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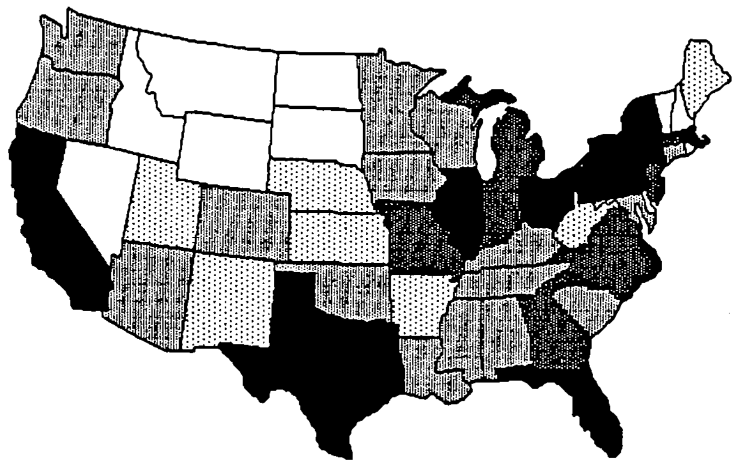
Precision, Planning, and Perseverance:

Exporting Architectural Services to the United States



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The Royal	L'Institut
Architectural	Royal
Institute	d'Architecture
of Canada	du Canada

External Affairs Canada — Affaires extérieures Canada

Organizations	Restoration, Revitalization	Waterfront Redevelopment	Health Care Facilities	New Office Construction	Residential Developments	Educational Facilities	Correctional Facilities	High-Tech Facilities
AIA: Committee on Architecture for Health			●					
AIA: Committee on Architecture for Justice							●	
AIA: R/UDAT	●	●						
American Association of Homes for the Aging			●		●			
American Association of Retired Persons			●		●			
American Correctional Association Inc.							●	
American Health Care Association			●					
American Planning Association	●	●		●	●			●
Assoc. of Physical Plant Administrators of Universities						●		
Commission on Accreditation for Corrections							●	
MIT Centre for Real Estate Development	●	●		●	●			●
National Assoc. of Housing + Redevelopment Officials	●	●			●			
National Association of Home Builders					●			
National Association of Industrial and Office Parks				●				●
National Association of Realtors				●	●			
National Centre for Municipal Development	●	●		●				
National Council for Urban Economic Development	●	●		●				
National League of Cities	●	●						
National Trust for Historic Preservation	●	●						
Office of Coastal Zone Management		●						
The Forum for Health Care Planning			●					
U.S. Dept. of Commerce, Bureau of the Census	●	●	●	●	●	●	●	●
Urban Land Institute	●	●		●	●			●
Waterfront Centre		●						

This chart is meant as a quick reference to users of this document. The horizontal axis shows the eight market niches identified in the study and described in detail in Section 2.0. The vertical axis shows the key organizations firms should access in their marketing efforts in the U.S. They are described in Section 3.0.

Precision, Planning, and Perseverance:

Exporting Architectural Services to the United States

Royal Architectural Institute of Canada
and the
Department of External Affairs, Canada

1987

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(Publié également en français)

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Note: All figures are in U.S. dollars unless otherwise noted.

Preface

The United States represents a significant market opportunity for Canadian architects. Given its size and relative accessibility, the U.S. market offers enormous professional and financial potential for Canadian architects seeking to increase their volume of work or diversify their practices.

However, the competition from local U.S. firms is fierce. Canadian architects must be **precise** in identifying markets where their expertise is required. They must **plan** their market entry carefully, and then **persevere** in their marketing efforts. In other words, before committing precious resources of money and time, they need to prepare properly.

This handbook is meant to assist Canadian architects in achieving this end. The publication, which is the result of a collaborative effort between the RAIC and the Department of External Affairs (DEA), identifies major export opportunities for Canadian architects and provides guidance to firms wishing to access the U.S. market.

Given the dynamic nature of the U.S. market environment, the handbook is intended as a snapshot of current opportunities, not a document cast in stone. It will require updating on a regular basis and, with this in mind, we invite comments from Canadian firms regarding any omissions or new opportunities. This publication is intended as a **first step** toward encouraging increased export of architectural services to the U.S. It will be supplemented by other collaborative promotional programs between the Institute and DEA to be developed over the coming months.

This handbook is divided into four chapters. Chapter 1 explores U.S. development trends affecting construction demand. Chapter 2 identifies and analyses eight market niches perceived as having the best potential for Canadian firms. Chapter 3 provides concise information on key U.S. organizations operating in each of these market niches. Many of these organizations are excellent sources of information on market trends; they also sponsor conferences, seminars and publications through which Canadian firms can promote their services and build up networks. Chapter 4 investigates methods of market penetration and provides advice on such issues as immigration and work permits, professional registration, and U.S. government procurement policies.

Entry into foreign markets is rarely easy. However, with careful targeting of markets, agressive promotion, and a commitment of adequate dollars and time, Canadian architects can expect to succeed in the American building market. We hope this handbook will assist Canadian firms in their exporting efforts.

1.0 U.S. Development Trends

The U.S. is a market ten times the size of Canada.

The United States is a market of 240 million people. Almost ten times the population of Canada, the country represents a significant export opportunity for Canadian architects seeking to increase their volume of work or to diversify their practices. More accessible than any other export market, the U.S. shares many of our values and work practices. It also has over 30% **fewer** architectural firms per capita than Canada. At the same time though, there were more architects newly-registered in the U.S. last year than the entire membership of the RAIC.

1.1 Population

The 240 million people in the U.S. are concentrated in five regions: the Great Lakes; the North East; the mid and south Atlantic states; Texas; and California. The most populous states are California (25.5 million), New York (18 million), Texas (16 million), Pennsylvania (12 million), Illinois (12 million), Ohio (11 million) and Florida (11 million). Figure 1 shows the distribution of population by state.

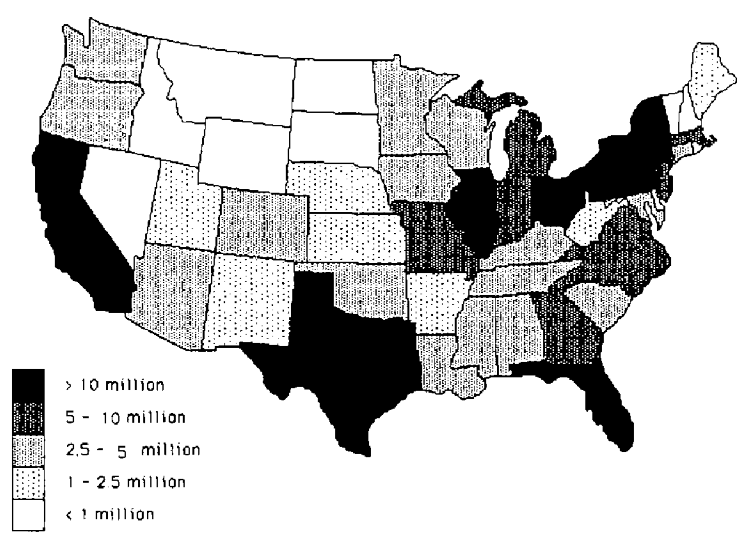

Figure 1: Size of State Populations 1984
Source: U.S. Dept. of Commerce, Bureau of the Census

Over a third of the U.S. population borders Canada.

States bordering Canada house 85 million Americans (35% of total population). Markets of an additional 32 million inhabitants are an hour's flight from the border.

Population has grown at a rate of 1% since 1973 (compared to Canada's 1.2%) and is expected to slow to .7% at the end of the century. By the year 2000, a population of 288 million Americans is anticipated.

The population shift away from the the northeast to the sunbelt is beginning to reverse.

A significant shift in population occured in the last decade away from the Great Lakes (the "rust belt") to the sunbelt in the south. Texas, Arizona, California, Florida and Georgia were the main growth centres due, in large part, to unemployed workers and their families emigrating from the industrial north. However, recent trends indicate a reversal of this movement as the northeastern U.S. and Great Lakes states diversify their formerly manufacturing-oriented economies and economic growth in the sunbelt slackens.

Population trends are towards a larger proportion of elderly.

As in Canada, population trends in the U.S. are towards a much larger proportion of elderly and aged. Every day, another 5,000 Americans turn 65 years of age. There are now almost 30 million elderly Americans (one out of eight) and, by the year 2030, one of five will be over 65. This population group grew at a rate of 6% between 1980 and 1983 compared to a growth rate of 3% in people under 65.

1.2 The Economy

Economic growth is likely to be uniform until the next decade.

The recession of the early 1980's gave way to moderate growth in the American economy. Although growth slackened somewhat in 1986, the real GNP growth rate for 1987 is expected to reach 4.2% and average 3.8% per year to 1991 (Fig.2). Inflation is expected to increase to 3.7 during 1987 and decline to a rate of 2% by 1991. Unemployment, currently at slightly below 7%, is expected to drop to 5.75% by the start of the next decade.

Slumps in world commodity prices has put a damper on some states.

The wealthier states, measured by per capita income, are in the northeast, Illinois, Colorado, Nevada and California. Agriculture-based economies in the mid-west and south-east generate the least wealth (Fig.3). The recent worldwide slump in commodity prices has hit the American mid-west hard. Growth of regional centres has stagnated. In addition, the oil price slump has atrophied much of Texas, particularly Dallas.

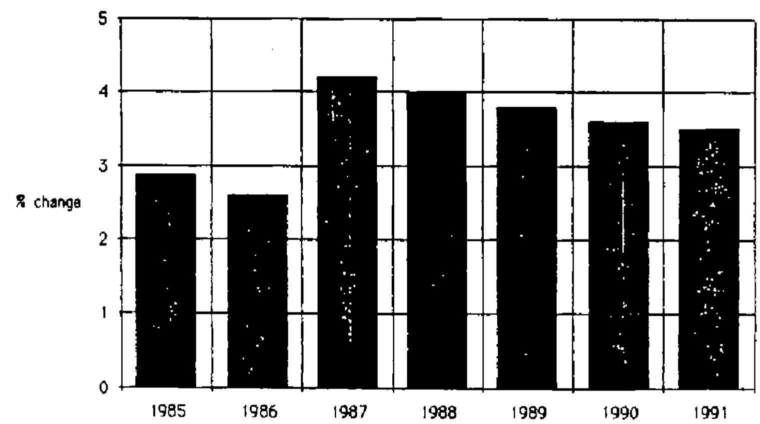

Figure 2: Per Cent Change in Real GNP
Source: U.S. Dept. of Commerce, International Trade Administration

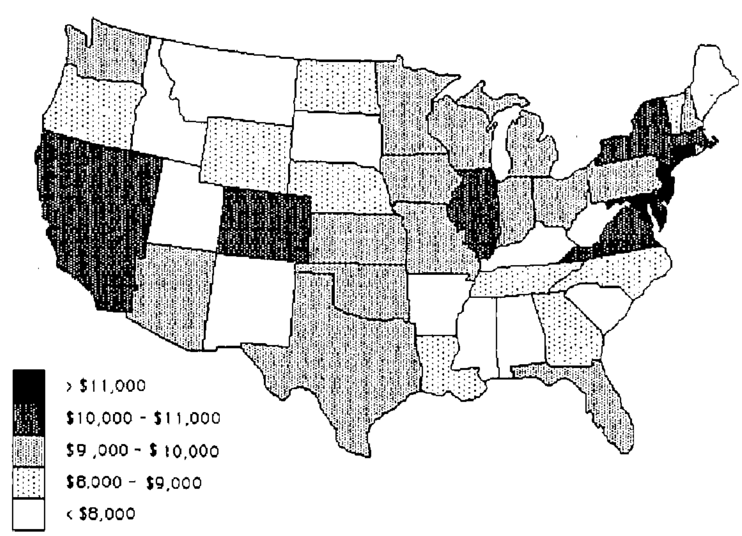

Figure 3: Per Capita Income by State 1984
Source: U.S. Dept. of Commerce, Bureau of the Census

Continued trade imbalances with a number of countries, particularly Japan, have led to a rise in protectionist sentiment in Congress. Should these imbalances not be adjusted, significant impacts on employment patterns are expected to occur.

The federal debt means more local and private financing, often in partnership.

Local and regional financing for programs and projects has become the norm due to the large federal deficit and resulting fiscal conservatism. Private sector involvement and public/private "linkages" are becoming the norm and have even extended to the construction of infrastructure such as airports, highways and bridges. Even though the Democrats have a majority in the House of Representatives, there is not expected to be a significant increase in the outlay of federal funds until the deficit situation improves.

America has become a service economy.

A major (and continuing) shift is occurring in the American economy away from manufacturing towards the service sector. The services sector now accounts for more than two-thirds of the GNP and provides 75% of total employment in the U.S. Since 1978, it has created over 14 million jobs compared to a loss of 2 million employed in the manufacturing sector.

1.3 Urban Trends

Most of America's population lives in large urban agglomerations.

States with the largest urban populations are California, New York and Texas followed by the Great Lakes states and Florida (Fig. 4). Heavy urban concentrations exist along the megalopolis stretching from Washington to Boston, along the Great Lakes Megalopolis from Chicago to Detroit and Cleveland, and in a band stretching from San Diego to Los Angeles.

A shift is occuring from the suburbs to urban cores.

Development is becoming more regulated.

A significant trend affecting almost all American cities is the growing shift away from the suburbs back to the urban cores. Many suburbs are now discouraging continued growth to the point of enacting restrictive zoning legislation. Environmental concerns are gaining more weight in development decisions. Construction in central cores is also becoming more controlled. For example, San Francisco has enacted "Proposition M" which reduces by half the allowable volume of commercial office construction in that city. "NIMBY", not-inmy-backyard, has become a rallying cry in many cities.

Quality of life is increasingly becoming a primary factor in urban development across the country and will influence construction and architecture well into the next decade.

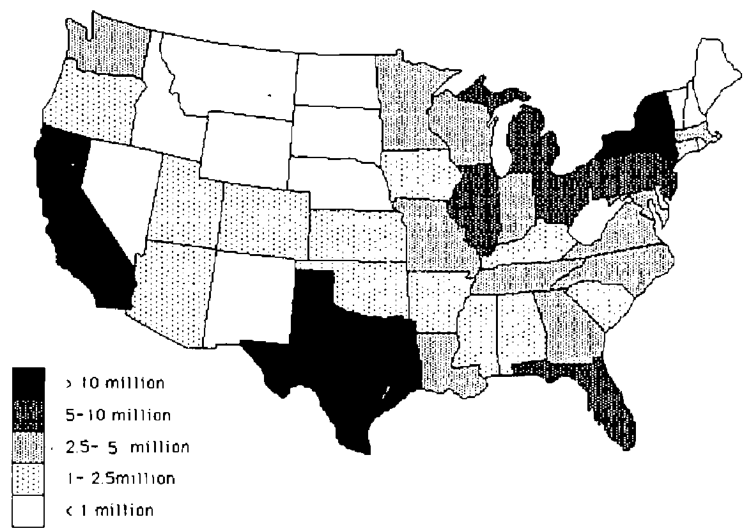

Figure 4: Size of Urban Population 1985
Source: U.S. Dept. of Commerce, Bureau of the Census

Retrofit and redevelopment is increasing throughout the U.S.

Retrofit and redevelopment is increasing throughout the U.S. governments and private developers. Both have found significant cost savings in retrofit and this has led to many older downtown buildings being converted, added to, or simply renovated.

The private sector is expected to subsidize low-income housing and municipal infrastructre.

The scarcity of government funding at all levels has resulted in the deterioration of America's urban infrastructure. Roads, bridges, sewers, and power lines are in increasing disrepair. Local governments are now turning to private developers to share the cost of maintenance by charging "impact fees" or municipal development levies. Boston, Miami, Princetown, San Francisco, Santa Monica and Seattle have turned to the private sector to finance low income housing by charging additional fees on new construction.

Mixed use is becoming the prime development trend.

Another major trend in urban areas is towards construction of mixed use developments. Single-use buildings are becoming less common as housing, office, retail and public facilities are combined in increasingly larger projects.

Buildable land is becoming scarce.

Availability of buildable land is becoming constrained. Developers are now often required to pay for construction of municipal services, roads and even highway interchanges in suburban locations. In addition, land prices are increasing in most growth centres.

1.4 Building Construction

Non-residential building costing $176 billion will occur in 1987.

Total value of building construction in 1987 is expected to reach $343.2 billion (Fig.5). Construction has increased by $100 billion since the recession in the early 1980's. Residential building will account for almost half of total construction in 1987, up from 47% in 1986. Since comparatively little design of housing projects is done by architects, this leaves a total of approximately $176 billion of non-residential construction open to firms on an annual basis over the next few years.

Construction is shifting back to the northeast and Great Lakes states.

The shift back to the industrial north-east and south Atlantic states is shown clearly in 1984-1986 non-residential construction trends (Fig. 6). Pennsylvania, Michigan, Virginia and Tennessee all increased their capital outlays while the heavily populated states of Texas and California spent less. Overbuilding in these latter states in every sector but residential and retail is the principal cause for decline in construction activity.

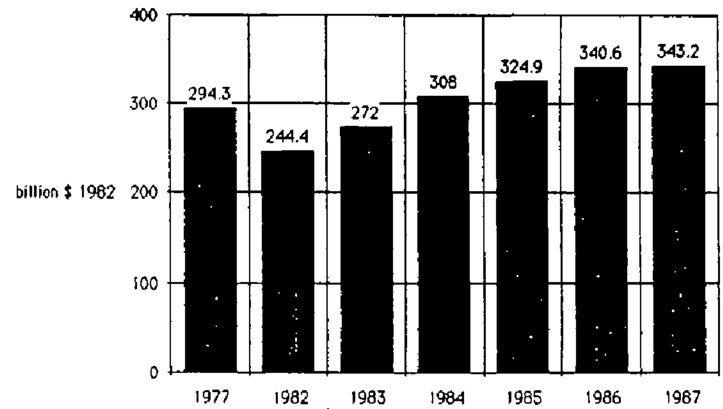

Figure 5: Value of New Construction Put in Place
Source: U.S. Dept. of Commerce, Bureau of the Census

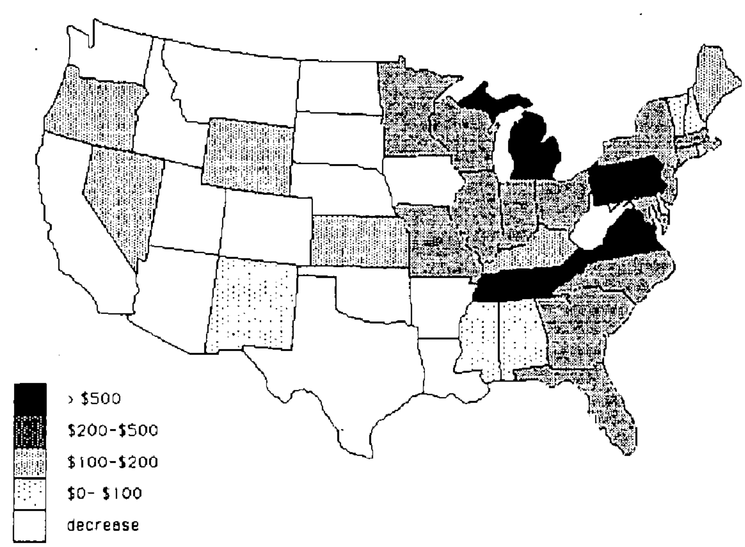

Figure 6: Change in Private Non-Residential Construction 1984-86 (millions $)
Source: U.S. Dept. of Commerce, Bureau of the Census

Tax changes and overbuilding will curtail new office and apartment projects for 2-3 years...

Except in some locations along the Atlantic coast, commercial office construction is on a steep decline due to overbuilding and removal of tax advantages through the Tax Reform Act of 1986. Similarly, multiple-unit residential construction is expected to decline. These effects of tax reform will continue into the 1990's. While the initial limiting effects of tax changes will depress speculative construction in some sectors during the next 2-3 years, it is expected that the positive effects of increased consumer spending will create a significant demand by 1990 that will continue for several years. Volume of construction in the early part of the next decade will likely exceed that of 1987.

...but building will increase in the early 1990's.

Americans are demanding better buildings.

Several qualitative trends seem to encompass the entire construction industry. Demand for higher quality construction is increasing in the U.S.: aesthetics, durable materials and finishes and equipment requiring low maintenance are all in greater demand. The "smart" building is also emerging as a new requirement in the residential, manufacturing and commercial sectors. Retrofit and renovation are increasing as well. Concern for health and safety is dictating a myriad of factors in construction ranging from site location to materials, layouts, mechanical systems and access for the handicapped. Construction projects are getting larger and more complex. American architectural firms are ahead of their Canadian counterparts in the use and development of CAD in everything from conceptual design to facility management.

Fewer but larger projects has led to a shake-out in the development industry.

Although projects are increasing in scale there is a slackening in demand: a shake-out is occurring in the industry that will lead to fewer but larger development firms. How this will impact on the size and number of architectural practices remains to be seen.

2.0 Market Niches

Canadian firms can fill a wide range of market niches in the United States. Hotels, laboratories, government buildings, airports, private homes, warehouses, and shopping centres are being built every day in the U.S. However, some market niches stand out and are described in the following pages.

These niches were selected for research for one of two reasons:

- they represent a significant market opportunity and Canadian expertise is acknowledged to be strong;
- or even though a niche may be in decline in some locations, there are specific elements having continued demand for which Canadian architects have the necessary experience, expertise and reputation.

Canadians will undoubtedly find other niches. As well, those documented in this study are subject to rapid change. For example, should Congress remove tax credits for restoration of historic properties, one niche would be virtually wiped out.

Figure 7 outlines the type of possible client groups for eight major niches:

- downtown revitalization and restoration of historic buildings, a growing trend in American cities large and small;

- waterfront redevelopment, occuring in major metropolises as well as small, lesser-known towns such as Hartford, Bellingham and New Bedford;

- health care facilities which are being subjected to radical changes as a result of federal and state funding cuts;

- commercial office construction which is seriously overbuilt except in specific locations along the Eastern Seaboard;

- residential development of prestige condominium development associated with waterfront and downtown revitalization, and housing for the elderly.

- educational facilities, particularly post-secondary institutions and surplus lands that are being sold or leased for other development;
- correctional facilities, for which there is a huge demand;
- and high-tech research and manufacturing facilities, for which qualitative and locational requirements have changed markedly in the last few years.

Two other specialized niches may well emerge in the next few years: cultural and recreational facilities; and building retrofit. Firms should keep abreast of developments in these two, possibly future, niches.

	Federal Government	State Governments	Local Governments	Canadian Developers	U.S. Developers	U.S. Manufacturers	U.S. Private & Non-Profit Orgs.
Revitalization & Restoration			●	●	●		●
Waterfront Redevelopment				●	●	•	
Health Facilities	•	●	●				●
Commercial Office Buildings	•	•		●	●	•	
Residential Development			•	•	•		•
Educational Facilities		●			•		●
Correctional Facilities	●	●					●
High-Tech Research & Manufacturing					●	●	

Figure 7: Market Niches for Canadian Architects

Downtown revitalization and restoration of historic buildings is a growing trend in the U.S.

One of the strongest trends in urban development in the United States over the last few years has been towards restoring existing building stock and revitalizing downtown cores. Many Canadian architects are acknowledged world leaders in historical preservation and downtown revitalization.

Some firms are already active in these markets.

Some firms are already active in the U.S. The Zeidler-Roberts Partnership is designing the 25-acre Yerba Buena Gardens project in downtown San Francisco, Moriyama and Teshima have conducted a Main Street revitalization in Buffalo, and Arthur Erickson is architect of the 11-acre California Centre redevelopment in downtown Los Angeles. There is a significant market opportunity for Canadian firms in a wide range of U.S. cities including large metropolitan regions, intermediate cities and small towns.

2.1.1 The Recent Past

The post-war flow to the suburbs drained the cores of American cities.

The massive growth of suburbs in the 1950's and 1960's siphoned commercial facilities from the cores of American cities. Large suburban shopping malls and office parks became the norm with city centres degenerating into virtual wastelands of crime, vandalism and urban poverty. Building stock in the central cores deteriorated from dis-use or poor maintenance by owners unable to charge premium rents.

Small towns were also affected as Main Streets fell into disrepair.

The exodus from downtown cores was not limited to large cities. The "Main Streets" of many American towns were left to deteriorate as businesses closed or re-located to suburban malls and commercial strips. Property values and tax revenues plummeted as downtown buildings became dilapidated and storefronts were boarded-up. Once-vibrant streetscapes became empty.

The trend is reversing.

In the last decade, considerable effort has been made to reverse the degeneration of America's urban cores. High costs of gasoline and a gradual realization that suburban living had lost an intrinsic urban quality have led to a large number of revitalization projects. Some, such as Detroit's Renaissance Centre, attempted to wipe out the squalor and replace with completely new, introverted megastructures. It has gradually been recognized, however, that "renewal" is not usually as successful as revitalization.

U.S. developer James Rouse was the first to return to the urban core with projects in major cities.

The Rouse Company, one of the largest developers in the U.S., was instrumental in shifting attention to downtown cores. Their Faneuil Hall in Boston was the first major revitalization project in the U.S. followed by Harborplace in Baltimore, New York's South Street Seaport and smaller redevelopments in San Antonio (Texas) and Norfolk (Virginia). With the economic viability of downtown revitalization proven by these projects, a large number of developers and municipalities have undertaken redevelopment work in many cities throughout the U.S.

The National Trust for Historic Preservation's Main Street Program has addressed the revival of smaller towns.

A major impetus to revitalization has been given by a large, non-profit organization, the National Trust for Historic Preservation. In 1977, the Trust launched a pilot program to develop a comprehensive revitalization strategy that would encourage economic development within the context of historic preservation. Three midwestern communities were chosen for a three-year, on-site demonstration project aimed at testing various approaches to organizational design, promotion, physical design, and economic restructuring of downtown cores. The Trust expanded the program in 1980 by creating the National Main Street Centre in Washington as a human resource and technical reference centre. Since then, the organization has assisted 26 states in setting up Main Street revitalization programs in 280 towns. More than $150 million has been invested in these towns to date. The Trust is now examining the potential for involvement in downtown revitalization of large metropolises throughout the U.S.

Significant tax advantages accrue to developers rehabilitating historic structures.

Inherent in such projects has been the need to restore existing building stock. Heritage preservation has become a major trend supported by recent significant tax advantages. Although Congress had passed the National Historic Preservation Act in 1966 making rehabilitation of historic properties a national goal, no funding was made available for restoration projects. By the early 1980's, thousands of historic buildings were faced with decay. In the Economic Recovery Tax Act of 1981, tax measures were put into place that promoted restoration projects. From 1982 through 1985, the historic rehabilitation tax credit stimulated an investment of $8.8 billion in more than 11,700 historic buildings.

A 20% tax credit applies for buildings on the Historic Register and a 10% credit on those built before 1936 but not on the Register.

The federal income tax credit is equal to 20 percent of the cost of rehabilitating buildings on the National Register of Historic Places which is maintained by the Department of the Interior. A 10 percent tax credit is available for restoration of non-historic buildings built before 1936 and used for non-residential, commercial or industrial purposes. Although these tax measures have been responsible for the restoration of large buildings (such as the Willard Hotel in Washington D.C. and Union Station in St. Louis) almost 80 percent of restoration projects cost less than $1 million. Despite attempts by the Administration to remove these tax advantages as part of the massive general tax reform adopted in 1986, Congress chose to retain the rehabilitation tax credits.

The retrofit of newer buildings and open spaces is increasing in the downtown cores.

Another area of increasing activity in the last five years has been the retrofit of public open spaces. As people return to the central cores, many newer buildings and open spaces have been found to lack amenities that are conducive to public enjoyment and use. Consulting firms have been re-designing the public spaces of an increasing number of large buildings and malls: Rockefeller Centre in New York, the Renaissance Centre in Detroit, the IDS Centre in Minneapolis, Boston's Prudential Center, Houston's The Park, Pittsburgh's PPG Place, Washington's F Street Mall, Eugene, Oregon's downtown mall, Philadelphia's Chestnut Street Transitway, New York's Central Park, and Boston's Summer Street Mall.

2.1.2 Current Trends

Revitalization and restoration will continue well into the next decade.

Downtown revitalization appears to be an irreversible trend for the next decade. Despite the absence of federal funding, state and local governments are committed to redevelopment and rehabilitation in concert with the private development industry. Recent projects have confirmed the economic, social and regulatory viability of revitalizing downtown cores and aging building stock of historic value. Tax credits remain in place, public and private development linkages are on the rise, and a wealth of experience is being accumulated and shared by groups such as the National Trust for Historic Preservation. Attention is now shifting to intermediate cities and small towns: for example, Rouse's Enterprise Development Co. is planning revitalization projects in Portland (Oregon), Flint (Michigan) and Toledo (Ohio).

Smaller cities and towns represent a significant market opportunity.

Some states are encouraging revitalization through legislation.

Some states are beginning to address revitalization and urban design issues directly through legislation. For example, Florida enacted a State and Regional Planning Act in 1984 and a State Comprehensive Plan and Growth Management Plan in 1985. Under this legislation, municipalities are required to analyse their current condition and examine how future growth will affect land use, traffic, housing, sewers and water supply, recreation and open space. Although urban design and historic preservation goals are optional in the growth management plan, many jurisdictions are expected to include them. All municipalities are required to submit their plans to the state by the early 1990's.

Planning and design "charettes" are being used by many municipalities.

A planning and design technique gaining increasing popularity in the U.S. is the use of advisory panels or "charettes" by local municipalities. An expert team is parachuted into the municipality for 2-4 days to help resolve planning problems that often deal with downtown revitalization. Organizations conducting such charettes include the American Institute of Architects (Regional/Urban Design Assistance Teams - R/UDAT), the American Society of Landscape Architects, the Urban Land Institute, the Institute for Urban Design, International Downtown Association, the National Main Street Centre, and the Project Public Spaces.

Canadian firms should try to join the AIA's R/UDAT teams in the U.S.

The AIA recently conducted a R/UDAT in conjunction with the RAIC in Edmonton on the theme of Livable Winter Cities. Although no Canadian architects have yet participated in R/UDATs in the U.S., interested firms should contact the AIA directly. Despite the provision that participating firms must undertake not to solicit work resulting from specific R/UDATs, participation in a charette would be an effective way to gain exposure to planning processes and problems being encountered in U.S. cities.

On large metropolitan core projects, firms should piggyback on Canadian developers or enter design competitions.

Canadian architects with a strong interest and experience in preservation and revitalization should concentrate their efforts at two levels. Large metropolitan projects are perhaps best handled through piggybacking on Canadian developers who are doing downtown projects, or through design competitions. In smaller intermediate cities and towns, the competition is less fierce than in the large metropolitan areas. Firms should identify those towns that are in need of revitalization and market their services directly to local governments.

For smaller projects, local governments and developers should be contacted directly.

2.1.3 Additional Sources

Information on market conditions and marketing forums related to this niche can be obtained from:

- American Institute of Architects: R/UDAT
- American Planning Association
- MIT Centre for Real Estate Development
- National Association of Housing and Redevelopment Officials
- National Centre for Municipal Development
- National Council for Urban Economic Development
- National League of Cities
- National Trust for Historic Preservation
- U.S. Dept. of Commerce, Bureau of the Census
- Urban Land Institute.

These organizations are described in detail in Chapter 3.0: Role Players.

2.2 Waterfront Re-Development

Waterfront redevelopment is a major market niche. Canadians have the experience and expertise needed to compete in the U.S.

Closely related to downtown revitalization and restoration is another significant market niche open to Canadian architects. Redevelopment of urban waterfronts is fast becoming a major focus for developers in the United States. Canadian expertise and experience in this field is well known through developments such as Halifax's Historic Properties, Charlottetown's waterfront, St. John, New Brunswick's Market Square, Toronto's Harbourfront, and Vancouver's Granville Island and False Creek. There are over 80 major towns and cities along the U.S. Atlantic coast and over 30 along the Mississipi River alone. Numerous towns and cities dot inland waterways and lakes throughout the United States.

2.2.1 The Recent Past

Historically, aside from fishing towns, most American waterfront towns formed along waterways for industrial and distribution reasons. Railway lines were often built to service factories and harbours. As a result, most urban waterfronts evolved into a collection of warehouses, railroads, factories and shipping facilities. With such prevalent industrial use, water pollution became common along urban waterways.

America's waterways are being cleaned up.

Environmental concerns in the late 1960's and 1970's resulted in actions to significantly reduce water pollution. With water bodies becoming more habitable, the stage was set for waterfront redevelopment. Combined with the tax credits accruing to historical preservation and increased interest in downtown living, redevelopment of urban waterfronts has become popular in both large metropolises and smaller cities and towns.

Combined with historical preservation tax credits and increasing interest in urban cores, waterfront re-developments are becoming popular.

Projects have ranged from strictly recreational/tourism uses to residential, retail, office, small-scale industrial and, most often, mixed use. Municipalities are particularly drawn to the employment generation and increased tax bases that waterfront projects create as well as to the increased revenues resulting from tourism.

There have been many large waterfront projects implemented in American cities in the last decade. Examples are:

Large projects have been implemented in major metropolitan areas.

Boston (Mass.):
- Quincy Market adjacent to the waterfront (retail)
- Commonwealth Pier Five/Boston Fish Pier (fish processing pier, office space, retail for fish merchants)

New York (N.Y.):
- South Street Seaport ($360 million office, retail, fish market)
- $600 million retail, office, hotel complex on Manhattan's west side (West Hudson) recently approved

Jersey City (N.J.):
- $1 billion redevelopment of Hudson River waterfront in West New York, N.J.

Chicago (Illinois) :
- Navy Pier ($337 million recreational/tourism project; planning now underway)

Baltimore (Maryland):
- HarborPlace and Inner Harbor (retail, office, residential, recreational project attracting 18 million visitors a year)

Portland (Oregon):
- Riverplace ($145 million retail, office, residential, hotel and recreation project)

Norfolk (Virginia):
- Freemason Harbour ($120 million commercial and residential project).

Smaller towns and cities have been active as well.

Although each of these projects is located in large metropolitan areas, many smaller (and less known) cities and towns have also undertaken redevelopment along their waterfronts: residential projects in Hartford, Connecticut; $14 million "seniors marina" in Stratford, Connecticut; $1 million residential project in Sackets Harbor, New York; $70 million hotel/convention centre and recreational project in Bellingham, Washington; $6 million redevelopment in Salem, Massachusetts; recreational development in

Burlington, Vermont; $4 million restoration in New Bedford, Massachusetts.

Financing, mixed ownership, and the multiplicity of government jurisdictions are factors to be addressed in waterfront redevelopment.

Unique constraints face developers and firms involved in waterfront redevelopment. Financing is often difficult to obtain, city officials may be reluctant to spend municipal funds on extending services in unproven areas, and land ownership is often a chequerboard of public and private interests. Government jurisdictions are more complicated than elsewhere due to the presence of water that introduces additional and overlapping agencies and regulations (for example, in Baltimore Harbour there are 30 state, local and federal government agencies involved).

2.2.2 Current Trends

There are still market opportunities in large cities where some redevelopment has already taken place.

Although there have been major projects completed in large metropolitan centres, there is still considerable scope for more large-scale projects. Baltimore's waterfront can apparently handle additional development. New York City officials have asked developers for proposals on more sites along the Hudson River. Boston's booming economy is thought to be able to sustain continued development along the waterfront.

Major opportunities continue to exist in smaller towns and cities.

Smaller cities and towns continue to be important markets. Kansas City is planning major recreational developments along the Missouri River. Charlotte (North Carolina) is considered a good prospect as is Duluth (Michigan). Cities and towns in the states of Tennessee and Ohio are also thought to be ripe for waterfront redevelopment. Two projects are in the planning stages in Cleveland, Ohio.

Private/public "linkages" are essential in waterfront development.

Due to federal spending cutbacks, state and municipal governments have been forced into "linkages" with private developers. Partnerships consist of municipalities putting up the land with private sector developers financing construction. Such arrangements have almost become prerequisites for waterfront redevelopment projects.

Firms should identify Canadian developers with up-front money.

Interested firms should carefully target specific towns and cities based on the nature of their expertise. Riverfront projects obviously differ in their technical requirements from those along oceans or large lakes. American economic development officials advise that a good track record in waterfront projects, access to private sector development financing, sensitivity to local urban issues, and good presentations are all essential in securing waterfront redevelopment work by architectural firms.

2.2.3 Additional Sources

Information on market conditions and marketing forums related to this niche can be obtained from:

- American Institute of Architects: R/UDAT
- American Planning Association
- MIT Centre for Real Estate Development
- National Association of Housing and Redevelopment Officials
- National Centre for Municipal Development
- National Council for Urban Economic Development
- National League of Cities
- National Trust for Historic Preservation
- Office of Coastal Zone Management
- U.S. Dept. of Commerce, Bureau of the Census
- Urban Land Institute
- Waterfront Centre.

These organizations are described in detail in Chapter 3.0: Role Players.

2.3 Health Care Facilities

New financial approaches to healthcare in the U.S. are restructuring the industry... and providing a market niche in which Canadian expertise is recognized.

The introduction in 1983 of the Medicare Prospective Payment System (MPPS) as a device to reduce the growth in government expenditures for hospital care has had a dramatic effect on the health care industry. The MPPS was designed to encourage shorter lengths of stay and more outpatient services. Hospitals are now paid a fixed rate for treating those Medicare and private insurance company patients whose illness can be classified into one of 470 diagnostic-related groups (DRGs). The fixed rate is based on industry averages for length of stay for each DRG category. The previous method for calculating health care costs, in both public and private hospitals, was a cost-plus, 'retrospective' system over which Medicare and private insurance had little control.

The 'prospective' system now in place puts the burden of cost containment on the health care industry. These changes are stimulating alternative health care practices requiring new configurations and design solutions for health care facilities. In a recent design award contest, Canadian competence in meeting the challenges was recognized.

2.3.1 The Recent Past

Hospital construction continues to decline.

In anticipation of the introduction of the prospective payment system, there was a surge in hospital construction in 1983. Hospital administrators advanced projects ahead of schedule because of a fear that the cost constraints imposed by the prospective system could limit future construction. This fear was well founded. In 1983, the contract value of health care construction reached $8.5 billion - an 11 percent increase over 1982. By 1986, the contract value of health care construction had declined by nearly 25 percent, to US $6.7 billion (Fig.8). For hospitals, the decline has been even more dramatic. The value of hospital contracts between 1983 and 1984 alone dropped 30 percent. All regions experienced this decline. Even with this reduced level of construction, hospitals continue to experience low occupancy levels.

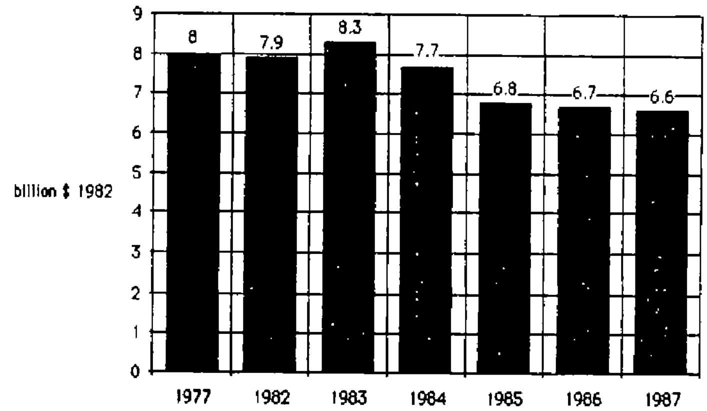

Figure 8: Value of New Construction Put in Place: Health Facilities
Source: U.S. Dept. of Commerce, Bureau of the Census

New ventures to immprove the financial viability of hospitals are being tested.

The result of the DRG prospective payment system has been a belt tightening in all phases of the health care industry. For hospitals, this has resulted in the remodeling of old facilities rather than the construction of new ones. It has also meant closings, mergers, acquisitions and new types of commercial ventures. For instance, in July 1986 the Daughters of Charity, which has been operating hospitals since 1874, formed the Daughters of Charity National Health System with an insurance company as its joint venture partner. This will help its 38 hospitals market several insurance options to major employers and permit it to provide more diversified services such as long term care facilities, services for the elderly and home care.

Alternative healthcare practices are promoting smaller specialized centres.

The emergence of alternative health care practices is another off-shoot of the system changes. A major trend is to more specialized health care facilities strategically located close to their markets rather than within large centralized hospitals. Facilities that specialize in emergency care, ambulatory care, hospice care, imaging (CAT scan and related technologies), out-patient clinics, kidney dialysis, nursing homes and the like are now common throughout the country. Even physicians' practices are changing with storefront offices becoming commonplace.

This trend toward smaller decentralized clinics has prompted such institutions as the Mayo Clinic to explore the desirability of establishing a network of satellite clinics for walk-in patients. In this context, a satellite Mayo Clinic was opened in Jacksonville, Florida in 1986 and a second satellite is planned for 1987 in Scottsdale, Arizona. In the event that these two satellite clinics prove successful, others are planned.

While alternative health care facilities are being established throughout the United States, it can be expected that the largest concentration will be in those states and communities with a large and expanding elderly population. Based on current trends and projections, eight states will be the prime focus for such facilities - New York, Ohio, Illinois, Pennsylvania, Florida, Texas, California and Arizona (Fig.9).

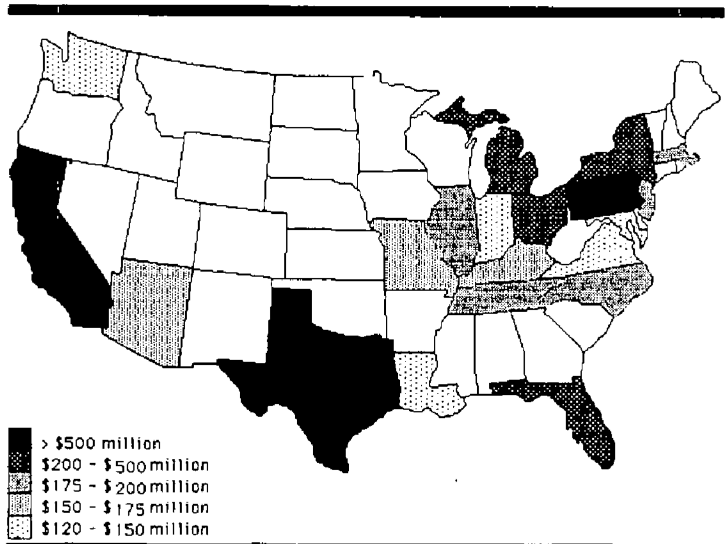

Figure 9: Value of Construction of Health Facilities in Top 20 States, 1986
Source: ENR, McGraw-Hill Inc., Jan.22 1987

Research facilities are a growing market.

The cost constraints of the Prospective Payment System are also causing financial problems for teaching hospitals. One result is that there appears to be a growing market for the construction of research-oriented facilities in association with medical schools. The regulations of the Prospective

Payment System are also spurring the move away from having ancillary facilities in the hospital. Construction costs are reduced by having a separate ancillary service facility because building code requirements are less restrictive for buildings which do not house patients.

2.3.2 Current Trends

Specialized facilities demand specialized architectural services.

The dynamic nature of the health care industry and the increasingly complex and specialized procedures and technologies of health care delivery demands that the architects have more than a general knowledge of how the industry operates. For those architectural firms which invest time in developing this knowledge, the pay-off can be worthwhile. A recent survey by the American Institute of Architects showed that firms specializing in health care made more profit in their health care projects than in other building types.

Competition among architects is increasing - but the challenge and benefits can be worth the effort.

The survey also found that the competition for the design and planning of health care facilities is increasing. A major advantage of developing a niche in this field is that once a firm has its foot in the door, it is likely to be retained for frequent remodelling, retrofit and expansion assignments. One report estimates that 90 percent of recent construction work in hospitals is for these types of activity.

In this context it would seem desirable for architects to establish a working relationship with one of the private sector health maintenance organizations (HMO) such as National Medical Enterprises Inc. (NME) and American Medical International Inc. (AMI). HMOs, which provide contracting, financing and administrative support systems to hospitals and other health care facilities throughout the country, are being used increasingly by the health care industry to help it cope with the Prospective Payment system. The emergence of the HMOs is already leading to acceleration of design. To exert control over some basic design standards and to reduce design and construction time, both NME and AMI do some preliminary, in-house design work before commissioning an architectural firm to complete the job. This has led to the NME and AMI working with a relatively small number of architectural firms since the former need not spend time explaining their philosophy of operations to a new firm each time a facility is built. This has not, however, led to "canned design solutions". Both companies recognize that there are differing work-load criteria and medical staff preferences among health facilities as well as regional differences. The need for non-threatening site and interior environments to attract patients is of growing concern in this era of competition and cost-consciousness.

Architects must carefully analyse the healthcare market.

Because of increased competition within the health care industry, architects must develop a stronger marketing sense for health care services. Projected demand for services is now more important than ever in determining a hospital or clinic design. For example, a small rural hospital in a resort area may need a large emergency room; in an area with many retirees, a large cardiac surgery department may be required; and an area with a younger population might dictate a concentration on obstetrics.

Canadian competence in healthcare facilities design is recognized.

In 1986, 213 projects were entered in the first Modern Health Care Facilities Design Awards contest. Two of the 14 award winning health care design and renovation projects were located in Canada, and designed by two consortia of Canadian architects. A number of the observations based on comments by the design competition judges, who were drawn from the health care industry and the AIA Committee on Architecture for Health, are revealing:

- "As an administrator, I was looking to the architects and engineers to lead me in a direction that is going to save on the efficiency of operations."
- "Architects can no longer be 'pedestrian' in their approach to health care - projects must meet market needs and client specifications and save money on operating costs."
- "Many smaller projects were better designed than larger facilities - That's a result of spending a lot of time on planning concepts and not having a lot of energy left for design."
- "The health care field is likely to have an abundance of smaller projects in the next 10

years. We'll see more non-hospital specialized facilities".
-"There is still a lack of design solutions which meet the needs of alternative delivery systems and the retirement market."

2.3.3 Additional Sources

Information on market conditions and marketing forums related to this niche can be obtained from:

- American Institute of Architects: Committee on Architecture for Health
- American Association of Homes for the Aging
- American Association of Retired Persons
- American Health Care Association Redevelopment Officials
- The Forum for Health Care Planning
- U.S. Dept. of Commerce, Bureau of the Census.

These organizations are described in detail in Chapter 3.0: Role Players.

2.4 New Office Construction

Construction of commercial office buildings is on the decline. Some markets though will continue to develop.

Construction of commercial office buildings has been booming in the last decade in the United States. However, oversupply and lowering demand will sharply brake speculative development in this sector during the next ten years. Some specific geographic markets will continue to boom, though, and represent opportunities for Canadian firms with experience and expertise in design of commercial office buildings.

Canadian architects are perceived by some to provide better services to developers.

Canadian architects are perceived by many U.S. developers to provide more substantial service than American firms. Quality of design, technical detailing, and rigorous construction review, in particular, set Canadians apart. In addition, our cold weather experience has made Canadian architects more responsive to concerns over energy conservation.

2.4.1 The Recent Past

Almost 40% of all premium office space in the U.S. has been built since 1975.

Slightly more than 36% of all existing Primary office space (Classes A and B) in the United States, or 1.3 billion square feet, has been built since 1975. An average of 300 million square feet of office space has been built every year since 1981, nearly double the rate of the 1970's. This volume of construction is equivalent to building five Manhattans in six years.

Reasons for this surge in commercial building are diverse. Millions of Baby Boomers were absorbed into the workforce. The job creation rate - most of it in the white collar service sector - averaged 2.5% between 1975 and 1985. High rates of inflation in the late 1970's and early 80's encouraged speculation. A large supply of readily available capital existed in numerous syndicates, pension funds, insurance companies and banks. Foreign investors, attracted by high rates of return in the U.S., streamed into the commercial office space market. In terms of tax, many projects had more value to investors in their ability to accelerate depreciation than the actual income they produced.

Vacancy rates are beginning to soar both downtown and in the suburbs.

The result of this development has been a massive oversupply of office buildings virtually all over the U.S. The national vacancy rate last September for downtown office space was 16.7% with regional rates ranging from 9% to 24%. Figure 10 shows the downtown vacancy rates in 11 American cities in 1987. For suburban locations, the national vacancy rate was 24%. Where a decade ago single-digit vacancy rates were considered enough to warrant additional construction, developers have recently begun to enter markets with vacancy rates of 12%. There is now more than 650 million square feet of excess Primary office space in the U.S. with an additional 300 million in leased but vacant space.

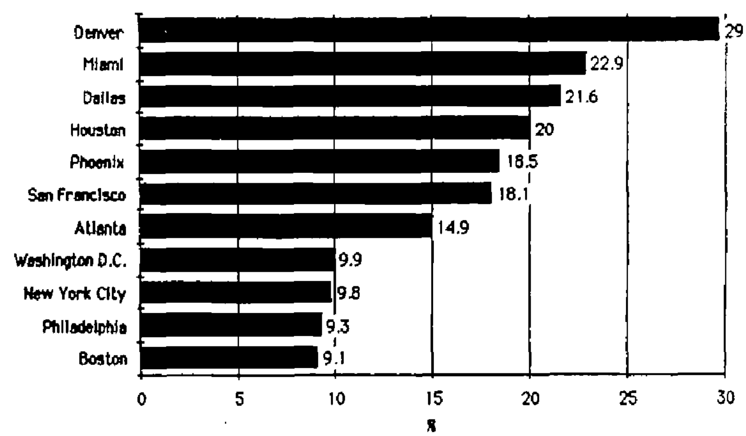

Figure 10: Vacancy Rates of Primary Office Space, January 1987
Source: Forbes, Jan. 26, 1987

2.4.2 Current Trends

The Tax Reform Act will curb speculative construction of office buildings.

One of the most significant events likely to brake commercial overbuilding occurred in 1986 through enactment of the Tax Reform Act which eliminated or reduced preferential tax benefits in speculative office building investment. Another constraining factor will be the sharp decline in rate of employment generation expected over the next decade to

1.2 - 1.7% compared with 2.5% over the last ten years. Declining overall demand will be coupled with a significant oversupply of available building stock.

An exhaustive study on commercial office construction was recently completed by the MIT Centre for Real Estate Development and Arthur Anderson & Co., a large management consulting firm. Supply and demand were analysed in 239 urban and rural areas in the U.S. to determine likely trends for the period 1985-1995.

If overbuilding continued, national vacancy rates would hit 20% with some areas reaching 40% by 1995.

If construction were to continue at current rates, there would be a national vacancy rate in Primary office buildings of 20.5% in 1995. Regional variations are more startling: Arizona, 43%; Texas, 30.9%; California 29%; New York, 11.6%; Washington D.C., 6.5%; and Massachusetts, 12.5%. Overall, construction over the next decade should continue at half the pace of the last ten years if reasonable vacancy rates are to be achieved.

There are some bright lights though in the northeastern U.S. and mid-Atlantic states.

However, not all is doom and gloom in this sector. Figures 11 and 12 show the expected vacancy rates in 1995 if overbuilding was to continue. There will still be a significant demand for office buildings in the northeastern United States with Washington D.C., adjacent areas in Maryland, Baltimore, New York City and Boston as prime locations. The North Central states are slightly less attractive with the South Atlantic, Mountain and Pacific states being areas to avoid. Recent data supports the MIT/Anderson projections: office construction during the last twelve months has been strongest in New England and the Mid Altantic states.

Some smaller urban centres appear likely markets as well.

Some smaller markets, particularly in the northeast, have been spared from overbuilding: examples are Springfield, Massachusetts; New Haven, Connecticut; Syracuse and Buffalo, New York; Scranton and Allentown, Pennsylvania; and Wilmington, Delaware. Although demand in these cities is not as high, they - and similar centres - represent possible niches.

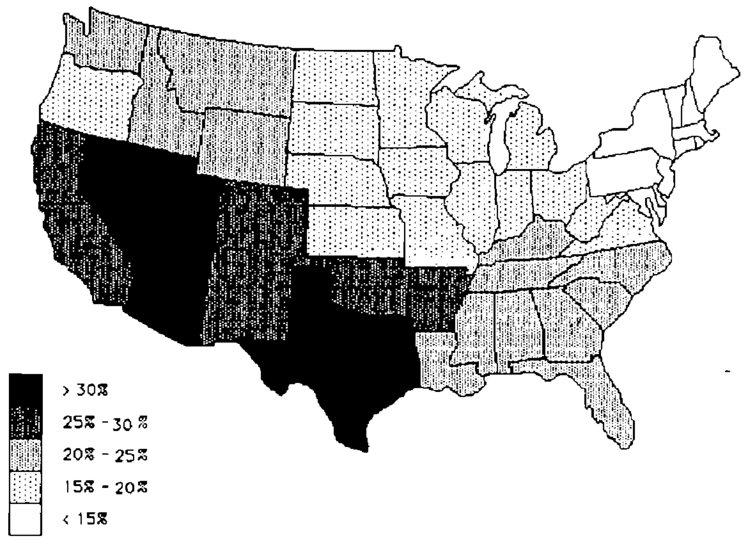

Figure 11: Primary Office Vacancy Rates in 1995 if Overbuilding Continues
Source: America's Office Needs: 1985-1995
© Massachusetts Institute of Technology

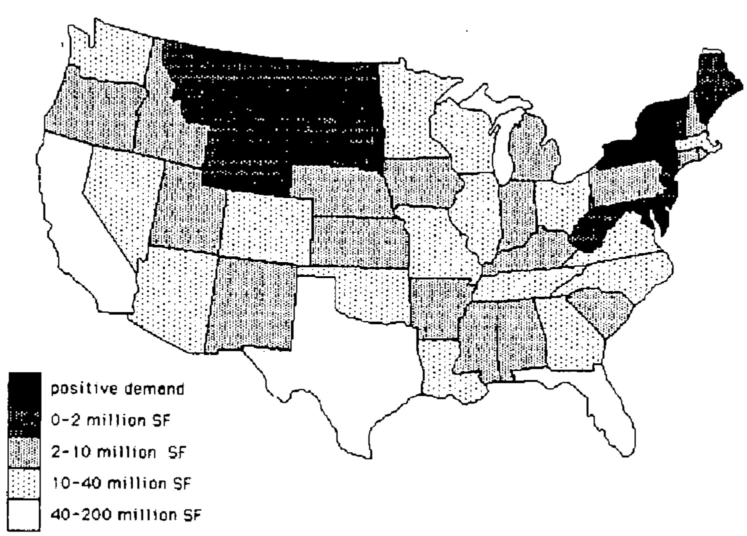

Figure 12: Surplus of Primary Office Space in 1995 if Overbuilding Continues
Source: America's Office Needs: 1985-1995
© Massachusetts Institute of Technology

Building retrofit and renovation is a market niche for Canadians.

Two qualitative trends in this sector should be noted. Much of the U.S.'s office stock is becoming technologically obsolete both in terms of deteriorating building elements and in the ability to respond to new requirements inherent in advanced information technologies. Retrofit and renovation of existing commercial buildings has often been found to cost less than 50% of new construction.

Canadian architects have been active in retrofit for years. The large number of Class B and C buildings built in the 1960's represents a market opportunity, particularly in the northeastern and Great Lakes states.

New buildings will have smaller blocks of office space reflecting new business needs.

The second qualitative trend is towards smaller offices. Many large companies are reducing their workforces as a result of increased productivity caused by more efficient information technologies. For example, the Fortune 500 companies significantly increased their sales from 1980 to 1985 with 2.2 million fewer employees at the end of that period. In addition, there are 1.4 million small businesses launched in the United States each year. Many of them are in the service sector and require small blocks of premium office space often in non-traditional locations such as older downtown areas.

Canadian firms must be very precise in researching the office market.

Although a building type with which many Canadian firms are familiar and in which they have special expertise, penetration into this market in the U.S. requires precise market research. Firms should carefully study changing requirements and shifting geographic trends before undertaking active promotion in this sector.

2.4.3 Additional Sources

Information on market conditions and marketing forums related to this niche can be obtained from:

- American Planning Association
- MIT Centre for Real Estate Development
- National Association of Industrial and Office Parks
- National Association of Realtors
- National Centre for Municipal Development

- National Council for Urban Economic Development
- U.S. Dept. of Commerce, Bureau of the Census
- Urban Land Institute.

These organizations are described in detail in Chapter 3.0: Role Players.

2.5 Residential Developments

Canadian architects will need to compete strongly for the few available niches in a sluggish market.

Construction of medium density residential rental developments is being constrained as a result of tax changes. The medium density condominimum market is also weak due to the slowdown in population growth and to the changing characteristics of households. While the decline in the construction value of medium density units is expected to be offset by an increase in demand for single family houses, it will be some years before there will be any significant growth in the total residential market. However, there are a few niches associated with the needs of a growing elderly population and an increase in spending on residential repair, renovations and rehabilitation. Canadian architects are recognized for their experience and expertise in these fields and for some, they could provide a significant market.

2.5.1 The Recent Past

Housing played a strong role in the recent economic recovery.

In the 1970s, housing starts averaged 1.77 million per year, peaking in 1978 at just over 2 million units. By 1982, the housing market had slumped to 1.02 million starts but by 1986 had rebounded to 1.8 million. Over the last four years, residential building has accounted for more than 45 percent of the total value of all construction. The increase in housing starts was fuelled by declining mortgage rates and tax shelter incentives.

The decline in housing starts in the early 1980s reflected soaring labour and materials costs. In the 1970s the typical home purchase consumed only 10% of a family's income - by 1985 it was 34%. This accounts for the switch to multi-family developments, particularly condominiums, from the prohibitively priced single family houses (Fig. 13). It has also led to the conversion from non-residential to residential uses and the renovation of older homes.

The housing market has little room for further improvement.

The home building industry will do well to maintain a yearly average of 1.6 million starts for at least the next decade . This slowdown matches population growth and household formation rates.

For the next few years, housing starts will also be constrained by the loss of the tax shelter status for rental units. It could take up to 1990 for the rental market to absorb the existing over-capacity. Offsetting the reduction in construction for the rental market will be the strong demand for trade-up single family housing. This will help the total value of residential construction to remain at or slightly below its current value.

Figure 13: Value of New Construction Put in Place: Multi-Family Housing
Source: U.S. Dept. of Commerce, Bureau of the Census

2.5.2 Current Trends

But there are some specific residential niches that should not be overlooked.

Spending on residential repair, renovation and rehabilitation is expected to remain strong and likely grow due to the increasing size and age of the existing housing stock. Increased demand for energy efficient structures and building modification to accommodate high technology innovations will also buoy the upkeep market.

Initial reaction to this tax credit initiative is that it could represent a potential $3 billion yearly market.

Demand for prestige apartments could also remain reasonably buoyant, particularly as a major component of the surge in downtown redevelopment and waterfront projects.

5,000 Americans turn 65 each day...but this market has special constraints.

The most active residential market will likely be housing for the elderly. Replacing the housing market for "baby boomers" is that for the elderly. At present, one of every eight Americans is 65 or older - in forty years, one of every five Americans will be 65 or older. Many predict that these trends will lead to a boom in housing for the elderly during the late 1980s and 1990s the way housing for singles boomed in the 1970s and early 1980s.

This elderly market may not be all it seems:
- most elderly do not move location - they stay close to friends, family and a lifetime of associations;
- seven states account for half the elderly population - New York, Illinois, Ohio and Pennsylvania in the north and Florida, Texas and California in the sun belt;
- the market is not 'deep' - eliminating those who do not move or earn less than $20,000 per year, the effective market is less than 170,000 buyers and renters per year.

Shared housing could provide a major design niche.

The fact that a large majority of the elderly do not move and a growing number wish to remain in their own home is itself spurring what could become a major design opportunity: the trend toward the conversion of single family housing to provide shared accommodation specifically for the elderly. This type of conversion usually entails major innovative design solutions so as to ensure that the conversion meets the privacy and specialized ambulatory needs of those who share the accommodation. Pressure for this type of accommodation is mounting since it seems to best meet the loctional demand and income capacity of the elderly while at the same time providing for companionship, security and support in times of emergency.

Housing for the elderly falls into three categories, each of which can take a variety

of forms:
- active retirement communities
- congregate housing
- life care communities.

Active Retirement Communities

Active retirement communities provide for a range of recreational pursuits and are usually associated with a golf course or a resort town. Typically, these communities offer 'downsized' housing in a range of styles from single family/single storey units to luxury apartments. A community centre is a usual feature of such developments providing for such indoor activities as handicrafts, dancing and dining.

These communities are designed for those in the 55 to 75 years of age range and, until now, do not offer on-site health care and other support services. However, this may become a requirement as the population ages.

Congregate Housing

Congregate housing usually provides residents with an apartment having at least one bedroom and a kitchen. Weekly maid service, a communal dining room providing a minimum of one cooked meal per day, transportation and organized activities are features of this urban elderly housing. To date, health care services have not often featured in this type of housing project but, with an aging population, this may become a requirement for the future. In 1980, there were 2.2 million in the 85 and over age group - by 1990 this will have increased to 3.5 million.

Life-Care Communities

This is expected to spur the development of new life-care communities and, as noted, the addition of life-care features in active retirement communities and congregate housing. Life-care communities provide for nearly every contingency in an older person's life. Housing usually ranges from independent, detached cottages to skilled nursing facilities with several levels of assisted living in between.

2.5.3 Additional Sources

Information on market conditions and marketing forums related to this niche can be obtained from:

- American Association for the Homes for Aging
- American Association of Retired Persons
- American Planning Association
- MIT Centre for Real Estate Development
- National Association of Housing and Redevelopment Officials
- National Association of Home Builders
- National Association of Realtors
- U.S. Dept. of Commerce, Bureau of the Census
- Urban Land Institute.

These organizations are described in detail in Chapter 3.0: Role Players.

2.6 Educational Facilities

Construction spending on educational facilities is on the increase.

After more than a decade of decline, construction expenditures for schools and higher education facilities are rebounding. While the tremendous growth of the 1960's is not expected to recur, a steady increase in construction volume will continue through the 1990's as the offspring of the baby boomers work their way through the education system.

Canadian architects should focus on post-secondary institutions with a variety of service niches.

Scope for Canadian architects in the design and construction of primary and secondary schools will be limited since these facilities are usually designed by firms who are well known to, and have a credible track-record with, local school boards. However, this hometown criteria is unlikely to be of such importance to institutions of higher education. Their need is for design competence and experience in any one of a number of specialized niches. For example, firms specializing in the retrofit, renovation and rehabilitation of existing (often historic) buildings are in demand as are those which specialize in such areas as smart buildings, modular designs, and athletic or research complexes. The trend of institutions to encourage related commercial ventures on campus also is an opportunity for architects experienced in promoting and designing mixed-use developments.

2.6.1 The Recent Past

The passage of the baby-boom generation through the system led to a downturn in the early 1980s.

As the baby-boom passed through the education system and the economic recession of the 1970's took hold, there was a steady decline in education construction expenditures such that by 1984, its value had declined to $6.6 billion. However, there has been a marked increase in construction activity since that time which by 1986 had reached $8.5 billion (Fig. 14). This increase was fuelled in part by the increase in the number of births between 1976 and 1982, in part by the improved fiscal condition of state and local governments, and in part by the need for building which could accommodate the educational requirements of new technologies. The main 'beneficiary' of this growth has been the primary and secondary schools - during 1985, they accounted for 70 percent of the education construction expenditures. Colleges, universities and other institutions of higher education were not so fortunate.

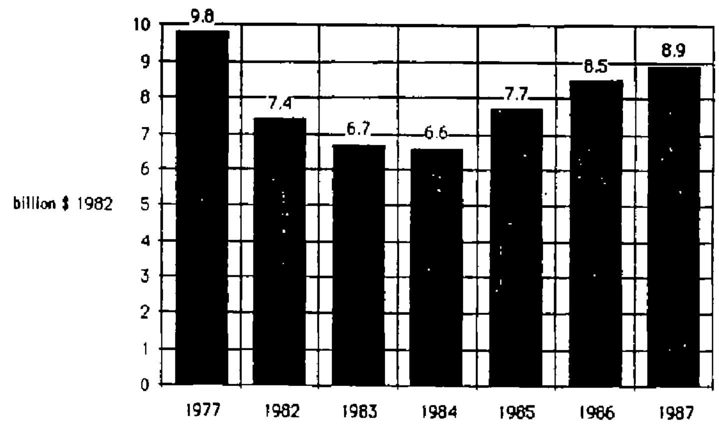

Figure 14: Value of New Construction Put in Place: Educational Facilities
Source: U.S. Dept. of Commerce, Bureau of the Census

There is an enormous backlog of capital projects in institutions of higher learning.

The need for governments to channel their funding to new schools, coupled with a decline in endowment support for higher education institutions (due to the recession and the enormous increase in equipment costs for scientific research), left these institutions with insufficient funds to even cover operating costs. As a result, there is an enormous backlog of capital maintenance and new building requirements facing most higher education institutions, particularly the smaller universities and liberal arts colleges which have traditionally been so important to the quality of the American higher education system.

Facility management is of growing importance.

This situation has led to a recognition of the importance of the facilities management function if colleges and universities are to retain their capacity to attract students and faculty, and to conduct research. As a result, in recent years there has been renewed emphasis on the built environment of higher education institutions. This can be expected to increase as the school population moves into these institutions and as the retraining needs of the work force accelerates due to technological advances.

The emphasis by the President of the United States in his 1987 State of the Union message on the need to strengthen the nation's scientific base is also expected to stimulate renewed emphasis on campus development.

2.6.2 Current Trends

Competition for public and secondary schools is rooted in local politics.

While the need for additional primary and secondary schools is expected to continue over the next few years, it will likely be at a declining rate. As in the past, local governments and school boards can be expected to contract with local architects for school design services and, as such, this will be a difficult niche for Canadian architects to penetrate. However, the design needs of post-secondary institutions is such that there could be considerable opportunity for Canadian architects in a variety of specialized niches.

But post-secondary institutions require design and management competence, whatever the source.

An estimated $50 billion of campus facilities assets are at risk due to past neglect.

The value of campus physical facilities is estimated at $200 billion. Recent estimates suggest that as much as $50 billion of these physical plant assets may be at risk due to past budgetary constraints. A Capital Renewal/Deferred Maintenance Survey is being undertaken by the Association of Physical Plant Administrators of Universities and Colleges (APPA) to better document the dimensions of this problem. Clearly though, retrofit, renovation, rehabilitation and renewal to improve energy efficiency and accommodate state-of-the-art technologies will represent a growing niche for architects throughout the remainder of this decade and into the 1990's.

Retrofit, renovation and "smart buildings" are market niches for Canadian firms...

Many of the buildings requiring attention also experience the added challenge of having historic significance. An example is the Nott Memorial in Union College at Schenectady, New York, a domed, 16-sided Victorian Gothic structure located in the centre of the campus and built in 1875. It has served as a 'graduates hall' for conventions and banquets, a library, a theatre and a bookstore. The upper floors and dome have been closed since the early 1970's for structural reasons and only now is renovation being contemplated at a cost of $6 million. Possible future uses are as a computer centre, museum or an expanded theatre.

...as is campus planning.

Campus planning is another growing opportunity for Canadian architects. The scope for this is demonstrated by a recent initiative of Ohio State University which has not undertaken a major facility project in the past twenty years. OSU has recently completed a comprehensive campus master plan that outlines the university's construction and renovation program for the next 25 years. This plan identifies $45 million worth of renovation and new construction required by 1990. This scale of construction needs is not exceptional. As a result, campus facility managers, particularly those of institutions which do not have access to large endowments, are seeking innovative ways to raise capital.

Private/public development on surplus campus lands is also growing.

In this context, there is a trend by those institutions with extensive land holdings to offer long term leases for the commercial development of these lands as a means for generating revenue in the short term and buildings for future institutional needs in the long term. For architects skilled in assembling joint venture mixed-use development packages, this presents a range of site planning and building design opportunities.

There are important qualitative considerations for both new and old buildings which also provide specialized niches for Canadian architects. These include a growing demand for 'smart buildings', modular structures, rapid construction techniques, flexible/multi-use building designs as well as such specialized facilities as athletic centres and research laboratories. Architects skilled in sophisticated facilities management systems are also in demand.

But not all campuses will benefit equally from government funding.

While nearly all post-secondary institutions claim a need for facilities rehabilitation, expansion or both, a December 1986 report, "American Science and Science Policy Issues", by the Chairman of the U.S. House of Representatives Committee cautions that funding limitations will be such that all demands cannot be met. Stress is placed on the need for institutions to work co-operatively, rather than competitively, in the development of research facilities and equipment purchase so as to avoid costly duplication of effort. This presents a new set of challenges for campus facility managers and their planning and design consultants. It is also implied that institutions located in regions with limited economic growth prospects cannot expect the same level of support as those located in potentially high-growth regions. In terms of location therefore, it can be expected that the construction of educational facilities will likely reinforce the pattern of 1986 (Fig.15).

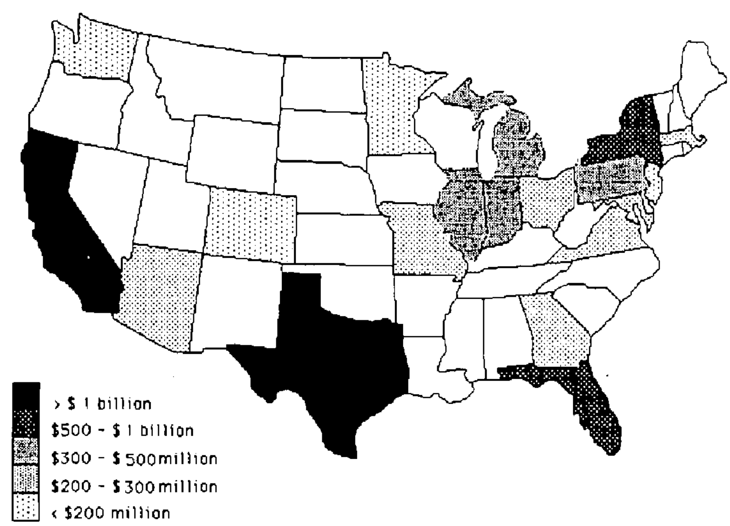

Figure 15: Value of Construction of Educational Facilities in Top 20 States, 1986
Source: ENR, McGraw-Hill Inc., Jan. 22, 1987

Joint ventures and development packaging are two penetration strategies that could work well for Canadian firms.

Nevertheless, post-secondary educational institutions present a wide range of opportunities for Canadian architects to engage in innovative planning, design and consulting work. Joint ventures with a US architectural firm may be required for initial entry into this niche but the facilities managers network of the APPA should also be actively pursued. Identification of institutions promoting on-campus commercial developments and encouraging Canadian developers to pursue these opportunities could also be an important route for entering the educational market.

2.6.3 Additional Sources

Information on market conditions and marketing forums related to this niche can be obtained from:

- Association of Physical Plant Administrators of Universities and Colleges
- U.S. Dept. of Commerce, Bureau of the Census.

These organizations are described in detail in Chapter 3.0: Role Players.

2.7 Correctional Facilities

The correctional service system is in crisis - rehabilitation and construction of correctional facilities are key to overcoming pressing problems.

The correctional service system, which is considered by many to be to be one of the largest growth industries in the U.S.A., is in crisis. In large part, this is the result of a major shortage of adequate correctional facilities, particularly prison beds. Considering that many prisons are more than 100 years old and that prison incarceration rates are expected to grow at an alarming pace, the rehabilitation of old prisons and construction of new facilities represent major market niches for architects and developers. A recent Department of Justice study suggests the need for a national building program of $70 million per week over several years to overcome the crisis in accommodation.

Joint ventures and consortia developments, coupled with a thorough understanding of the voluntary standards of the American Correction Association and its Commission on Accreditation for Corrections, offer the best potential for Canadian Architects.

The move toward privatization of correctional facilities with funding support at the state and community levels suggests that joint ventures with local architects or engineers or the establishment of development consortia would be the most successful penetration strategies for Canadian architects. Canadian architects and developers must be fully conversant with standards of the American Correction Association and its Commission on Accreditation for Corrections since these voluntary standards are increasingly becoming the norm for the design and operation of facilities. Presently, it is estimated that there are 25 U.S. architectural firms specializing in correctional facilities.

2.7.1 The Recent Past

The crime rate has stabilized but incarceration rates are increasing - by 1986, there was a shortage of 50,000 bed spaces.

Although the crime rate in the United States has levelled off since 1979, the incarceration rate has continued to increase. There is a chronic shortage of prison space. By 1986, the national prison population of 503,601 was 64 percent higher than in 1980. In California, the prison population had reached 58,515 by 1986 whereas just a few years ago, the projection was that it would not reach 40,000 until the year 2000. There has been a substantial surge in construction to try and cope but so far this effort has been insufficient to meet the incarceration growth rate. For instance, the Department of Justice reports that even though there was a net addition of 122,317 new prison beds provided in the period from 1978 to 1983, the shortfall in bed space during this time period still totaled 33,255. By 1986, this shortfall had grown to 50,000.

Voluntary design and operating standards of the ACA/CAC are fast becoming the norm for both major prisons and community based correctional facilities.

The major responsibility for correctional facilities is exercised at the state, county and municipal levels as a result of federal government decentralization. While accommodation standards and operating requirements still vary from state to state, the 1978 voluntary standards of the ACA and its Commission on Accreditation for Corrections (CAC) are increasingly becoming the norm for facilities design and operations throughout the country. Currently, 25% of all correctional facilities either comply with or are being modified to comply with these standards. Further, 80% of all state departments responsible for correctional and youth services are basing their standards on those of the ACA/CAC.

2.7.2 Current Trends

The market for correctional facilities is growing.

Trends towards mandatory sentences, the abolition of parole, the curtailment of other good behaviour privileges, and the increasing obsolescence of older facilities are all combining to provide a critical shortage of space for all elements of the correctional system. This situation will continue for at least the next decade and likely well into the twenty-first century. Already, the U.S. planned prison construction program amounts to $4 billion of which $2 billion has been appropriated in California. Other states with ambitious construction programs include New York, Texas and Florida. In the first few months of 1987 alone, Idaho, Iowa, Missouri, Utah and Vermont all announced major new construction programs. Utah's program was part of a master plan to add 4,600 beds to the state system by 1994. The program for Iowa was to permit offenders convicted of motor vehicle violations related to drug or alcohol use to be transferred from the state prison system to a local community correctional facility.

Even with this level of construction activity, it is estimated by the ACA that the national program shortfall is 150 to 200 beds per week. To correct the current space shortfall and keep pace with anticipated new growth, the Department of Justice suggests that a national building program of $70 million per week is required based on $50,000 per bed cell. Others consider this cost estimate to be low and should be closer to $100 million per week as bed cell costs are now closer to $70,000.

Trends towards community-based correctional facilities and privatization require an intimate knowledge of local attitudes, preferences and funding considerations.

The Iowa program exemplifies a growing trend of importance to architects. There is now much greater emphasis on locating correctional services in smaller community based facilities, often integrated into urban settings. This presents major urban design challenges. It also requires an intimate knowledge of local policies and philosophies toward correctional issues as well as the political nature of correctional funding at the state and local levels.

Several of the above-noted programs also demonstrate the growing trend toward involving the private sector in correctional service facilities development and operation through lease-purchase arrangements, a trend which also requires sensitivity to local attitudes and funding arrangements. The Idaho program includes a 248 bed maximum security unit at Boise to be developed through lease-purchase and bond financing while that for Missouri includes a 500 bed maximum security prison at Potosi to be funded by a lease-purchasing agreement. While these examples serve to demonstrate the trend toward privatization, the most profitable ventures for the private sector are in those activities which supplement the state programs such as community-based half-way houses, medical services, job training facilities and minimum security centers. The demand for centers for older inmates is also growing due to the 'greying' of the institutional population and represents a significant niche for the private sector.

New national policies are being developed.

As part of its ongoing national policy development process, the ACA is currently promoting national and state level debate on four new policy areas. These deal with employment of ex-offenders, women in corrections, health care and correctional research. The draft statements for each of these policy areas have facilities design and operations implications and should be monitored carefully since, once they are finalized, the ACA can be expected to mount a strong lobby at national and state levels.

Because of the community-based nature of the correctional system, and the privatization trends, Canadian architects should consider joint venture and consortia development opportunities.

The correctional system represents a long-term market niche for architects. There are currently twenty-five American architectural firms specializing in correctional facilities design and most are large and politically well-connected with a solid hold on the market. However, the projected market growth in community-based correctional services and facilities and new policies which are encouraging privatization and the development of a new range of facilities clearly represent opportunities for an increasing number of architectural firms. The political nature of correctional funding and the purportedly significant differences of philosophy between American and Canadian correctional design and management, suggest that an initial entry into the U.S. market might be through a joint venture arrangement with a firm conversant with local conditions and trends. Consortia opportunities with a Canadian developer offer further potentials for entering this major U.S. growth industry.

2.7.3 Additional Sources

Information on market conditions and marketing forums related to this niche can be obtained from:

- American Institute of Architects: Committee on Architecture for Justice
- American Correctional Association Inc.
- Commission on Accreditation for Corrections
- U.S. Dept. of Commerce, Bureau of the Census.

These organizations are described in detail in Chapter 3.0: Role Players.

2.8 High-Tech Facilities

High-tech parks are a potential market niche open to Canadian architects with linkages to private developers or manufacturers.

The high tech industry has potential as a major market niche for Canadian architects. High tech parks are being established in states and communities which have not figured prominently in the past as centres of economic development and are even forming the base for new mixed-use communities. Competition among the parks is such that building design and site planning and landscape are becoming key ingredients for successful development ventures. Suburban communities are assisting in the development of these quality parks and promoting associated mixed-use developments so as to compete with the trend toward downtown revitalization and restoration.

2.8.1 The Recent Past

High-tech industry has provided growth in design and construction as well as jobs and output.

The construction of industrial facilities was most dramatically affected by the economic recession of the late 1970s and the early 1980s. Proportionally, the most drastic declines occurred in manufacturing facilities followed closely by warehousing and distribution facilities.

Although high technology and research and development plant facilities also experienced a decline, it was not as drastic and was the first area to emerge from the recession. Since the latter half of 1983, the dollar volume of construction and the sale and leasing of high tech plants have shown a steady increase year after year.

High-tech manufacturing encompasses those industries whose engineering and technical work force exceeds the manufacturing average. In the decade to 1981, high-tech manufacturing acccounted for 88 percent of net growth in manufacturing jobs. The strength of high tech industries is also reflected in the shipment values during the 15 year period to 1987. In 1982 dollar value terms, total industrial shipments for the period increased from $1.38 to $1.74 trillion. The ten fastest growing industries accounted for 55% ($195 billion) of the $350 billion increase. Of these top ten industries, seven were high-tech.

High-tech has shunned traditional industrial centres.

The relative strength of high tech industries is forecast to continue. Of the ten fastest growing industries for 1987, eight are high tech with growth rates of up to 26 percent. This has major locational and design implications. To date, high tech plants have gone to states and areas that have not traditionally been industrial centres. Instead, they have concentrated along the east coast, particularly New England through to Florida, Texas and the south-west.

According to recent studies by the University of California - Berkeley Institute for Urban and Regional Development, there are several locational factors which have led to high tech dispersal patterns in the past, and which are expected to prevail in the future. For instance, the business, political and labour structures of traditional industrial regions are so oriented to existing industries that they tend to crowd out and deter new entrepreneurial ventures. Similarly, federal defence related activities have and continue to direct many locational decisions. With 75% of federal funding for R+D devoted to defense, many high-tech companies choose to locate near military establishments including smaller interior centres such as Huntsville, Alabama and Colorado Springs, Colorado. The latter has recently been selected as the location for the SDI National Test Facility. This can be expected to stimulate a range of associated new developments.

Military installations and amenities are key locational determinants.

The Berkeley study also confirmed the value of site and community amenities in attracting high tech industry but tended to discount the importance of access to a ready supply of skilled labour. This is a highly mobile group and can be fairly easily recruited. The study also found that proximity to university-based research centres, which was once considered of major importance for fostering high tech commercialization (as evidenced by the past roles of Stanford and the MIT/Harvard complex) is no longer of major importance. Some high tech centres, especially the newer ones, have no major research, university-based institutions. If anything, the labs of major private corporations such as Hughes, Rockwell and McDonell Douglas, seem more important in stimulating the development of high tech industrial parks.

In terms of amenities, well-planned science parks with easy access to exceptional recreational areas, resort communities, hub airports and interstate highways are in demand. All of these, along with the relative proximity of NASA's Langley Research Centre and the planned federal Continuous Beam Accelerator Facility, led Canon to choose the Virginia peninsula as the site for its $200 million manufacturing plant. Eventually its 175 acre site will be developed into a research and development park.

High-tech is re-ordering the economic ranking of states and communities.

These business and environmental considerations are leading to high tech growth in a new set of places. Already this has led to a rather remarkable ranking of states by their high tech specialization (Fig.16). According to Berkeley studies, Arizona, Connecticut, Kansas, Maryland and Colorado have the highest proportions of their manufacturing work forces in high tech industry. Only four traditional manufacturing states figure in the top fifteen. At the local level, high tech plants are moving to a rather select set of communities - often the suburban fringes of existing high tech agglomerations or small urban centres with military connections - which offer sites in exceptional park land settings, good transportation and parking, and potential for mixed use developments.

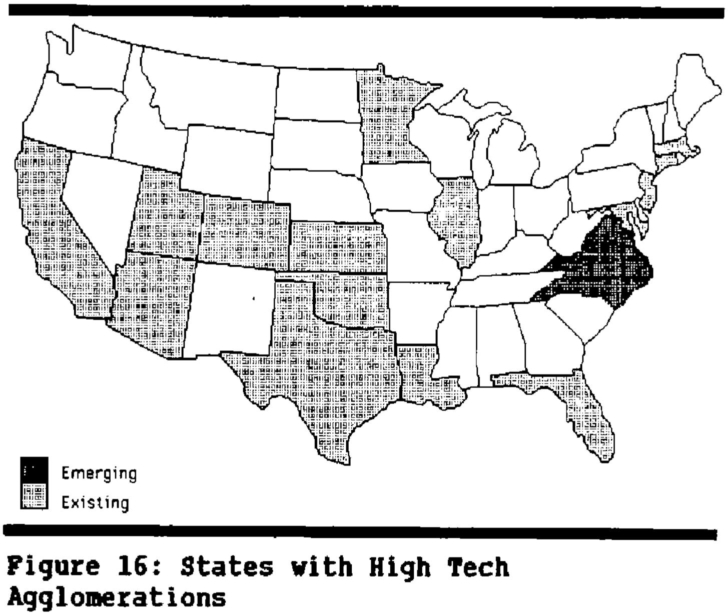

Figure 16: States with High Tech Agglomerations

Source: based on "High Tech Plants and Jobs: What Really Lures Them?", <u>Economic Development Commentary</u>, Vol. 10, No. 3, Fall 1986

2.8.2 Current Trends

New linkages are being established and provide new opportunities for architects.

Recent trends are stimulating considerable development linkages and design innovations to meet the competition among high tech industrial parks. Cooperative ventures between governments, developers, builders and designers are common to ensure high quality site and environmental design as well as versatile and flexible buildings which will attract a wide range of high tech ventures, usually around a common theme.

Minnesota, Massachusetts and California are examples.

For example, in Coon Rapids, Minnesota, the City is acting as masterplanner in a cooperative venture to create a $100 million Minnesota Medical Enterprise Park. The City is acquiring land through its $7.9 million tax increment financing pool and is providing construction financing for the private development of medical facilities. In the first phase, the City is issuing $2.6 million in industrial revenue bonds for a multi-tenant building and $2.3 million for a medical centre. A partnership between the Alpha Business Group, Gaughan Construction and a biomedical consulting venture capital management firm is responsible for the development of both of these first phase facilities.

In Worcester, Massachusetts, the city's Business Development Corporation is the masterplanner for a biotechnology research park, the Boston office of Hines Industrial is development manager and Cushman & Wakefield of Massachusetts are leasing agents. The first building, a 75,000 square feet multi-tenant facility, is already 85 percent leased by firms specializing in the analysis of water, air, soil and tissue sample using state-of-the-art gas chromatography and mass spectrometry.

In Valencia, California, an affiliate of the California Federal Loans Association (Cal Fed Income Properties) and Katell Properties Inc. are planning two parks of a total built area of 365,000 square feet along Interstate 5. Barasch Architects and Associates intend to create a 'garden office environment', through landscaping, vistas and road alignments, for what will be a mix of offices, warehousing, and light industrial uses.

High-tech is a growing stimulus for mixed-use developments.

The above are but three of the growing number of cooperative ventures and examples of the trend toward themes and design excellence in the competition for high tech developments. An equally important trend is towards mixed-use developments by the suburban communities of those high tech urban agglomerations which have mounted downtown redevelopment and rehabilitation programs. High tech parks are being associated with such uses as hotels, shopping centres, health facilities, entertainment and leisure centres, offices and other support services.

By way of example, in Loudon County, Virginia, Xerox Realty Corporation has just commenced a 2,267 acre planned community along the Potomac River (Fig. 17). In addition to housing the Xerox International Training and Executive Conference Centre, it will eventually contain 12.5 million square feet of office space, two 300 room hotels, 1,830 residential units and two golf courses. To enable such a development, Xerox will pay $20 million for widening State Route 7, add an interchange, extend an interceptor line as well as contribute to road and fire rescue trust funds and park and trail improvements.

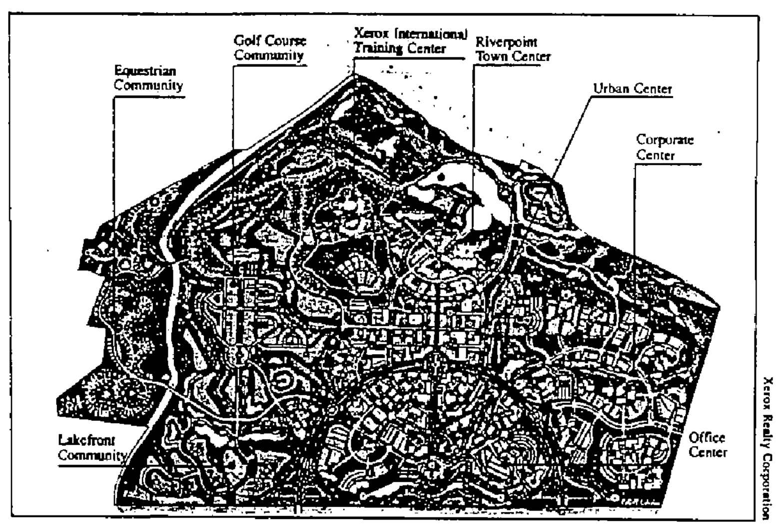

Figure 17: Xerox's Lansdowne Mixed Use Community near Dulles Airport
Source: Xerox Realty Corporation

Canadian architects who assume the role of development managers - finding the Canadian high-tech manufacturers who are planning new facilities in the U.S. and linking them to Canadian property developers - stand a particularly strong chance of becoming successful in this niche.

2.8.3 Additional Sources

Information on market conditions and marketing forums related to this niche can be obtained from:

- American Planning Association
- MIT Centre for Real Estate Development
- National Association of Industrial and Office Parks
- U.S. Dept. of Commerce, Bureau of the Census
- Urban Land Institute.

These organizations are described in detail in Chapter 3.0: Role Players.

3.0 Role Players

3.1 An Overview

A broad range of organizations in the U.S. can provide market information and forums for promotion to Canadian firms.

There are a multitude of organizations in the United States that Canadian architects should be aware of in their marketing efforts. Some are excellent sources of information on market trends. Others sponsor various forums such as conferences, expositions and workshops through which firms can promote their services and build up networks either by staging exhibits, delivering papers, or simply attending and meeting potential clients. Many organizations publish journals, newsletters and bulletins in which articles, profiles of a firm's work and even advertisements could prove extremely beneficial.

American firms are alreay tapping these organizations in their marketing efforts.

Canadians should be aware that these organizations are already being tapped as the single most effective marketing venue of American firms. <u>If Canadians are serious about penetrating the U.S. market, they should carefully integrate access to these organizations in their market research and promotional efforts.</u> Attempts to enter the U.S. market without reference to these organizations and participation in their marketing forums are likely to fail.

Twenty-four organizations are particularly useful.

In the conduct of this study, individuals from 26 American associations, institutes and centres were interviewed in addition to discussions with architects, developers, realtors, and government officials at the federal, state, and local levels. Twenty-four of these organizations are particularly useful in providing market information or sponsor forums through which Canadian firms should promote their services. They are shown on Figure 18 referenced against the eight market niches described in the previous section of this report.

Each organization is described below in alphabetical order.

US3

MARKET NICHES

ORGANIZATIONS	Restoration, Revitalization	Waterfront Redevelopment	Health Care Facilities	New Office Construction	Residential Developments	Educational Facilities	Correctional Facilities	High-Tech Facilities
AIA: Committee on Architecture for Health			●					
AIA: Committee on Architecture for Justice							●	
AIA: R/UDAT	●	●						
American Association of Homes for the Aging			●		●			
American Association of Retired Persons			●		●			
American Correctional Association Inc.							●	
American Health Care Association			●					
American Planning Association	●	●		●	●			●
Assoc. of Physical Plant Administrators of Universities						●		
Commission on Accreditation for Corrections							●	
MIT Centre for Real Estate Development	●	●		●	●			●
National Assoc. of Housing + Redevelopment Officials	●	●			●			
National Association of Home Builders					●			
National Association of Industrial and Office Parks				●				●
National Association of Realtors				●	●			
National Centre for Municipal Development	●	●		●				
National Council for Urban Economic Development	●	●		●				
National League of Cities	●	●						
National Trust for Historic Preservation	●	●						
Office of Coastal Zone Management		●						
The Forum for Health Care Planning			●					
U.S. Dept. of Commerce, Bureau of the Census	●	●	●	●	●	●	●	●
Urban Land Institute	●	●		●	●			●
Waterfront Centre		●						

Figure 18: Role Players by Niche

3.2 Organizations

AIA's Health Committee should be tapped by Canadian firms interested in the Health Care Niche...

American Institute of Architects
Committee on Architecture for Health
1735 New York Avenue, N.W.
Washington, D.C. 20006
(202) 626-7300

This AIA Committee provides a forum for exchanging health care/design knowledge as well as the opportunity to meet health care administrators. A forum was held in 1987 in San Diego (Proceedings available) and others will be held in England (in conjunction with the International Union of Architects Congress in July), in Atlanta (in conjuction with the American Hospital Association convention in July) and in Detroit/Cleveland in October.

...as should AIA's Committee on Architecture for Justice for the correctional niche.

American Institute of Architects
Committee on Architecture for Justice
1735 New York Avenue, N.W.
Washington, D.C. 20006
(202) 626-7300

This AIA Committee holds a conference in the spring and one in the fall each year consisting of discussions on trends in correctional facilities, planning and design approaches, and specific projects (the next conference will be held in Columbus, Ohio from October 7-10, 1987). There is no restriction to attendance which includes architects, administrators and non-governmental organizations. A product exhibit is usually held in conjunction with these conferences but members are precluded from exhibiting. The Fall conferences include an exhibition of projects selected by an AIA-sponsored jury which are also documented in a published catalogue. Entry into the exhibition awards process is open to any firm, including Canadians, subject to payment of $550 of which all but $75 is refunded if the project is not selected.

The AIA publishes a two-volume "Design Reference File" outlining planning and design guidelines for correctional facilities. There are two kinds of membership on the Committee on Architecture for Justice: active membership if a firm is willing to attend two meetings per year; and corresponding membership (for $35/year) which entitles firms to receive bulletins and notices on upcoming events.

AIA R/UDATs are an effective way to learn about urban problems in American cities.

**American Institute of Architects,
R/UDAT Task Group, Urban Design and Planning Committee,
1735 New York Avenue, N.W.,
Washington, D.C. 20006
(202) 626-7300**

AIA's Urban Design and Planning Committee has sent interdisciplinary Regional/Urban Design Assistance Teams to 90 American cities since 1967. Over 400 American architects, urban designers, planners, economists and policy specialists have been involved in dealing with specific local planning problems. The objective of a R/UDAT is to improve physical design, stimulate public and private action, and provide an opportunity for concensus among diverse community groups and individuals.

R/UDAT members do not charge fees nor are they allowed to solicit work related to the program. Local organizations pay for travel and accommodation of Team members.

The first joint AIA/RAIC R/UDAT was held in Edmonton in 1986 in conjunction with the Livable Winter Cities Conference and was judged by both organizations to be a success. A follow-up session is planned again in Edmonton as part of the Winter Cities Showcase to be held in February 1988. However, there has so far been no discussion about RAIC members joining a R/UDAT in the United States.

Those Canadian architects who are also members of the AIA should contact AIA's Urban Design and Planning Committee to explore ways of joining future American R/UDATS.

Most R/UDATS are summarized in reports available from the AIA.

Contacts and market data on homes for the aging are available through this association.

**American Association of Homes for the Aging,
1129 Twentieth Street N.W.,
Washington, D.C.
(202) 296-5960**

This association has a membership of 3500 facility managers, trustees, residents, and firms in related fields. It holds two conferences a year: in Washington in the spring dealing strictly with legislative and policy matters; and a general conference in October at which attendance averages 3000. The 1987 Conference will be held in Louisville, Kentucky from Oct. 11-14 and the 1988 session will be in Orlando, Florida from Oct. 24-27. Registration cost is approximately $500.

In addition, the association runs a series of 1-2 day educational workshops on a variety of topics at a cost of approximately $300. Three publications are available to members only: a bi-weekly newsletter; a quarterly "Continuing Education" newsletter; and an annual publications catalogue. Business membership costs $545/year which includes a directory of members listed by state and a "yellow pages" listing by specialty. Advertising space is available in this directory. Members can exhibit at the annual Fall conference.

The association has a separate "for-profit" Development Corporation which assists members in securing financing and with early development/planning stages of a project. This corporation publishes a "Capital Development Directory" which carries listings of architects active in this sector.

Trends information on housing for the aging can be obtained from this group.

American Association of Retired Persons
1909 K Street N.W.,
Washington, D.C.
(202) 872-4700

The AARP is an advocacy and lobbying group that should be consulted about general trends in housing the aging and specific user requirements for the range of facilities described in Section 2.5, Residential Developments.

The ACA is the best single source on correctional facilities.

American Correctional Association Inc.,
4321 Hartwick Road, Suite L-208,
College Park, Maryland 20740
1-800-222-5646

ACA is an umbrella organization of sixty-five affiliated groups one of which is the

"Correctional Facilities Association" which has as its members architects, engineers, and heads of the various deparments of corrections.

ACA has an educational and central lobbying function. It holds an annual, national conference on corrections generally in late summer. Over 50 sessions at the conference focus on a wide range of issues including facility planning and design. An exhibit is held as part of the conference. Registration fees are approximately $150. Membership in ACA is $65/year.

The Association publishes a monthly journal "Corrections Today" (with occasional issues devoted to facility planning and design) and a monthly newsletter "On the Line" which features an extensive monthly calendar of corrections-related events across the country.

Firms interested in the health care niche should establish networks within this association.

American Health Care Association,
1200 Fifteenth Street, N.W.,
Washington, D.C.
(202) 833-2050

The Association is a lobbying and information transfer organization with membership consisting of owners and administrators of nursing homes, facility planners and managers, and several contractors. A national conference is held annually (in 1988, from Oct.16-20 in Anaheim, California). Registration is approximately $350. An exhibit is held in conjunction with conferences. AHCA has no formalized program of seminars or workshops but rather organizes them on an ad hoc, "as-needed" basis across the country.

The Association publishes "Provider", a monthly magazine with circulation to all licensed nursing homes in the country ($49/year for non-members) and a bi-weekly newsletter dealing primarily with legislative issues. Two types of membership are available: "associate business" at $750/year which provides access to the Association's mailing list; and "associate professional" at $100/year which includes both publications but no access to the mailing list.

APA is a good source of general information on urban trends in the U.S.

**American Planning Association,
1776 Massachusetts Avenue, N.W.,
Washington, D.C. 20036
(202) 872-0611**

The APA is a nonprofit research and educational organization for city planners and others involved in land use and urban affairs. It has over 21,000 members and an extensive network of regional chapters. The American Institute of Certified Planners is the professional institute within APA.

Membership (at sliding salary scale - less than $85/year) includes subscription to the monthly "Planning Magazine" and quarterly "APA Journal" and access to the "Planners Bookstore" with over 1000 publications. An annual national conference is held in different cities.

APPA is the principal organization of facility managers of post-secondary educational facilities in the U.S.

**Association of Physical Plant Administrators of Universities and Colleges,
1446 Duke Street,
Alexandria, Virginia 223114-3492**

APPA is the principal organization representing the interests of higher education facility managers in the U.S. Its membership also includes secondary school district managers, private developers, contractors, materials suppliers, engineers and architects. There is an annual conference and exhibition usually held in mid-summer in various locations. Registration costs are $450 for non-members and $350 for members. Annual membership costs are $165 for individual, non-voting status and $575 for corporate, voting membership. Voting members can exhibit at the annual convention and have access to APPA's membership list once a year.

APPA has two publications: a monthly "APPA Newsletter" and a quarterly journal, "Facilities Manager" which includes advertising.

APPA has established a "Higher Education Facilities Trust" to focus on professional development of facility managers. It currently runs a training program at the University of Notre Dame.

Firms interested in correctional facilities should obtain guidelines from this Commission.

Commission on Accreditation for Corrections,
3202 Monroe Street, Suite 140,
Rockville, Maryland 20852,
(301) 770-3097

CAC is a private, voluntary, non-profit organization set up to improve the administration and operation of correctional agencies through the implementation of a standardized accreditation programme and to ensure the ongoing revision of standards in conjunction with the American Correctional Association. These standards include facility planning and design guidelines which are increasingly being followed nation-wide. Canadian firms must be familiar with the latest versions of these standards if they are to compete effectively with American architects.

CAC has produced a range of publications and manuals related to corrections accreditation and management.

MIT's Centre for Real Estate Development is one of the best sources of research on trends in the U.S.

Centre for Real Estate Development,
Massachusetts Institute of Technology,
W31-310,
Cambridge, Massachusetts 02139
(617) 253-4373

Aside from conducting a Master's degree program in Real Estate Development and offering professional development courses in the summer, the Centre has an extensive research program on land development. In addition, it has a "membership program" in which over 100 members have a forum for the structured exchange of ideas and information on topics of mutual interest. Members include developers, investors, bankers, public agencies, non-profit groups, and professionals (Canadian members include the National Capital Commission and Cadillac Fairview Corporation). Membership ranges from $5000 for individuals to $10000 for corporations and includes full access to the Centre's research data, all publications including a semi-annual newsletter, and two membership meetings per year, usually in Cambridge.

NAHRO is useful to those with an interest in public housing and redevelopment.

National Association of Housing and Redevelopment Officials,
1320 18th Street, N.W.,
Washington D.C. 20036
(202) 429-2960

Aside from acting as an information exchange and lobbying group, NAHRO sponsors a number of professional development seminars across the country and runs accreditation courses for public housing managers on behalf of the U.S. Department of Housing and Urban Development.

A diverse membership of professionals, public housing managers, local government officials and academics meets annually in October at the NAHRO convention (to be held in 1988 in New York from Oct. 25-28). Registration costs are approximately $330.

Membership of approximately $25 includes a discount on professional development courses and subscription to the bi-weekly "NAHRO Monitor" and monthly "Journal of Housing"(in which advertising space is available). The Association also publishes a directory of its publications.

NAHB's conferences and publications are excellent sources of information and contacts in the residential sector.

National Association of Home Builders,
Fifteenth and M Streets N.W.,
Washington D.C.
(202) 822-0200

NAHB is a federation of local builder associations that acts as the industry's prime lobbying force at the national level. In addition, it has a strong research department and publishes a weekly newspaper "Nation's Building News" for members only. NAHB sponsors over 200 seminars and workshops across the country each year. Two national conferences are also held: the "Membership Parade and Homes Convention" (to be held in Fort Worth, Texas between April 23-24 in 1988) and a national convention focussing on policy issues and emerging development trends affecting the industry (to be held in Dallas from January 15-18 in 1988).

Data and contacts on High-Tech are available from NAIOP.

National Association of Industrial and Office Parks,
1215 Jefferson Davis Highway,
Suite 100,
Arlington, Virginia 22202
(703) 979-3400

NAIOP's membership includes over 5,800 developers, realtors, industrial development agencies, contractors, and professionals in law, engineering and architecture. Two of its 1987 Directors are Canadians. There are 66 chapters throughout the U.S. and Canada in which there are five. The Association was founded in 1967 to provide a forum for the exchange of information, lobbying, and education and training of its members. Membership fees for architects are $425/year which includes: access to half a dozen educational programs a year; reduced registration fee at the annual national conference and exhibit (to be held in 1988 in San Francisco from Nov. 2-5); subscription to the quarterly "Development" journal (in which advertising space is available); access to an extensive collection of books and technical monographs, cassette tapes and slides; and telephone access to the NAIOP Information Centre which provides research and information circulating services to its members including bibliographies and indexes. A membership directory is also provided.

NAIOP also sponsors charettes in the form of a "Project Plan Analysis" in which volunteer members analyse specific development projects in the field for a fee of $15,000.

NAR is a good source of informaiton on commercial and industrial development.

National Association of Realtors,
430 N. Michigan Ave.,
Chicago, Illinois 60611
(312) 329-8200

777 14th St., N.W.,
Washington D.C.
(202) 383-1000

NAR is the primary lobbying and information exchange organization for realtors in the U.S. Members join through local realtor associations (including Canada's). An annual conference is held usually in November (in 1988, it will be held in San Francisco from

Nov.10-15). Registration costs are approximately $200 for non-members.

Membership includes monthly subscriptions to "Real Estate Today" and "Realtor News" and five issues per year of "Executive Officer".

Affiliated associations sponsor a wide range of state and local conferences and seminars related to the development industry. Courses range in cost from $75-$500.

NCMD has market information on specific cities and towns.

National Centre for Municipal Development
1620 I Street N.W.,
Washington D.C.
(202) 429-0160

The Centre is an educational and advocacy group promoting the development of specific municipalities. Project officers are each responsible for a small number of cities and seek means of channelling federal and private sector funds into these cities. This is an excellent source of information on specific market opportunities as all officers are well-briefed on waterfront potentials in their individual cities.

The Centre publishes a monthly newsletter.

THE NCUED is a major player in promotion of public/private partnerships in downtown revitalization.

National Council for Urban Economic Development
1730 K Street, N.W., Suite 1009,
Washington, D.C. 20006
(202) 223-4735

The Council is an information clearinghouse on urban economic development focussing on public and private joint ventures. Membership includes corporations, municipalities, consultants and redevelopment authorities. Regional chapters are located in Arizona, Connecticut, Florida, Georgia, Illinois, Indiana, Iowa, New Jersey, New York, Ohio, Pacific-Northwest, Pennsylvania, Rhode Island and Virginia.

The Council publishes a quarterly magazine ("Developments and Commentary"), various legislative reports and updates on urban economic development, and various guidebooks and manuals. In addition, membership at a minimum $250/year, provides access to the

"Clearinghouse", a telephone network providing access to all members and technical staff in Washington. A number of regional workshops are held each year. The annual conference is held in Washington each spring.

The National League of Cities is an important network of municipal administrators.

National League of Cities,
1301 Pennsylvania Avenue, N.W.,
Washington D.C. 20004
(202) 626-3000

The NLC is the premier lobbying group of municipal governments in Washington. With a membership of 49 states and 1200 cities, the League develops a national urban policy through the "Priorities for America's Cities" statement which is tabled at annual "Congressional-City Conferences" held in Washington in March. These conferences are the principal forum through which cities impact on the federal budget and legislation. An annual "Congress of Cities" is held for the general membership in November or December (1987 congress is in Philadelphia).

Associate membership is available for $750/year. Members receive a weekly newspaper "Nations Cities Weekly", weekly "Urban Affairs Abstracts", a directory of 9000 key municipal officials, and access to a large series of reports and monographs on urban issues.

The National Trust is the key organization for historic preservation in the U.S.

National Trust for Historic Preservation
1785 Massachusetts Avenue, N.W.,
Washington D.C. 20036
(202) 673-4000

Aside from acting as a human resource and technical reference centre on historic preservation, the Trust also runs the National Main Street Centre. Regional offices are located in Philadelphia, Chicago, Boston, Charleston, Denver, Fort Worth and San Francisco.

The Main Street Centre sponsors numerous regional workshops and publishes a monthly newsletter "Main Street News". Membership in the National Main Street Network costs $195/year (also includes membership in the National Trust). The National Trust publishes a monthly newspaper "Preservation News" and a bimonthly magazine, "Historic Preservation". It also holds an annual "National Preservation Conference and Rehabitat" (exposition) in October. The 1987 conference is in Washington and that for 1988 in Cincinnati, Ohio.

Office of Coastal Zone Management,
Office of Policy and Evaluation,
3300 Whitehaven Street, N.W.,
Washington, D.C. 20235
(202) 634-4245

OCZM funds urban waterfront and harbour planning project through state OCZM grant programs. In addition, the office conducts research and offers advice and technical assistance pertaining to urban coastal issues.

This Forum is useful to firms interested in Health Care.

The Forum for Health Care Planning
1101 Connecticut Avenue, N.W.
Suite 700
Washington, D.C. 20036
(202) 857-1162

The Forum and its predecessor, the American Association for Health Care Planning, has been active for thirty years in bringing together those responsible for the health care delivery system - hospital executives, practising physicians, hospital architects, hospital consultants, hospital and medical associations, financing specialists, third party payers, health lawyers, health officers and public educators and government personnel.

The Forum issues a quarterly newsletter to members which profiles policy issues, specific events and projects and lists a schedule of regional and national meetings.

An Annual Health Planning Forum is held in Washington and provides the opportunity for architects to keep abreast of health care trends, design issues and establish marketing networks.

The Bureau of the Census is the source of essential information on construction and demograhic trends in the U.S.

U.S. Department of Commerce,
Bureau of the Census,
Customer Services,
Washington D.C. 20233

An essential data source for Canadian firms conducting market research in the United States is the Bureau of the Census. Data is available in print form, on computer tapes, and, in some cases, on PC-based data diskettes. Monthly construction statistics are available at various geographic levels through the Bureau's "Construction Reports". In addition, a monthly "Construction Review" outlines key residential and non-residential trends at the national and state levels as well as for selected metropolitan areas.

The ULI is an excellent source of information on development trends in the U.S.

Urban Land Institute,
1090 Vermont Avenue, N.W.,
Washington D.C., 20005
(202) 289-3307

The ULI is a 10,000-member, independent research and educational organization of professionals, developers, government officials and academics focussing on issues of urban land development.

Publications include the monthly "Urban Land Magazine", the monthly "Land Use Digest", and over 100 books and monographs on urban issues. Numerous regional workshops are held every year. The annual conference is held in the autumn, generally in Washington. Membership for firms is $220/year.

This Centre is an important forum to be tapped by firms interested in waterfront re-developments.

The Waterfront Centre,
1536 44th Street, N.W.,
Washington D.C. 20007
(202) 337-0356

The Centre is a non-profit educational organization dealing with waterfront development issues throughout the United States. It also provides consulting "charettes" to municipalities.

A bimonthly newsletter, "Waterfront World" outlines recent events, profiles specific projects, and lists conferences related to waterfront development (cost is $54/year).

Four publications have also been produced by the Centre.

An annual conference is held in Washington each year, usually in mid-September, and is an excellent forum for Canadian architects to present papers and establish marketing networks.

3.3 Canadian Trade Posts in the U.S.

The Department of External Affairs maintains an active trade promotion group both in Ottawa and in consulates throughout the U.S.

The Department of External Affairs maintains an active trade promotion bureau in Ottawa and Trade Development desks in a number of consulates in the United States. Canadian firms should contact these offices prior to commencing market research and promotion activities.

Ottawa

United States Trade and Investment Development Bureau,
Department of External Affairs,
Lester B. Pearson Building,
125 Sussex Drive,
Ottawa K1A 0G2
(613) 991-9479

Washington

Trade Promotion and Market Access Section,
Canadian Embassy,
2450 Massachusetts Ave. N.W.,
Washington, D.C. 20008-2881
(202) 483-5505

Atlanta

Consul and Senior Trade Commissioner,
Canadian Consulate General,
400 South Tower,
One CNN Centre,
Atlanta, Georgia 30303-2705
(404) 577-6810

Boston

Consul and Senior Trade Commissioner,
Canadian Consulate General,
Three Copley Place, Suite 400,
Boston, Mass. 02116
(617) 262-3760

Buffalo

Consul and Senior Trade Commissioner,
Canadian Consulate General,
One Marine Midland Center,
Suite 3550,
Buffalo, N.Y. 14203-2884
(716) 852-1247

Chicago	Deputy Consul General and Senior Trade Commissioner, Canadian Consulate General, 310 South Michigan Avenue, 12th Floor, Chicago, Illinois 60604-4295 (312) 427-1031
Cleveland	Consul and Senior Trade Commissioner, Canadian Consulate General, Illuminating Building, Suite 1008, 55 Public Square, Cleveland, Ohio 44113-1983 (216) 771-0150
Dallas	Consul and Senior Trade Commissioner, Canadian Consulate General, St. Paul Place, Suite 1700, 750 N. St. Paul Street, Dallas, Texas 75201-9990 (214) 992-9806
Detroit	Consul and Senior Trade Commissioner, Canadian Consulate General, 1920 First Federal Building, 1001 Woodward Avenue, Detroit, Michigan 48226-1966 (313) 567-2340
Los Angeles	Deputy Consul General and Senior Trade Commissioner, Canadian Consulate General, 300 South Grand Avenue, 10th Floor, California Plaza, Los Angeles, California 90071 (213) 627-9511
Minneapolis	Consul and Senior Trade Commissioner, Canadian Consulate General, 15 South Fifth Street, Minneapolis, Minnesota 55402-1078 (612) 333-4641
New York	Consul and Senior Trade Commissioner, Canadian Consulate General, 1251 Avenue of the Americas, New York, N.Y. 10020-1175 (212) 586-2400
San Francisco	Canadian Consulate General, One Maritime Plaza, Suite 1100, Alcoa Building, Golden Gateway Center, San Francisco, California 94111-3468

(415) 981-2670

Seattle

Consul and Senior Trade Commissioner,
Canadian Consulate General,
412 Plaza 600, Sixth and Stewart,
Seattle, Washington, 98101-1286
(206) 443-1777

In addition, firms should contact their provincial governments to identify possible trade offices in regions of interest.

4.0 Entering the U.S. Market

4.1 The Market Environment

Despite our many similarities, the U.S. is a different market.

Although there are generally few constraints for Canadian architects seeking to practice in the U.S. which do not apply equally to American architects, there are some inherent conditions that differ from Canada and which, if not adequately addressed at the outset, can seriously erode the chances for market penetration by Canadian firms. They consist of political, economic, commercial, regulatory and socio-cultural constraints that are described below. It must be noted that, as a result of negotiations currently underway on liberalized trade between Canada and the U.S., and the RAIC's parallel series of formal discussion with the American Institute of Architects, many of these constraints could be mitigated by the end of 1987. Already, as a result of joint representations to their respective governments, the RAIC and AIA have succeeded in removing duties on drawings entering the U.S. and greatly reducing those being brought into Canada. Firms seeking to export to the United States should make a special effort to follow the negotiations and contact the RAIC for clarification of any perceived changes that may be taking place.

Protectionism is taking hold in some sectors.

Although directed primarly at the Japanese with whom the U.S. has a persistently large trade deficit, the growing sense of protectionism in Congress, in many State governments, and among an increasing portion of the private sector in the U.S. represents a possible impediment to market entry by Canadian firms. Those who have sought to geographically diversify their practices in Canada by establishing in other provinces understand the kinds of political and attitudinal issues that must be faced.

Although the attitude of many Americans that "our architects are the best - why hire Canadians?" is perhaps understandable, there are specific niches in urban development and building construction in which Canadian expertise is unique. The limiting of market access through blatant protectionist measures has not yet been encountered by Canadian architects. However, they should be aware that, in some sectors (certainly not widespread), attitudes are not conducive to awarding of commissions to foreigners.

Government procurement often requires having a local branch office fully staffed by professionals.

In terms of **government procurement**, there are policies at the Federal, State, and local levels of which Canadian firms should be aware. A number of municipalities have enacted regulations that favour local procurement of services (eg. "Buy Chicago"). Regulations of most States give preferences to state-based firms.

At the Federal level, the General Services Administration (the largest procurement agency for architectural services) has a policy of awarding contracts to firms in the project locale. Should no qualified firms exist, the net is broadened to the state, and then regional scales. Firms must be **fully operational** in the locale to be considered.

4.2 Precision

Firms should focus on specific sectors and locations.

Entering the U.S. market requires considerable precision in market research, planning of effective organizational modes and promotional programs, and perseverance in tracking clients and projects.

Since the market is huge, firms must be very precise in targetting both service sectors and geographic markets. Market research should focus on identifying areas with effective demand for services. Effective demand is demand backed up by capital.

Similarly, the effective supply of architectural services should be carefully analysed. There may be many local architectural firms in a particular location but, since they do not have the specialized expertise required in, for example, health care facilities, are not serious competition to a qualified Canadian firm. Alternately, the few local architects could have extensive experience in waterfront design and therefore preclude a Canadian firm with similar expertise.

Firms should attempt to identify project opportunities and then link up with Canadian developers interested in the U.S. market.

With the trend toward cooperative, public/private joint ventures for most of the identified market niches, the importance for Canadian architects of developing and maintaining networks with developers, development agencies and financing/management houses both in Canada and the U.S. cannot be over-emphasized.

The maxim that "the best project is one which you create yourself" is particularly relevant when looking at the U.S. market. With seven of the top ten developers in North America being Canadian, there is ample opportunity for architects to take the initiative in identifying projects, seeking out Canadian financial participation, and putting the development package together. This is probably the most effective way most firms will have to participate in downtown revitalization, waterfront re-development, and high-tech manufacturing projects in the U.S.

Domestic competition is strong. It is being supplemented by foreign firms, many from Europe.

Competition is the major commercial constraint for Canadian architects trying to enter the U.S. market. U.S. domestic competition is very strong and penetration of the U.S. market by architects from other countries, particularly Europeans, is increasing. Foreign interests - European contractors in several cases - have purchased a number of American architectural and engineering firms in recent years. In 1985, foreign firms accounted for $115.4 million of the design services market -a 20 percent increase over 1984.

But most foreign competition has come from Canada.

Most foreign competition has been from Canada: Canadian firms accounted for 60 percent of foreign penetration in 1985. Although figures are not available, it is likely that the largest portion of Canadian work centered on only a few firms involved in large projects financed by Canadian developers.

Most firms are in Texas and California..but most medium-sized firms are close to Canada.

There are now over 14,000 American architectural firms. The heaviest concentration is in Texas and California (Fig.18) followed by New York, Illinois and Florida. In terms of medium-sized firms - the likeliest competition to Canadian exporters - they are concentrated along the Great Lakes, Massachusetts, Maryland, Georgia, Florida and Colorado (Fig. 19).

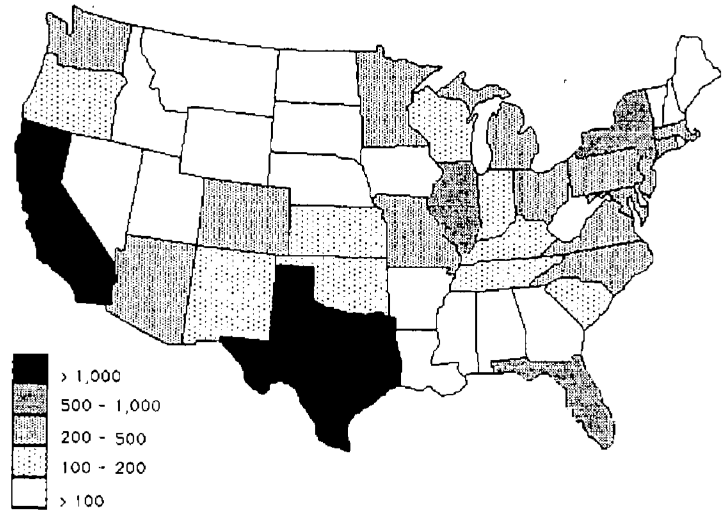

Figure 18: Total Number of Architectural Firms, 1987
Source: American Institute of Architects

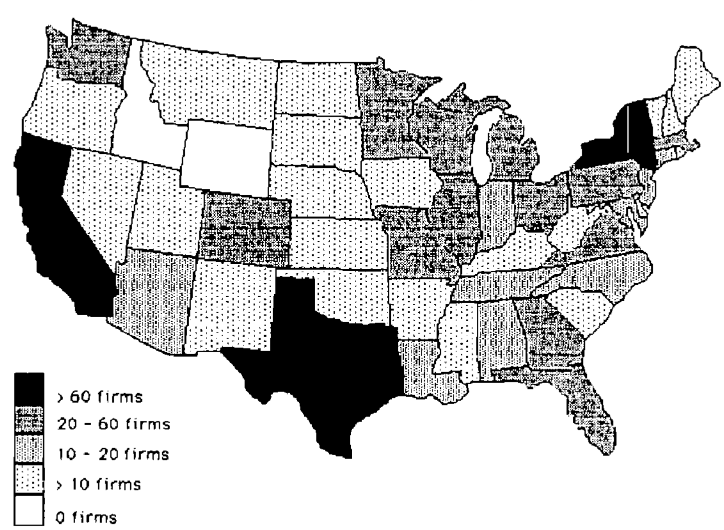

Figure 19: Distribution of Medium-Sized Architectural Firms (6-20 professionals), 1987
Source: American Institute of Architects

Surprisingly, the greatest amount of non-residential construction per architectural firm occurred in 1986 in Indiana and Nevada followed by Michigan, Minnesota, Maine, New Hampshire, Virginia and Tennessee (Fig. 20) due to the few firms having access to large capital outlays. Competition is therefore likely to be more fierce in New York State, Massachusetts, Maryland and Washington.

Canadian firms have the advantage over other foreign competition by virtue of location.

Clearly, without a particular specialty or an international reputation, Canadian firms can only compete on the basis of price. Their proximity to the U.S. market however, does provide a competitive edge compared to other foreign firms. It is comparatively easier for Canadians to establish a local office and/or enter into a joint venture type arrangements which give access to a larger slice of the government procurement market.

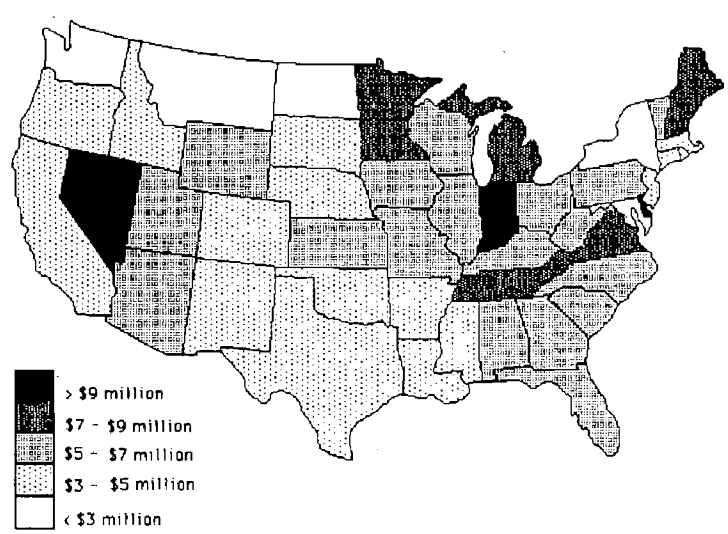

Figure 20: Ratio of Volume of Non-Residential Construction ($mil) to Number of Architectural Firms, 1986

Source: American Institute of Architects and U.S. Dept. of Commerce, Bureau of the Census

Firms should be aware that professional liability costs are very high in the U.S.

Another commercial constraint of which firms should be aware is the high costs of professional liability insurance in the U.S. Fewer companies are insuring architects and those that are often charge up to 400% more than they did several years ago. Most of these costs, which of course competing American firms must also account for, can be borne by higher charges to clients.

4.3 Planning

Firms must have time, energy and dollars for export.

A prerequisite to export is having the funds, time and energy required to penetrate a new market. Should the firm have these resources - backed up by commitment at senior managerial levels - careful planning is required.

Firms are cautioned against looking at the U.S. market to fill a temporary slack in domestic work. Export is a distinct business thrust that requires a long-term commitment if marketing efforts are to succeed.

First look at nearby markets...

A basic tenet of market planning is to first analyse market potentials in nearby market territories. Adjacent areas often require less financial commitment, time and effort than territories that are distant and perhaps less familiar to the exporter. There may be projects in Portland, Buffalo, Duluth, Great Falls and Seattle that firms could access quicker than those in Georgia or California.

...and then commit resources.

Resources are required for four distinct marketing activities: choosing the most appropriate market niche for the firm; preparing promotional materials (American firms tend to have glossy brochures, slides and videos); building networks by attending conferences, workshops, exhibitions etc.; and travelling to touch base with potential clients on a regular basis.

There are four ways of working in the U.S.

Firms can follow one of four principal organizational modes in practicing in the U.S.:

- Consulting

Consulting is the simplest form of export.

Firms can market their services to American practices as project planning and design consultants. Particularly in specialized areas such as architectural programming, technical methods, and facility management, this approach may work the best for many smaller and medium-sized firms. Alternately, firms can promote consulting services directly to prospective clients requiring specialized expertise that a Canadian architect may have. Many of the immigration difficulties associated with work permits can be alleviated through a consulting mode.

- Joint Ventures

Joint venturing with American firms is often the most effective.

Possibly the most effective organizational mode for provision of basic architectural services, joint ventures have the advantage of an already-established local presence. Canadian firms, although in some cases requiring state registration, are spared from a number of procedural nuisances such as conformance to secondary regulations. Most Canadian firms now practising in the U.S. do so through project-specific joint ventures. They are either approached directly by American firms for their specialized expertise (implying the need for good exposure of Canadian firms in the American professional press) or, if doing work for a Canadian client, identify suitable local partners. Another advantage of joint ventures is that Canadians can often do most of their work out of their own home offices and not be required to incur additional overhead expenses by establishing operations in the U.S.

- Piggybacking

Piggybacking on Canadian developers and manufacturers has worked for firms in the past.

Closely related to Joint Ventures is the piggybacking route into the U.S. Several firms who have already established working relationships with Canadian developers in Canada, have been able to secure their first toehold in the American market by working on private development projects. Once they have become familiar with the markets in the course of the first or second project, they have established permanent offices in the U.S.

• Local Office

Establishing local offices is risky but potentially the most lucrative form financially.

By far the most risky organizational mode, some Canadian firms have been successful in establishing local branch offices in the U.S. State licensing and work permits have been obtained, local staff hired, and business networks have been established. The Local Office route requires extensive time, effort and financing but, as some have found, the payoff in the end has been lucrative. Firms considering this mode should ensure that they have the managerial capacity to handle both Canadian and American operations.

Immigration and work permit restrictions are very onerous in the U.S.

Canadian firms should be aware of the immigration restrictions existing in the United States. Canadian architects can obtain work permits in the U.S. in one of four ways: by obtaining a B-1 visa for exploratory visits; an H-1 visa for "persons of distinguished merit and ability"; an H-2 visa for "persons who desire to enter the United States temporarily to perform other temporary services or labour if unemployed persons capable of performing such service or labour cannot be found in the United States"; or, if a U.S. branch office has been legally established, an L-1 visa "for certain employees of international firms who are being transferred...in a managerial or executive capacity or in a capacity requiring specialized knowledge".

Interpretation of regulations is often arbitrary and not uniform.

Employment visas are issued by local Immigration and Naturalization Service offices. There are no uniform standards in the United States that prevent differing interpretations and decisions by INS personnel. An architect may be judged in New York's INS office to have "distinguished merit and ability" and then, a year later to be rejected by San Francisco's INS office.

To obtain an H-2 visa for Canadian staff, it is conceivable that a legally-established firm could be forced to advertise nation-wide, and only if a suitable U.S. candidate cannot be found (from 72,000 licensed architects) be able to hire its Canadian principal to work in the U.S.

According to U.S. consular officials in Ottawa, a Canadian architect, wishing to set up a firm or joint venture in the United States, should most likely apply for an L-1 visa covering employee transfer. However, again, there is no uniform way of determining the nature of a "qualifying business relationship" required between the two firms or of defining what constitutes "managerial, executive or specialized knowledge capacities". Again, the RAIC and AIA are addressing this issue with respective governments by simplifying immigration procedures and establishing uniform definitions affecting architects.

In addition, there is a plethora of secondary regulations that must be met on federal work.

Another important set of regulatory constraints that firms should be aware of is the plethora of "secondary" regulations that must be conformed to in the conduct of federal or federally-funded work. These regulations concern minority and women's rights, and labour and safety issues. Although American firms must also comply with these requirements on federal contracts, they have had the benefit of time and experience in dealing with what are often time-consuming and onerous regulations.

Professional registration is another aspect to be considered in export planning.

The registration of architects is, similar to the situation in Canada, a responsibility of each individual state or district: State Boards of Registration issue licenses to practice architecture. To ensure some consistency among state registration practices, every jurisdiction is a member of the National Council of Architectural Registration Boards (NCARB). The mandate of NCARB is to recommend to member states standards of professional practice, to administer a uniform set of registration examinations, and to administer a central certification procedure that facilitates inter-state licensing of architects.

There are nine divisions to the NCARB registration examinations. Ontario and British Colombia have adopted five of these nine as their provincial licensing examinations and several other provinces are likely to follow suit. However, NCARB refuses to accept applications of Ontario and B.C. architects for certification until these provinces administer the complete nine divisions and increase their marking levels to match those in the U.S.

To apply to states for registration, most require prior accreditation of one's architectural degree by the National Association of Accreditation Boards. Although NAAB has, to date, not accredited any Canadian degrees, there are strong indications that they will do so by the end of 1987.

There is no uniform code of ethics in the U.S.

Unlike in Canada, there is no uniform code of ethics covering the practice of architecture in the U.S. Although such codes of conduct are virtually universal in Canada, in the U.S., two sets of recommended codes exist. NCARB has a set of "Rules of Conduct" which is not binding on a state board. In addition, the American Institute of Architects (AIA) has a code of ethics. It governs the conduct only of those individuals who are members of the AIA (approximately 75% of American architects). Since membership in the AIA is not a requirement for state registration and practice, individuals found guilty of professional misconduct by the AIA, and not by a state, could continue to practice.

Enforcement lies with the state governments who are often reluctant to prosecute for professional misconduct.

In the United States, the responsibility for enforcing professional conduct is left in the hands of state attorneys-general (ie. the profession is not self-governing). According to senior administrators of the AIA, it seems that, since the attorneys-general are elected officials - and since professional misconduct cases do not carry a high profile - there is little motivation to prosecute and enforce state rules of conduct.

RAIC and AIA are working on an Accord on Professionalism.

In an effort to address ethical concerns, the RAIC and AIA are negotiating an Accord on Professionalism that will set forth the principles that should govern the practice of architecture in both countries. It is expected that these principles will be reflected in regulation of architectural practice at the state level.

Although there are difficulties, there are many market opportunities. Several Canadian firms are succeeding admirably.

Although the above-noted factors may appear daunting, so also is the size, scale and excitement of the U.S. market. Several Canadian firms have found ways to mitigate or otherwise deal with these constraints and have considerably expanded their practices and professional interests.

4.3 Perseverance

Firms should count on a 2-3 year haul before securing significant work in the U.S.

Sources of market information on the eight niches have been described in this report. Other data sources are outlined in the bibliography. All of these documents or organizations have much to offer the Canadian architect that is serious about market research. Many of the groups contacted during this project are surprisingly open and forthright in dispensing information and insights to Canadians (sometimes overly so!).

Despite the abundance of published information, once a service sector and geographic location has been tentatively targetted, firms <u>must</u> do field research before mounting a promotional program. There is nothing more effective in targeting a market than getting a personal feeling for opportunities and potential problems.

Entry into foreign markets is rarely easy. Firms must persevere often for 2-3 years before the first export contract is obtained. However, as mentioned earlier, Canadians have a distinct advantage in entering the U.S. market over foreign competition because of our location and familiarity with business practices. Entry into offshore markets is comparatively difficult.

Canadian firms have long been aware of the overall decline in demand for architectural services in Canada. To survive in the long term, Canadian architects will have to address export markets.

But the net benefits could be substantial.

The United States represents a significant market opportunity in a number of niches. With precise market research, well-prepared promotional programs based on the most appropriate organizational mode, and perseverance in tracking clients and specific projects, Canadian firms can look to the United States for significant professional and financial benefits.

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