master plans for northern communities of 1000 inhabitants.)

The plans, commissioned and funded by the "Ministère des Affaires Municipales du Québec", appear to reflect a means of fitting the "North" to the southern administrative mold set up by the Land Use Planning and Development Act 1979. Plans were produced by students of urbanism from the Université de Montréal under control of the planning division of a regional organization (KRG). Guidelines used were defined by southern Québec town planners and do not give sufficient consideration to specific physical, human and social realities of the North. Inuit consultations were carried out only after zoning had been determined according to "southern" concepts, (ie. function separation, services grouping, road network organization). Completed master plans do not sufficiently integrate specific realities of this environment, (eg. critical role of rivers in Inuit life, problems related to dump sites and water supply, scope of hous-

ing needs) the plans did not introduce the Inuit to the technical world with which they must deal. They were conceived more for use by the Ministry than for communities themselves. The regional organization KRG, which should have defended Inuit interests, acted as a representative of the Ministry. "All this seems to deny principles advocated by the 1975 James Bay Agreement which stated that more decision - making powers would be transferred to native groups."

(from " Northern Science Network Newsletter", August 1985, pp 19 - 20.)

Low - Energy Renovation Open to Public

An unique energy - efficient demonstration project has opened at 211 Pretoria Avenue in Ottawa, "the first comprehensive retrofit based on standards for new super energy - efficient homes". A n 100 year old house has been renovated to state - of - the - art quality, comfort and performance levels. Created by private sector contributions, the building demonstrates currently available upgrading techniques and is open to the public on a continuing basis. Contact The Sunwrights - Alternate Energy Developments, 205 Pretoria Ave., Ottawa Ontario K1S 1X1.

Metro Toronto To Host IKC'86

Manumod Exhibitions announces IKC'86, the International Innovative Housing and Components Exhibition, to be held in Metro Toronto Convention Centre November 12 - 16, 1986.

Sponsored by the Canadian Home Builders Association and Canadian Manufactured Housing Institute, the conference and exhibition will be the first of its kind in North America. IHC'86 will promote research and development in innovative housing and component production, and provide

advanced information to all segments of the building industry. Exhibitors include equipment and modular component manufacturers, international municipal representatives, and home builders from North America, Europe and Asia.

Do you want to be part of the continuing miracle of the "Winter City Movement?" Do you want to tune into important new developments in northern design and planning? Do you want to ride a wave of the future? Do you want to join

in a movement to improve the lives of Northerners generally?

If any of these scenarios appeal to you, you can "get a piece of the action" by using the form below to indicate your prefer-

ences; 1. Become a member of the Livable Winter City Association; 2. Subscribe to the Livable Winter Newsletter; 3. Put in your order for the LWCA book, "Reshaping Winter Cities," or 4. Take a "Package Deal" that gives you 1,2 and 3.

MEMBERSHIP / ORDER FORM

MEMBERSHIP, NEWSLETTER, BOOK - choose the combination you prefer

TO: Livable Winter City Association
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Toronto, Ontario M5A 1J2

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