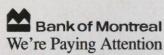


OPPORTUNITIES IN MEXICO: THE CONSTRUCTION SERVICES MARKET



A C C E S S N O R T H A M E R I C A



Department of Foreign Affairs Ministère des Affairs étrangère and International Trade et du Commerce international Latin America & Caribbean Trade Division



CANADIAN CONSTRUCTION ASSOCIATION

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Canada - Mexico: Industry Market Profile Series

Opportunities in Mexico: The Construction Services Market

was developed by the Department of Foreign Affairs and International Trade (DFAIT), researched and written by Townsend Trade Strategies Inc. in collaboration with the Canadian Construction Association (CCA) and Industry Canada.

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Any errors or omissions found in this book are the sole responsibility of the authors. As well, all opinions expressed herein are those of the author, not of the Government of Canada, the Bank of Montreal, Baker & McKenzie or the Canadian Construction Association.

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CANADA-MEXICO: INDUSTRY PROFILE

OPPORTUNITIES IN MEXICO-THE CONSTRUCTION SERVICES SECTOR



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A North American Free Trade Agreement (NAFTA) expands Canada's free-trade area of 270 million people into a market of 360

population of the 12 countries of the European Community and one with a total North American output of \$7 trillion.

Mexico is Canada's most important trading partner in Latin America. Two-way merchandise trade with Mexico exceeded \$3.5 billion in 1992 and is expected to increase to over \$5 billion by the end of the

Cumulative Canadian investment in Mexico is growing rapidly, increasing from \$350 million in 1989 to over \$580 million in 1992. This guide booklet has been prepared with the problems inherent to the initiating exporter in mind. However it is not exhaustive; individual circumstances, interests and needs will dictate how companies should tailor their approach and strategy to the Mexican market. While every attempt has been made to ensure accuracy in this study, no responsibility can be accepted

Further assistance can be obtained by

Industry Canada (IC) through the provincial International Trade Centres (Key Contacts

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TABLE OF CONTENTS

INTRODUCTION	5
1. THE CONSTRUCTION INDUSTRY IN MEXICO	5
Infrastructure Development Priorities	6
Industry Structure	7
Regional Activity	10
2. PROFILE OF MEXICAN CONSTRUCTION COMPANIES	11
Industry Specialization	11
Globalization of the Industry	12
Opportunities for Canadian Companies	12
Key Success Factors	13
3. SECTORAL OPPORTUNITIES — ROADS AND HIGHWAYS	14
The Highway Concession Program	14
Opportunities for Canadian Companies	16
4. SECTORAL OPPORTUNITIES — WATER INFRASTRUCTURE	17
Comisión Nacional del Agua (CNA)	17
Water Projects	17
Selling to the CNA	19
Opportunities for Canadian Companies	19
5. SECTORAL OPPORTUNITIES — THE ENERGY SECTOR	20
Petróleos Mexicanos (Pemex)	20
Comisión Federal de Electricidad (CFE)	21
Opportunities for Canadian Companies	22
6. SECTORAL OPPORTUNITIES — HOUSING	23
Housing Market Demand	23
Opportunities for Canadian Companies	26
7. Sectoral Opportunities — Tourism	26
FONATUR	27
Mega-Projects	28
Investment in Tourism — The Trust Mechanism	28 28
Opportunities for Canadian Companies	28



8.	OTHER OPPORTUNITIES	29
	Ports	29
	Railways	29
	Industrial Plants, Parks & Warehouses	30
	Commercial Development	30
	Social Development	31
9.	THE REGULATORY ENVIRONMENT	31
	Establishing a Construction Company In Mexico	31
	Building Permits	32
	Building Codes	33
	Standards	34
	The Use Of Local Labour	34
	Environmental Legislation Relating to Construction	36
	Patent and Trademark Protection	36
	Taxation	37
	Remittability of Funds	37
	Work Permits For Canadians	37
10). Public Works Contracting	38
	Tender Notification	39
	Bidding	39
	Award	40
	Contract Disputes	42
	Evolution of the Public Works Law	42
	Tips for Canadian Bidders	43
12	2. THE IMPACT OF NAFTA	44
	Government Procurement	44
	Cross-Border Trade in Services	47
	References	48
13	3. WHERE TO GO FOR ADDITIONAL ASSISTANCE	49
	Canadian Government Departments and Services in Canada	49
	Key Contacts in Canada	55
	Canadian Government Departments and Services in Mexico	57
	Key Contacts in Mexico	57

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INTRODUCTION

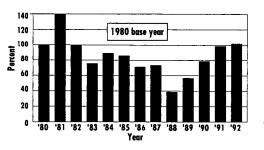
This guide has been prepared to assist Canadian firms interested in exporting construction services to Mexico. It provides an overview of the country's plans for infrastructure development and the general level of activity experienced by Mexican construction firms. Sections 3 to 8 examine six key subsectors which offer the greatest potential to Canadian contractors:

- roads and highways;
- water infrastructure;
- the energy sector;
- housing;
- tourism; and
- others port, railway, industrial, commercial and social development.

The guide lists the various regulatory issues involved in establishing a local construction company, applying for building permits, and employing Mexican labour. As public works projects represent the most significant portion of construction activity, a step-by-step overview of the public tendering process is included. Finally, the guide provides a section which summarizes the enhanced opportunities for Canadian construction firms that have resulted from the implementation of the North American Free Trade Agreement (NAFTA) on January 1, 1994.

1. THE CONSTRUCTION INDUSTRY IN MEXICO

FIG. 1.1 REAL VALUE OF CONSTRUCTION ACTIVITY (1980-1982)



Source: Mexican Construction Associatian (CNIC)

In the 1970s and early 80s the construction industry was one of Mexico's fastest growing industrial sectors, fueled by a booming economy based on oil exports. Following the economic crash of 1982, production declined dramatically hitting an all time low in 1988. Five years later the industry has demonstrated a strong comeback and is beginning to offer Canadian construction, engineering and architectural firms significant opportunities.

Though construction activity has not yet regained the stellar levels of the early 1980s, industry growth has averaged 30 percent per annum between 1988 and 1992. This growth is a direct result of a commitment by the current government to infrastructure development. Mexico's public infrastructure has been one of the most critical constraints on the country's economic growth. Road and port construction have become major priorities, reflecting a sense of urgency in improving the country's transportation routes in order to facilitate trade. Large scale energy generation and water and sewage systems are planned as part of the government's promise to improve the overall standard of living and private sector investment in housing, commercial buildings and tourism mega-projects is rising substantially.



^{*}All currencies are in \$ Canadian unless otherwise stated.

In 1992 construction activity represented 5.3 percent of Gross Domestic Product (GDP¹) and employed 10 percent of the Mexican labour force. The value of construction contracting in the formal sector of the economy — i.e. as reported by the 18,000 construction firms representing the industry — was approximately U.S. \$11 billion.² It is estimated that the total value of the industry could be twice this figure if the informal industry is included. The informal sector includes house building, repairs, maintenance and remodeling performed by individuals.

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INFRASTRUCTURE DEVELOPMENT PRIORITIES

In 1989 the government established the priorities for Mexico's social and economic development over the following 10-year period through its *Plan Nacional de Desarrollo* (National Development Plan). The Plan outlines an ambitious program for infrastructure development required to achieve the government's goals of economic growth. Highlights of the Plan are:

- the construction of 15,000 km of new four-lane highway;
- plans to bring new drinking water, sanitary sewer, and drainage systems to an estimated 3 million inhabitants per year;
- the construction of 1500 waste water treatment plants;
- increasing the area of land under irrigation by 2 million hectares;
- doubling the generation capacity of installed electrical plants;
- the construction of 6 to 8 million housing units;
- the modernization of 15,000 km of railroad;
- the expansion or installation of 3 industrial ports in the Gulf of Mexico and 3 more on the Pacific Coast; and
- plans to develop and upgrade industrial parks in order to double employment capacity.

Efforts to fulfill the Plan are reflected in the concentration of construction activity currently observed in Mexico. Table 1.1 shows the type of work performed by the Mexican construction industry in 1992. After non-residential building, land transportation works occupy the second most important area of activity, as a result of the early emphasis placed on the highway improvement program. The most significant areas of growth since 1991 are in water works and residential buildings, reflecting the growing attention being placed on these aspects of the Plan.

TABLE 1.1 TOTAL CONSTRUCTION CONTRACTING PERFORMED BY MEXICAN CONSTRUCTION COMPANIES BY TYPE OF WORK, 1992

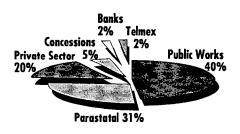
Type of Work	Construction Activity in 1992 (U.S. \$billions)	percentage of Total Work	
Non-residential buildings	1.82	16.58	
Land transportation works	1.59	14.47	
Industrial construction	1.34	12.15	
Residential buildings	1.20	11.06	
Urban development	1.18	10.71	
Water and sanitation works	0.94	8.60	
Utility installations	0.75	6.82	
Maritime works	0.46	4.21	
Professional services	0.44	4.02	
Other works	1.25	11.38	
TOTAL	\$11.0 \$	100 %	

Source: Mexican Construction Association (CNIC)

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FIG. 1.2 CONSTRUCTION ACTIVITY BY CLIENT 1992



Source: Mexican Construction Association (CNIC)

INDUSTRY STRUCTURE

Traditionally, the state has played the major role in the Mexican construction industry, funding the majority of projects. However, as a result of the structural changes in the Mexican economy, the privatization of government and *parastatal* organizations, and the reduced federal budget, there is considerably more private sector involvement in the industry today.

Essentially, there are three main client groups for construction services, each representing approximately one-third of the total activity:

- the government (federal, state and municipal);
- the *parastatal* enterprises; and
- the private sector.

Mexico is a federation of 31 states and the Federal District, each with distinct budgets and spending plans. The *parastatal* enterprises are public companies dedicated to producing goods and services for public consumption. Examples are Petróleos Mexicanos (Pemex) and the Federal Electricity Commission (CFE).



In analyzing the distribution of work by client group (Fig. 1.2) it is important to note that:

- Public sector work accounts for over 70 percent of formal construction activity. Hence government procurement opportunities are key to involvement in the industry.
- The *parastatal* entities represent the single largest spending group with over 30 percent of construction activity.
- Public construction activity is decentralized. In fact, total state and municipal government spending is greater than that of the federal government.

The following is a more detailed breakdown of construction activity performed by the federal government, *parastatal* enterprises and the private sector.

TABLE 1.2

BREAKDOWN OF MEXICAN FEDERAL GOVERNMENT CONSTRUCTION ACTIVITY, 1992

Federal Government Entity	Construction Activity in 1992 (U.S. \$millions)	percent
Secretariat of Communications and Transportation	478	32.7
National Water Commission	370	25.4
Federal District Department	359	24.6
Secretariat of Health	91	6.2
Secretariat of Social Development and Housing	60	4.1
Other	102	7.0
TOTAL	\$1,460	100 %

Source: Mexican Construction Association (CNIC)

The significant participation of the Secretariat of Communications and Transportation is a direct result of the introduction of the highway rehabilitation program. The National Water Commission's activity is channeled towards potable water, sewer and water treatment systems. The Department of the Federal District (DDF) is a significant contributor to overall government spending on public works. Nearly one fourth of the country's population lives in the Mexico City metropolitan area which comprises the Federal District. Currently in Mexico City more than U.S. \$5 billion is being invested in new building projects. However, more and more private and foreign investment is being directed towards these projects.



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TABLE 1.3 BREAKDOWN OF PARASTATAL CONSTRUCTION ACTIVITY, 1992

		percent	
Parastatal Entity	Construction Activity in 1992 (U.S. \$millions)		
Petróleos Mexicanos (Pemex)	1,294	38.0	
Workers' Housing Program (INFONAVIT)	760	22.3	
Federal Electricity Commission (CFE)	468	13.7	
School Construction Program (CAPFCE)	216	6.4	
Road and Bridge Maintenance Program (CPFISC)	116	3.4	
Social Security and Health System (IMSS)	110	3.2	
Other	444	13	
TOTAL	\$3,408	100 %	

Source: Mexican Construction Association (CNIC)

Of the *parastatal* enterprises, Pemex, CFE and INFONAVIT are responsible for 74 percent of public works construction. The activities of these three enterprises are discussed in further detail in Sections 5 and 6.



TABLE 1.4

BREAKDOWN OF PRIVATE SECTOR CONSTRUCTION ACTIVITY, 1992

Private Sector Activity	Construction Activity in 1992 (U.S. \$millions)	percent
Industrial	641	20.5
Concession works	512	16.4
Residential	278	8.9
Banks	232	7.4
Teléfonos Mexicanos (Telmex)	223	7.2
Hotels	173	5.5
Other	1,062	34.0
TOTAL	\$3,120	100 %

Source: Mexican Construction Association (CNIC)

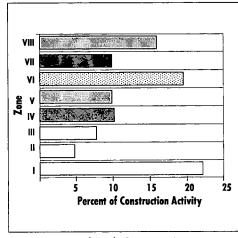


The high degree of industrial work in the private sector is a reflection of the increase in foreign investment in the country. Foreign companies that are establishing operating facilities within Mexico are driving the need for new plants and industrial parks. Concession work refers to the government highway program, discussed further in Section 3.

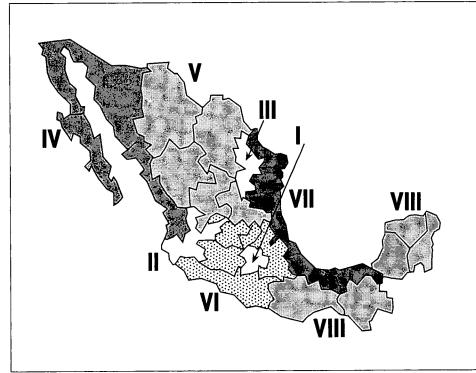
REGIONAL ACTIVITY <u>1</u>.2

The location of construction activity throughout Mexico varies with population density. Most activity occurs in Zone I — the Mexico City Valley. Over 25 percent of the country's 90 million people live in this region. The continued pressure of people migrating from the countryside to the city adds a further one million people per year to the VALLEY. To counter the pressure, development is being channeled toward a number of satellite cities in the states neighbouring the valley. Strict environmental legislation, forcing new industry out of the Valley, has caused emerging cities in the Zone VI region to experience rapid growth. For example, considerable construction activity can be observed in the cities of Aguascalientes, Puebla, Querétaro, León, Toluca and Pachuca.

Fig. 1.3 **REGIONAL CONSTRUCTION ACTIVITY, 1992**



Source: Townsend Trade Strategies Inc.





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2. PROFILE OF MEXICAN CONSTRUCTION COMPANIES

The Mexican housing, construction, and services industry employs 2 million workers in approximately 18,000 companies. All companies involved in commercial contracting must be members of the Mexican Construction Association whose official name is Cámara Nacional de la Industría de la Construcción (CNIC), National Construction Industry Chamber. In general, the industry is dominated by a few large companies.

Class of firm	No. of Companies	percent of Companies	Value of Production (U.S. \$billions)	percent of Production
Gigantic	299	1.66	6.1	55
Large	614	3.40	0.5	5
Medium	2,609	14.46	0.9	8
Small	14,527	80.49	3.5	32
Total	18,049	100 %	\$11	100 %

TABLE 2.1 MEXICAN CONSTRUCTION INDUSTRY, 1992

Source: Mexican Construction Association (CNIC)

Small firms are those with annual sales up to approximately U.S. \$1 million; medium-sized firms range up to U.S. \$3.3 million; large firms up to U.S. \$6.7 million; and firms with sales over these levels are classified as gigantic. Less than 2 percent of the construction companies account for 55 percent of industry activity. A few of the largest firms have sales in the order of U.S. \$1 billion per year and operate internationally as well as domestically.

INDUSTRY SPECIALIZATION

Companies vary in their levels of technology and areas of specialization. The largest firms tend to be highly diversified. These companies provide engineering and contracting services while also producing many of the building materials that they use.

In general, Mexico's construction industry is highly competent though, due to the poor economic environment of the 1980s, the firms have put little investment into new technologies or equipment. Many companies are now feeling the impact and are looking to foreign partners to help modernize their operations. Top executives of Mexican construction companies are very qualified, but management technology is slow to reach the lower ranks. Critical path method (CPM) scheduling is rare. Reporting systems and controls are unsophisticated. Improved skills are required in areas such as better project definition, testing and inspection, and shop drawing reviews.



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WHO'S WHO IN THE MEXICAN

The industry recognized leaders in traditional

GUTSA

Grupo ICA

Protexa 2

Grupo Mexicano de Desarrollo 🗆 Tribasa

Grupo Bufete Industrial

CONSTRUCTION INDUSTRY

sectors are:

Commercial

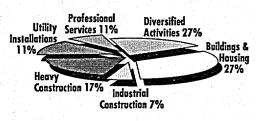
Infrastructure

buildings

Industrial

plants

Fig. 2.1 COMPOSITION OF INDUSTRY BY SPECIALTY



Source: Mexican Construction Association (CNIC)



GLOBALIZATION OF THE INDUSTRY

At present very few Mexican construction companies undertake contracting activity outside of Mexico. Only the largest companies export contracting services, representing less than 1 percent of total activity. However, there is growing involvement by foreign firms within the domestic industry.

A number of Mexican firms have established strategic alliances with foreign companies in order to access new technology or capital. Joint ventures are being formed on a company or project basis. In order to handle many of the larger projects and concession programs, medium-sized Mexican companies are forming consortia which often include a foreign partner.

Many foreign construction firms that have been active in Mexico for a while have begun to realize that there are distinct advantages to partnering with a Mexican firm. Benefits cited are:

- Knowledge of the public bidding system;
- Dealing with unions and Mexican labour issues;
- Familiarity with local building codes and techniques;
- Surmounting the language barrier; and
- Diversifying the risk of operating in the market.

OPPORTUNITIES FOR CANADIAN COMPANIES

Canadian construction companies can benefit from the new openness to partnering within the Mexican construction industry. The major players in the industry have realized that they must become more competitive internally in order to face the competition coming from abroad. These Mexican firms are seeking new construction technologies, and the middle and upper management strength to organize and finance large turnkey projects. Those Canadian companies with expertise in new building technologies, project management and financial engineering will be welcome allies.

For a profile of 30 major construction firms and their areas of technical strength, see the Foreign Affairs and International Trade Publication, A Report on the Construction Industry in Mexico available through InfoEx. (Contact InfoEx at 1-800-267-8376 or (613) 944-4000). Most of these firms are interested in developing joint venture relationships with Canadian or other foreign firms. Many of the larger construction companies have some experience in joint venturing with American and European firms. Small and medium-sized firms are less likely to have this background.

"Mexican construction companies are generally family-run operations. It is difficult to relinquish control to non-family members. Joint ventures will take time and considerable trust."

Octavio Rivera,

Director of International Promotion, Mexican Construction Association (CNIC).

Key Success Factors

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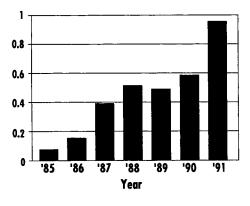
Canadian firms that have been active in Mexico's construction sector point to a number of factors that can contribute to a company's success.

- **Establish a local presence** This can mean setting up a local office staffed by your company's personnel; retaining the services of a Mexican representative, agent or subcontractor; or establishing a strategic partnership with a Mexican firm. It is important to demonstrate to clients that you are committed to the market and that you will be present before, during and after the completion of the contract. A local partner can be a critical factor in the success of a project. The Mexican partner will know how to obtain the necessary permissions from local authorities and will be key in ensuring that materials and labour issues are routinely dealt with.
- Have staying power It takes time to understand who the key players and institutions are in the industry, the complexities of bidding systems, and the building methods employed in Mexico. A firm must take a long-term approach to marketing in this highly competitive environment.
- Bid on what is being requested Avoid telling the Mexican clients what they need. Mexicans are all too often exposed to the arrogance of some foreign firms who believe they have all the answers. Respect your potential clients' needs and develop a sense of cooperation. If a rapport is established with that client, there may be more opportunity in the future to propose how projects could be improved.
- Consider equity participation More and more infrastructure projects in Mexico are going to bidders that can offer project financing and are willing to operate the facilities which they are constructing. Companies that cannot undertake turnkey projects on their own should consider partnering with other Canadian or Mexican firms in order to bid on these contracts.
- Anticipate projects Try to be aware of project plans well in advance of the tender announcement date by establishing contacts within your customers' organizations. It is important to keep an eye on the funding plans of the World Bank and the InterAmerican Development Bank, two key lenders to Mexico. Projects are often in the Banks' pipeline for approval as much as five years in advance of construction contract tendering. Information on proposed projects is published bi-weekly in the United Nations publication, Development Business.



3. SECTORAL OPPORTUNITIES - ROADS AND HIGHWAYS

FIG. 3.1 PUBLIC INVESTMENTS IN ROAD CONSTRUCTION (U.S. \$ BILLIONS)



Source: National Institute for Statistics, Geography and Information (INEGI)

One of the most active sectors of infrastructure development in Mexican is highway construction. In 1989, the federal government introduced a program to construct 15,000 km of new four-lane highway by the year 2000. As a first phase, it proposed 40 ventures to improve existing highways and to construct approximately 7,000 kilometres of toll roads. To date over 3,000 kilometres of highways have been built and approximately 2,000 kilometres are currently under construction.

In 1991 public investment in highway construction had risen to 3 billion new pesos (U.S. \$1 billion) which represented close to 10 percent of all spending on public construction. In addition to public funds, the private sector has taken over a considerable portion of the highway construction through the *Programa Nacional de Carreteras de Cuota Concesionadas* — the highway concession program. It is estimated that since the introduction of this program the investment in roads already built and those currently under construction is more than U.S. \$10 billion. Much of this has been financed by the builders in return for short term concessions.

THE HIGHWAY CONCESSION PROGRAM

The development of toll road concessions was the first example of privatization of Mexican public construction projects. In order to finance construction of highways the government created a build-operate-transfer (BOT) scheme. Under the concession program the investor (usually a large construction company) finances and builds the road, retains ownership of the highway over a period of 10-12 years, and recoups the investment via the collection of tolls. At the end of the concession period the ownership of the highway is transferred to the state. The government guarantees the investor's return on investment in terms of projected traffic revenue over a set period of time. If the traffic is lower than projected, the tenure period is extended to compensate; if the traffic exceeds expectations, the period is shortened and the government takes ownership earlier.

The privatization of the highway system was considered important for several reasons:

- It allowed the government to modernize its highway system within the constraints of a shrinking publics works budget.
- It represented one of the cornerstones of the government's infrastructure renewal program. Road transportation is viewed as essential to attracting new industrial investors who will require safe, timely and cost efficient transportation.
- Being the first application of infrastructure privatization (indeed the first of its kind in Latin America), it was one of the most significant measures of the government's initiative and was to be used as a blueprint for future concession projects by both the government and the funding institutions.



Key Mexican Construction Companies Involved in the Highway Concession Program

Grupo ICA
 Tribasa
 Pycsa
 Protexa

RESULTS

After five years of operation, reviews on the success of the concession program are mixed. Over 3,000 km of highway have been built since 1988 but investors are finding that the traffic flow on these roads is not as high as expected. Drivers are choosing alternate routes in order to avoid paying the high tolls (for example, the one-way toll on the Mexico City-Acapulco highway is U.S. \$77). Construction firms are not recouping their investments as quickly as projected and concession periods are being extended to compensate.

A limited number of firms have taken part in this program. These are, for the most part, the largest construction firms with the resources and the capabilities to undertake projects of this magnitude. In a few cases consortia of medium-sized companies have successfully bid on concessions. For those firms that do participate, there have often been significant costs overruns which have increased the debt of the private operators (the 400 km Mexico City-Acapulco highway was finished at U.S. \$1 billion — double its estimated cost³).

Financing of these projects has been one of the problem areas. With Mexican interest rates ranging upwards of 30 percent per annum, concession owners are forced to seek international financing where possible. Lack of experience in financial markets is cited as a problem.

The government's reaction to these problems has been to consider extending the terms of concessions from their current 10 to 12 years to as much as 30 years.

LESSONS FROM THIS EXPERIENCE

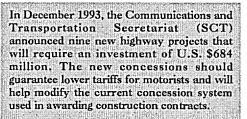
The fallout of the highway experience may offer opportunities to Canadian firms:

- Traditional methods of construction are being reviewed. Builders, who are now responsible for the maintenance of the roads over extended concessions, are looking for new road building technologies that can reduce their long-term operating costs.
- Mexican financial institutions have redefined their requirements with regards to funding these programs. Projects must now be well defined and "financially engineered" — two areas in which Mexican construction firms have not traditionally excelled.

BIDDING ON HIGHWAY CONCESSION PROJECTS

The award of highway concessions is handled through public tender (see Section 10). Calls to tender are published in major national newspapers and the general specifications of the project are distributed to interested bidders. Due to the magnitude of the investment, proposals must be accompanied by a letter of guarantee from a financial institution demonstrating financial support for the construction and concession phases of the project.

CANADA-MEXICO INDUSTRY PROFILE: Opportunities in Mexico - The Construction Services Sector



El Financiero International

Officials of the Secretariat of Communications and Transportation stress that the key criteria upon which a concession is awarded are:

- the lowest timeframe for construction of the road;
- the shortest concession period;
- the soundness of financial support; and
- the experience, capability and prestige of the bidder.

OPPORTUNITIES FOR CANADIAN COMPANIES

With over 10,000 km of highway remaining to be built in Mexico, Canadian companies can still participate in the country's concession program.

Companies can consider partnering with Mexican firms in the road construction sector. Initially, the first round of contracts went to large firms that had the capability to handle the project by themselves. Increasingly concessions are being handled by consortia of medium-sized Mexican firms. Canadian firms can augment such a group's abilities by bringing new technology, construction methods, equity and, in particular, financial management capabilities.

Even though the concession program has increased Mexican highway capacity, there is concern that local roads have deteriorated considerably. As such, significant effort is being put into maintenance, upgrading and new construction of secondary roads. Between 1988 and 1992, over 3,000 km of new paved roads were constructed. Contracts for these projects are administered as public works at the federal, state and municipal levels. To become involved in these projects, Canadian companies can contact:

the Secretaría de Comunicaciones y Transportes (SCT), at the federal level;

Caminos y Puentes Federales de Ingresos y Servicios Conexos (CAPFISC) — the Federal Roads and Bridges Commission, also at the federal level; and

state and municipal governments, on a regional basis.

Companies can also investigate the World Bank pipeline of projects for possible contract opportunities as the Bank has a current program to fund improvements to Mexico's secondary roads.

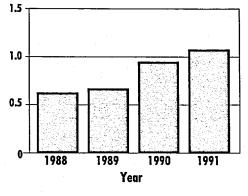
The Asociación Mexicana de Concesionarios de Infraestructura (AMICO) is a recently formed organization which will examine the issues related to privatizing infrastructure projects. It should be an excellent source of information on concession opportunities and a contact point for potential partners.



4. SECTORAL OPPORTUNITIES - WATER AND INFRASTRUCTURE

Fig. 4.1

PUBLIC INVESTMENT IN WATER INFRASTRUCTURE (U.S.\$ BILLIONS)



The economic depression of the 1980s resulted in significant deterioration of Mexico's water infrastructure. Construction of new systems did not keep up with the needs of a rapidly increasing population. By 1988, less than 70 percent of the population had access to potable water, less than 50 percent had access to sewer systems, only 15 percent of municipal discharge was treated and few industries were treating their waste water. Irrigation systems were not maintained and dams did not have the capacity to meet growing agricultural and electrical needs. The government, recognizing that the deficiency must be addressed quickly, has committed substantial resources and instituted a privatization program to shift the financial burden to the private sector.

From 1988 to 1991 Mexico's public spending on water infrastructure doubled exceeding U.S. \$1 billion in 1991. It is expected to remain in this range for the foreseeable future.

Source: National Institute for Statistics, Geography and Information (INEGI)

In Mexico, the federal government department responsible for water is the Secretaría de Agricultura y Recursos Hidraúlicos (SARH). The Comisión Nacional del Agua (CNA) is the decentralized department of SARH responsible for water.

Comisión Nacional del Agua (CNA)

The government agency responsible for administration of water is the decentralized *Comisión Nacional del Agua* (CNA) — the National Water Commission. The CNA oversees all aspects of Mexican water policy, including:

- potable water;
- sewer and storm water systems;
- water treatment;
- irrigation; and
- dams.

It is mandated to direct and administer federal government policy, set technical standards, oversee the implementation and enforcement of these standards and control funding for the projects. However, state and municipal governments are responsible for the actual building and operation of local water systems.

WATER **PROJECTS**

There are substantial opportunities in the construction of water works as the country moves to upgrade, rehabilitate, and create new infrastructure.

POTABLE WATER

Mexico's first priority was to provide access to potable water to as much of the population as possible. Considerable resources were dedicated to bringing coverage up to 90 percent of the population. The priority has now become maintenance and rehabilitation of existing systems; it is estimated that as much as 40 percent of the nation's network leaks. Future works will focus on new

> CANADA-MEXICO INDUSTRY PROFILE: OPPORTUNITIES IN MEXICO - THE CONSTRUCTION SERVICES SECTOR



WATER RECYCLING

In the Mexico City Valley, up until now, the cost of treating and recycling waste water has been double that of using clean water. However, water tariffs have risen substantially — by five times. Treatment and recycling of waste water is now an economic requirement as well as a social desire. Many companies will be installing recycling plants to deal with the increased costs. construction in keeping with population growth. Substantial activity is foreseen in building aqueducts to those cities whose requirements for water are already exceeding their local capacity.

In 1991 total investment in new drinking water systems was U.S. \$500 million.

SEWER AND STORM WATER DRAINAGE

Sewer and storm water drainage has become the area of major concentration of the CNA. To achieve the government's desired coverage of 85 percent of the population by the year 2013, over 2,000 kilometres of sewer pipe will have to be installed per annum.

Recent changes in design standards have called for complete separation of sewer and storm water systems. It is projected that future construction activity will be directed toward the installation of parallel storm water drainage systems in major cities.

In 1991 investment in this sector was over U.S. \$300 million.

WATER TREATMENT PLANTS

MUNICIPAL

There are 704 municipal water treatment plants in Mexico, however it is estimated that only 15 percent of the nation's waste water is treated. The CNA has targeted 104 municipalities as priority areas for upgrading existing facilities or building new plants. At the end of 1993, the CNA was examining proposals for 18 new treatment plants that would be operated under a concession program. The CNA's first objective will be primary sewage treatment. Secondary and tertiary treatment will follow in later phases.

PARASTATAL

Both Pemex and CFE are investing in water treatment plants. During 1993 Pemex requested proposals for 6 new treatment plants which will be constructed on a BOT basis.

INDUSTRIAL

It is estimated that only 16 percent of private industry currently treats its waste water before discharge. However, new environmental legislation has stipulated that all waste water must be treated and meet strict standards. New and existing industrial plants will be forced to construct water treatment systems in order to comply with the new legislation.

IRRIGATION AND DRAINAGE

The National Development Plan calls for an increase in the total agricultural lands under irrigation by 2 million hectares, or 33 percent. Funding for irrigation projects will be supplied through the CNA. However, contracting of construction services to build reservoirs, pipelines, irrigation and drainage systems will be carried out by 80 autonomous agricultural user groups organized regionally. In 1991 U.S. \$260 million was spent on irrigation projects. There is no central publication which announces upcoming projects with the CNA. As with all public works tenders, the CNA places announcements in at least two national newspapers. It generally uses *El Universal, Excelsior, Novedades, El Nacional, Uno Mas Uno, or El Financiero.* The cost of bid documents normally ranges from about U.S. \$320 to \$640, varying with the contract size. Bids must be submitted in Spanish. Contract award decisions, as well as the administration of the project, are handled at the state and municipal level.

A company is not required to register with the CNA prior to bidding on a contract. Instead, registration is conducted during the bid process. Foreign construction companies must register with the *Cámara Nacional de la Industría de la Construcción* upon the award of a contract. Bidding companies are expected to have a net worth in excess of 20 percent of the project cost.

Companies without permanent representation in Mexico should assign someone in Mexico to track the process of the competition and to respond to any questions that the CNA might have. Their responsibility will be to visit the job site, personally submit the bid, be present when the decision is made, sign the contract and receive the down payment. The representative should be notarized as having power of attorney.

The World Bank and the InterAmerican Development Bank fund over 50 percent of all potable water and sewage projects and over 80 percent of all irrigation and drainage. World Bank policy requires that any project funded by the Bank in excess of U.S. \$5 million must be open to international tender and have a bidding lead time of 45 days.

OPPORTUNITIES FOR CANADIAN COMPANIES

The large demand for water services, and the commitment of Mexican government bodies to deliver these services, create a substantial market for Canadian engineering and construction firms that specialize in water infrastructure development.

- Waste water and sewage treatment will be the growth area in Mexico's water sector. Public construction contracts will go to the companies that can combine state-of-the-art technology with financial backing.
- Projects will vary in size and scope. It will be important to search out opportunities that lie within one's capabilities. A local partner could be instrumental in matching skills to specific opportunities.
- Private sector markets will emerge based on new environmental regulations. Many companies are now forced to construct plants to treat their industrial waste water. Canadian firms should also investigate opportunities in industrial parks. Groups of Mexican companies are exploring the possibility of building communally-owned plants to treat their combined effluent.
- Good sources of information on upcoming water projects in Mexico are the InterAmerican Development Bank's project pipeline, and the CNA itself. At the CNA, inquiries should be directed to the Gerencia de Construcciones — Office of Construction Management.

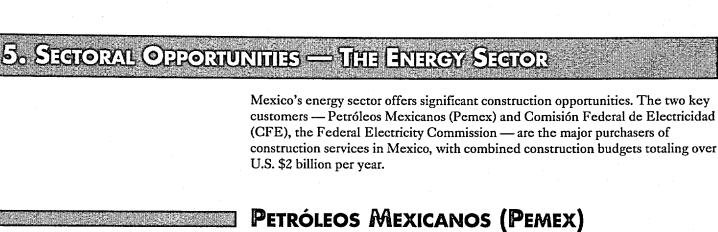
REHABILITATING MEXICO CITY'S WATER SYSTEM Commenting on the Mexico City water program, Ing. Alonso Gutierrez Cortina, director of Urban

Ing. Alonso Gutierrez Cortina, director of Urban Services for Grupo Gutsa, stated that the Ciry's plan will be the model for future administration of the country's municipal water systems.

The city has been divided into 4 zones. Contracts totaling U.S. \$2 billion have been extended to four major consortia to carry out the rehabilitation program. The deal will involve both Mexican and European partners, including Britain's Severn Trent, Anglian Water and North West Water; France's Compagnie Générale des Eaux and Lyonnaise des Eaux Dumez; and Mexican construction firms ICA, Gutsa and Bufete Industrial.

The program has 3 phases:

- Installation of metres and establishment of a billing system.
- Repair of the system, which is estimated to have a water loss rate of 30 percent. Repairs will cost U.S. \$500 million and are expected to take 5 years.
- Finally, the expansion of the system to keep up with the city's growth.



Pemex, the state oil company, is Mexico's largest government entity. In 1993, its procurement budget totaled U.S. \$2.9 billion of which \$U.S. 1.1 billion was directed towards construction (not included in this figure is the amount spent on drilling). In 1992 Pemex was realigned into four operating subsidiaries and a central holding company. The four subsidiaries, and their respective construction budgets for 1993 are listed below:

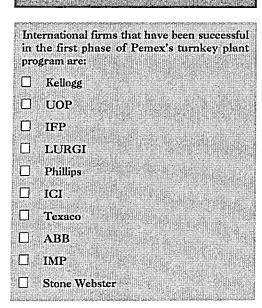
TABLE 5.1 PEMEX PROCUREMENT BUDGET, 1993

Pemex Subsidiary	Total 1993 Procurement Budget (U.S. \$millions)	Construction Budget (U.S. \$millions)	
Pemex Exploration and Production	1,710.1	396.7	
Pemex Refining	827.4	537.2	
Pemex Natural Gas and Basic Petrochemicals	139.5	97.5	
Pemex Secondary Petrochemicals	83.5	46.2	
Pemex Holding Company	187.3	18.8	
TOTAL	\$2,947.8	\$1,096.4	

Source: Pemex

In the Exploration and Production and the Refinery subsidiaries, a significant portion of construction spending is on projects to reduce pollution and on the construction of new plants. The construction budget for the gas and petrochemicals subsidiary is primarily dedicated to the construction of pipelines.

It is estimated that Pemex will have to spend between U.S. \$6.5 to U.S. \$7.5 billion on construction between 1993 and 1997 to upgrade or replace current facilities. The company has announced plans to invest U.S. \$1.7 billion in new plants to produce propylene, butadiene, chlorine derivatives, aromatic hydrocarbons, ethylene and biodegradable detergents.



CANADA-MEXICO INDUSTRY PROFILE: OPPORTUNITIES IN MEXICO - THE CONSTRUCTION SERVICES SECTOR

20

FIG. 5.1 CFE GENERATION BY TYPE OF PLANT Nuclear Geothermal Coal Turbo-gas Combined Cycle Hydroelectric Steam 20 40 60

Percent

Source: Federal Electricity Commission (CFE)

BUFETE INDUSTRIAL

Today, turnkey construction or "llave a mano" is in vogue. Bufete Industrial is considered to be the Mexican firm most capable of taking on large turnkey projects in the energy sector. In response to the changes in the contracting environment, Bufete has had to introduce new operating methods. These include CAD design and drawing, simulation systems, computer and administration networks, and sophisticated cost control systems. Bufete has used strategic alliances to acquire these skills. They have worked with C. Itoh and Hitachi on the building of thermoelectric plants, and Lyonnaise des Eaux Dumez on the Mexico City water renewal project. In addition, the U.S. engineering giant Kellogg has taken an equity position in Bufete.

Pemex currently has 19 plants under construction. The projects were undertaken in two phases. The first was the design phase. Pemex invited tenders from companies that possessed state-of-the-art technologies to prepare basic engineering and then to provide technical support as the project developed. The second phase was an international tender for detailed engineering, equipment purchase, construction and commissioning of the plant. Each project is being handled on a turnkey basis where the builder assumes responsibility for financing the construction. It is expected that more and more Pemex contracts will be handled in this manner.

COMISIÓN FEDERAL DE ELECTRICIDAD (CFE)

The Federal Electricity Commission (CFE) is the state corporation responsible for generating and distributing electricity to the Mexican public. It is undergoing an accelerated modernization program to improve the country's infrastructure and to extend electricity to over 700,000 new users per year. The *parastatal*'s annual procurement budget is approximately U.S. \$2 billion, a large portion of which goes towards the construction of new generating plants and extension of its transmission network. In 1991 CFE's investment in construction was U.S. \$1.6 billion.

The National Development Plan specifies an increase in generating capacity from 24,000 Megawatts (MW) in 1988 to 71,000 MW by the year 2010. To accomplish this goal, the first phase of investment (1989-1994) was expected to reach U.S. \$14.5 billion.

At the end of 1993, generating capacity was 28,450 MW and twenty-six plants were under construction. These will increase generation capacity by 5,675 MW. They include five hydroelectric plants, ten oil-fired, six coal burning and one nuclear plant. In 1994 CFE is planning construction of additional plants to generate a further 4,000 MW.

In addition to increasing its generating capacity, CFE is also investing in construction to expand its transmission network and the coal handling infrastructure at various ports.

SUPPLYING TO CFE

CFE has implemented a build-lease-transfer (BLT) scheme in many of its large construction projects. Typically, a consortia of financiers, construction companies, operators, and equipment suppliers finance, design, build and operate a facility which is leased back to CFE. Canadian companies can consider bidding independently on a turnkey project, participating in a consortium, or acting as a sub-contractor.

> CANADA-MEXICO INDUSTRY PROFILE: Opportunities in Mexico - The Construction Services Sector



SUPPLYING TO INDEPENDENT POWER PRODUCERS

Canadian companies will now have expanded opportunities to provide construction and engineering services not only to the public utility but a host of new private players in the electricity sector. In May of 1993, new regulations opened the electricity sector to independent power producers. The regulations now make it possible for private firms to build four types of private power plants:

- self-supply plants (those producing power exclusively for the owners' needs);
- independent power-production plants (those producing power to be sold to the state);
- small production plants (those producing power for rural communities); and
- co-generation plants (those producing electricity with vapour).4

Taking advantage of the new law, a consortium formed by General Electric, Bechtel and El Paso Natural Gas is currently building a U.S. \$600 million power plant in northern Mexico.

OPPORTUNITIES FOR CANADIAN COMPANIES

Mexico's energy sector, traditionally a lucrative source of construction contracts, has become much more accessible to Canadian contractors with the implementation of the NAFTA. However, developing contracts with Pemex and CFE will require time and commitment to the market.

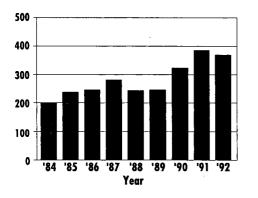
- To participate in the large turnkey projects being launched by Pemex and CFE, Canadian companies must be prepared to compete with the international and domestic consortia that offer design, construction, operating and financing skills. Smaller firms should consider forming alliances with other Canadian or Mexican companies in preparation for project opportunities.
- Bidding to CFE and to Pemex has all the risks inherent in doing business with a large organization. Tenacity and perseverance are characteristics that are essential when trying to sell to these enterprises. Both have the reputation of issuing call-for-tenders and then letting a considerable amount of time pass before advising bidders that the project has been canceled. It is important to conduct as much research as possible on the project's viability before committing considerable funds to preparing proposals. A local staff member or representative is necessary in order to keep a finger on the pulse of these entities.
- Contact the Canadian Embassy in Mexico City. The staff can assist by identifying key contacts within both CFE and Pemex.

Canada-Mexico Industry Profile: Opportunities in Mexico - The Construction Services Sector

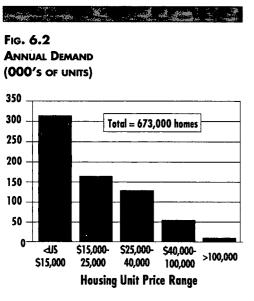
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6. SECTORAL OPPORTUNITIES — HOUSING

Fig. 6.1 Housing Units Built by the Formal Construction Sector (000's of units)



Source: Secratariat of Social Development and Housing (SEDESOL)



Source: Softec, Mexico, D.F.

In 1990, the Mexican government estimated that the country faced a deficit of 6.1 million houses. The greatest shortage existed on the outskirts of urban cities, such as Mexico City (2.7 million homes), Guadalajara (0.5 million), Monterrey (0.5 million), and cities in the northern states (1.2 million). The estimated housing shortage in rural areas was 1.2 million units. Moreover, it was evident that 980,000 units would be required annually just to prevent the deficit from increasing further. New family housing accounts for 80 percent of this demand, the remainder being replacement of substandard housing.

In recent years the actual rate of housing construction has fallen short of the calculated demand. Total housing production in Mexico averages 650,000 units per year. It is estimated that as much of 50 percent of this construction is provided by the informal housing sector — usually selfconstruction by the owner, often without title to the land. The remainder is built by the formal construction sector either through government-assisted programs for low-income housing or private development for middle and upper-class dwellings.

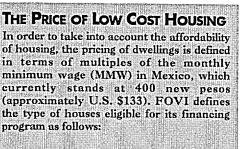
HOUSING MARKET DEMAND

Though reliable housing statistics are scarce in Mexico, it is estimated that the current annual demand for new units to be as follows: 48 percent of the need is for homes valued at less than U.S. \$15,000, while 10 percent of the requirement is for homes exceeding U.S. \$40,000 (Fig. 6.2).

FINANCING

The availability and accessibility of financing has been a critical constraint on the housing market in Mexico. Until now, the existence of mortgages has been very limited. Only 13 percent of dwellings are financed. As interest rates drop, banks are increasing their mortgage portfolios (some doubling in two years) however this growth has been primarily fueled by middle and upper-class home owners. Strong demand at these levels allows the banks to shy away from lower income clients. With mortgage rates ranging between 20 and 25 percent in Mexico, banks are understandably concerned about the high default risk of low-income clients. However, the greatest need for housing, in terms of units required, exists at the low end of the market. Housing units costing 30,000 new pesos or less (U.S. \$10,000) are the most urgently needed, yet least catered to, segment of the market.





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INFONAVIT sets a ceiling of 38,000 new pesos (U.S. \$12,700) on its loans.

THE FOVI LOW INCOME HOUSING PROGRAM

Step 1

FOVI publicly announces, typically in a major newspaper, an offer of financing available for a certain type of house expressed in number of monthly minimum wages. For example, 300 houses selling for a maximum of 100 MMW in Torreón, Coahuila which qualify for 90 percent financing.

Step 2

Builders or developers hid on the contract by stating the price of the houses they are willing to build (expressed in MMW) and the premium they are willing to pay the institution for the extension of construction credit.

Step 3

After the contract is awarded, construction commences. Construction companies must use their own initiative in building the houses and selling them directly to the homeowners. They receive construction financing from a commercial bank, typically the one which will eventually extend mortgages to the buyers.

Step 4

A commercial bank provides mortgage loans to the extent stipulated by the institution (e.g. 90 percent of the house value) and is reimbursed by FOVI. In order to understand Mexico's housing sector it is vital to have an understanding of the financing mechanisms that are in place today. The financing of housing is channeled through three institutions:

- Commercial banks;
- Pension funds; and
- Public housing agencies which receive federal, state and municipal funding.

Commercial banks prefer to offer financing to buyers at the middle and upper ends of the market. However, they will lend for lower income units when they are backed by loans from the *Fondo de Operación y Financiamiento Bancario a la Vivienda* (FOVI). FOVI is the Mexican central bank's Housing Fund for commercial banks which lends construction and acquisition money to private banks. As the recipient of a U.S. \$450 million World Bank loan in 1992, FOVI will finance the construction of 150,000 new low-income homes in 1994.

The most important pension funds are a) the *Instituto del Fondo Nacional de la Vivienda para los Trabajadores* (INFONAVIT), the pension fund for private sector, employees and b) the *Instituto de la Vivienda del Sistema de Seguridad Social de los Trabajadores del Estado* (FOVISSSTE), the public sector workers' fund. These pension funds are important players in the housing market. In addition to providing mortgages, they use employee contributions to provide construction credit to private builders. The funds commission housing projects by auctioning construction loans to the builders.

Public housing agencies are federal, state or local government groups which cater to specific market segments. The largest public housing agency is the Federal government's low-income housing fund, the *Fondo Nacional de Habitaciones Populares* (FONHAPO) which lends to the poorest segment of the market. FONHAPO loans are administered through state and municipal housing authorities which are responsible for contracting the construction of housing projects. FONHAPO loans average U.S. \$4,000 per beneficiary, indicating the low value of the housing units contemplated.

LOW INCOME HOUSING

Under Mexico's new housing initiative the main institutional low income housing programs (FOVI, INFONAVIT, FOVISSSTE and FONHAPO) are no longer responsible for building homes, but primarily for financing the mortgages for homeowners. The institutions define the projects and, in most cases, extend construction credit to private builders. The housing projects are initiated by the home builders who design, construct and sell new homes at their own risk. Unlike the past when construction companies built what they were told to by the government, the builders now play the role of planner, builder, lawyer and vendor. Almost all housing contracts which are commissioned in this manner are implemented by Mexican construction companies. To date, no foreign construction firms have registered to be eligible for FOVI loans. However, foreign investors are becoming involved by partnering with Mexican construction firms. Of the Mexican firms registered with FOVI, nearly one-third have some involvement with foreign capital. While there are more than 10,000 small firms and contractors that build homes in Mexico, the majority of new housing projects are built by 500 or so large and medium-size developers throughout the country.



OPPORTUNITIES IN MEXICO - THE CONSTRUCTION SERVICES SECTOR

TRIMEX INTERNATIONAL INC.,

Trimex International Inc., from Kitchener, Ontario, first attempted to supply housing in Mexico in 1991. It tried to promote different Canadian housing technologies before finding its niche after three years of tough slogging in the market. "Not all housing technologies are appropriate to Mexico", advises Dennis Kuchma, International Director of Trimex. "Exporting pre-fabricated wood structures seemed to be an opportunity. Our technologies offered construction efficiencies, esthetics, comfort — all at an affordable price. However, we had misjudged the market reception to these advantages. The cultural limitations were major hurdles to overcome, particularly in the lower to midrange housing markets."

Trimex made its breakthrough in 1993 by offering a brick-based technology to the lower middle income market.

"Mexicans will accept wood in roofs, interior walls and finished surfaces, but the external walls of a house must have the appearance of stone or brick in order to sell houses here" — Director of Building Methods, SEDESOL

In Mexico, the federal government department responsible for housing is the Secretaria de Desarrollo Social (SEDESOL) — the Secretariat of Social Development and Housing.

FACTORS AFFECTING THE HOUSING SECTOR

There are a number of additional factors affecting the growth of the housing industry in Mexico — both from the perspective of the willingness of builders to take on new projects and the affordability offered to new home buyers.

- Regulatory Burden many layers of licenses, permits, service charges and taxes exist at the local and state level. It is estimated that regulatory costs to the developer and home buyer can reach as high as 23 percent of the price of a house. Many municipalities are now working towards developing a ventanilla unica, or single office, to handle developers' permits.
- Lack of Urbanized Land the lack of suitable urbanized land has, until recently, been caused by the inability to legally convert land that was originally for farming to urban use. Recent reforms to the agrarian law have begun to open up the urban land market.
- High Taxes on Property Sales these can discourage private owners from selling land.

CULTURE

With the high demand for housing in Mexico, many foreign suppliers have approached the market with a broad range of building techniques and housing alternatives with mixed success. Culture plays a key role in Mexican taste for housing, in all price ranges. The strong preference for brick and cement-based construction can be attributed to traditional attitudes related to earthquakes, fire and other natural phenomena. In addition, these materials are conducive to the piecemeal methods of construction typically employed. Many houses are built a little at a time, often by the homeowner. Concrete and bricks are familiar materials that can be left exposed for a long time as the builder finishes the project.

The taste for wood-based houses can vary across Mexico. They are more popular in a few regions of the country, particularly in the forested areas where wood is a more common building material. Over 2,000 wood-based units have been built in recent years, including the Llano Largo project in Acapulco, and others in Durango, Sinaloa; Tuxtla Gutierrez, Chiapas; and Morelia, Michoacán.



OPPORTUNITIES FOR CANADIAN COMPANIES

Mexico's large housing deficit suggests tremendous opportunities for Canadian construction firms. However, a selective approach to specific market segments is required.

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- Look for opportunities to partner with a Mexican construction firm. Mexican firms are skilled in building techniques but are less knowledgeable in the areas of planning, development financing and selling homes. These skills are vital to operating under the new public housing regime.
- Become knowledgeable with regards to the key house financing institutions and look for upcoming auctions of housing projects in which your firm can participate.
- Consider approaching the market for middle and upper income homes. This has the advantages that commercial financing is more readily available for buyers, profit margins for builders are healthier, and there is more likely to be a taste for less traditional housing styles and an "imported" look.
- Investigate the market for housing in tourist resorts. Throughout Mexico there is a significant level of activity in the building of condominium-type vacation and retirement homes. Builders may find opportunities to cater to Canadian, U.S. and European tastes and budgets.
- Act as developer/financier. Many veterans in the market believe that the real money-making deal in the housing business is for the developer to finance construction at a lower interest rate than the mortgage rate extended by the associated bank or government institution.

7. SECTORAL OPPORTUNITIES - TOURISM

State Pate

With 6,000 miles of coastline, rich historical culture, and proximity to North American markets, Mexico boasts tremendous tourism potential. Tourism is Mexico's second largest source of foreign exchange after oil. It plays a vital role in the country's economy, earning a 3 percent share of the GDP in 1991 and providing employment for nearly two million people, approximately 9 percent of the total labour force. However, much of its potential still remains untapped. In 1989, the Mexican government designated tourism as a major development area and set out to encourage private investment in the sector. At that time, the annual flow of tourists into Mexico stood at approximately 6 million people per year, generating U.S. \$3 billion in foreign exchange. The following targets were set for the 1989 -1994 period:

- 50,000 additional hotel rooms;
- 10 million foreign tourists annually by 1994; and
- total foreign exchange income from tourism of U.S. \$5 billion in 1994.

Canada-Mexico Industry Profile: Opportunities in Mexico - The Construction Services Sector

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very well.

GRUPO SITUR

Grupo Sidek is one Mexican company that believes in the potential of the tourism sector.

Once primarily a steel company, it has

shifted its focus to become the major private sector player in the tourism industry. Its

subsidiary, Grupo Situr, is estimated to be

responsible for 30 percent of new tourism

developments in Mexico. Situr bases its

success on careful market research to determine what North American, European

and Asian tourists are looking for. The

company has the capacity to take on megadevelopments which are in turn contracted to

Situr has been highly innovative in its

approach to construction. On one project it

built a completely pre-fabricated hotel. On Mexico's Caribbean coast, it put up a mock

Maya village of 60 wooden houses that sold

secondary and tertiary developers.

Growth in all areas has not come as quickly as expected. In recent years, recession in North America and Europe and the war in the Persian Gulf have conspired to keep many travelers at home. By the end of 1992, hotel room supply had increased by only approximately 20,000 rooms. However, investment in the tourism sector remains strong. In keeping with Mexico's move to privatize industry, tourism investment has also shifted from the hands of the government into the private sector. Today, tourism investment is primarily privately-backed yet is guided by the development plans of government agencies.

FONATUR

The National Fund to Promote Tourism (FONATUR) is the agency entrusted with promoting the expansion and improvement of Mexico's tourism infrastructure. Working with tourism investors, operators, and entrepreneurs, FONATUR has four functions:

- Development of integrally planned tourism centers FONATUR provides real estate development; it carries out facilities development and then sells and/or leases land and buildings; it is also responsible for property management, operation and maintenance.
- Provision of infrastructure and services FONATUR contracts for the construction of airports, roads, water and sewage systems, electrical services and employee housing for new tourist developments.
- Financing of tourism projects This includes provision of all types of financing for the construction, expansion, and remodeling of hotels and other tourism facilities.
- Direct investment in tourism operations In certain cases, FONATUR will take equity positions as a joint-venture partner with companies and individuals to develop a range of tourism facilities in selected destinations.

FONATUR acts very much like a venture capital firm, providing seed money and taking equity positions if necessary. In 1992, in hotel construction alone, FONATUR initiated new investment of U.S. \$400 million — over 70 percent of this going towards four and five-star establishments.

Canadian companies can approach FONATUR in two ways — bidding on construction projects initiated by FONATUR's works division, or investing in tourism mega-projects through its foreign investment group. As with any government public works project, FONATUR construction activities are submitted to public tender and are announced in major national newspapers.



CANADA-MEXICO INDUSTRY PROFILE: OPPORTUNITIES IN MEXICO - THE CONSTRUCTION SERVICES SECTOR



THE BUSINESS TRAVELER

Hotel development is growing rapidly in many non-coastal regions of Mexico in order to handle the vast numbers of business travelers. Many hotel chains are looking to expand into emerging business cities such as Aguascalientes, Puebla, and Querétaro. Grupo Posadas, the leading hotel chain in Mexico, which markets the Fiesta Americana and Holiday Inn brands, has targeted a 12 percent per year growth in its count of four and five-star rooms in Mexico.

In Mexico, the federal government

department responsible for tourism is the Secretaría de Turismo (SECTUR).

FONATUR is a branch of SECTUR.

Outstanding examples of investment in tourism, promoted by FONATUR, are the so-called mega-projects. Mega-projects are large-scale, self-contained developments based on a Master Plan which designates tracts of land to the development of hotels, marinas, golf courses, shopping centers, residential zones, condominiums and all necessary services. Fifteen mega-projects are currently in various stages of development throughout Mexico. These include expansions in the five major tourism centers — Cancún, Ixtapa, Los Cabos, Loreto, and Huatulco. Perhaps the most well-known success story is Cancún which grew from a small fishing village in 1969 to the flourishing world-class resort of today, visited by 1.5 million tourists a year.

Investment in Tourism — The Trust Mechanism

MEGA-PROJECTS

While Mexico's new foreign investment regulations (1989) opened many areas of the economy to international investment, foreigners are still restricted from owning land within 100 kilometres of Mexico's borders and 50 kilometres of the coast line. However, many foreign companies and individuals are participating in Mexico's rapidly expanding tourism industry through a unique form of real estate investment called a *fideicomiso* or Mexican bank trust. The bank holds title to the property in trust for the foreign beneficiary who retains the exclusive right to the use and control of the property. Trusts are established for initial 30-year periods and can be renewed indefinitely. Through the real estate trust, foreign investors can construct, sell, rent, and operate: resorts, hotels, residential parks, condominiums, commercial centers, marinas, golf courses, and restaurants on coastal lands.

OPPORTUNITIES FOR CANADIAN COMPANIES

Tremendous opportunity exists in the construction of hotels, marinas, shopping centers, condominiums, and golf courses, as well as the provision of services to new tourism sites — airports, water treatment plants, roads and electrical infrastructure.

- Firms can begin by examining FONATUR's plans for development and developing contacts within the agency. This can lead to introductions to private sector developers who are engaged in tourism projects.
- Companies can look for upcoming projects through the InterAmerican Development Bank (IDB). The IDB is providing U.S. \$150 million in loans to FONATUR. Tourism projects valued over U.S. \$5 million, with IDB support, can be bid on by companies from all Bank lending countries, including Canada.

CANADA-MEXICO INDUSTRY PROFILE: OPPORTUNITIES IN MEXICO - THE CONSTRUCTION SERVICES SECTOR

28

- Firms specialized in airport, road, water and electrical infrastructure construction can find opportunities in new developments which often have only the most basic services prior to their designation as tourism centres (e.g. Huatulco).
- Firms should define and promote specific areas of expertise. Amidst significant international competition, a Canadian golf course designer recently won the contract to design and manage the construction of Ixtapa's new golf course.

B. OTHER OPPORTUNITIES

Further opportunities for Canadian construction, engineering and architectural skills include:

A New Airport for Mexico City

A private consortium is considering building a second airport for Mexico City at a possible cost of U.S. \$2 billion. Construction could begin in 1996 after a site is found. The consortium includes Mexican construction firms Grupo Gutsa, Tribasa and investors from Britain and Brazil.

Ports

A new law regulating ports will permit private investors to operate maritime ports under 50-year renewable concessions. This is expected to be the first step toward revitalization of Mexico's port infrastructure. Once this is done, investment in construction at the ports should increase significantly. A number of large Mexican construction companies have already demonstrated interest in acquiring port concessions. Construction upgrades are expected to reach U.S. \$1 billion in 11 existing ports. In addition, there are plans for three new ports targeted at promoting regional development — Progreso in the Gulf of Mexico, and Pichilingue and Topolobampo on the Pacific Coast.

Plans are underway for the construction of a new airport for Mexico City. Outside the City, airport construction is most evident in the newest tourism developments. Inquiries regarding port construction activity can be addressed to *Puertos Mexicanos*. For airports, contact *Aeropuertos y Servicios Auxiliares* or FONATUR for tourist centre opportunities.

In December 1993, a group of three Mexican construction firms and Canada's Bombardier won the concession to build and operate a U.S. \$650 million urban rail system linking Mexico City and the State of Mexico. The companies estimate the system will start functioning by the end of 1996 or early in 1997.

RAILWAYS

Ferrocarriles Nacionales de México (Ferronales), Mexico's state-owned railroad company, has been one of the most recent organizations to jump onto the privatization bandwagon. Once the organization has firmly established its policies for involving private capital in new projects, it is expected that a significant increase in rail infrastructure investment will follow.





At present Mexico has about 100 large industrial parks throughout the country, ranging from basic to world class production facilities. Many of these parks have arisen from the presence of foreign manufacturers in Mexico, particularly in the *maquiladora* regions of the north. Further development in the construction and upgrading of the parks is expected as a result of the NAFTA.

The international corporations investing in Mexico require high standards in plant construction. Opportunities will emerge for Canadian industrial design and construction technologies. In addition, there will be a need for construction of private electricity generating plants and water treatment facilities for individual companies or groups of companies within an industrial park. Firms should contact the Asociación Mexicano de Parques Industriales Privados (AMPIP) — the Private Industrial Park Association to investigate construction opportunities.

COMMERCIAL DEVELOPMENT

RETAIL SECTOR

There is a boom in mall development in Mexico today. The country is experiencing the mega-mall mania that captured Canada and the U.S. in the late 70s and 80s. Developers are trying to capitalize on Mexican's tastes for imported products by rapidly building U.S.-style shopping centres. One of the most ambitious projects opened in late 1993 — the Centro Santa Fe, just outside of Mexico City, which is Latin America's largest mall. Shopping center development is also taking place in Guadalajara and Monterrey, as well as the satellite cities around the capital.

OFFICE SPACE

To meet the growing demands of multinational companies and Mexican industry, more than 5 million square feet of new office space is currently under construction in Mexico City. The need is greatest for top quality office space which now accounts for only 10 percent of the City's office inventory. Recent reforms in leasing laws are expected to spur growth in the commercial real estate sector. The real estate industry in Mexico is underdeveloped to the extent that the traditional separation of real estate functions does not exist. Whereas in Canada there is a distinction between the real-estate developer, financier, the construction company, and the real-estate sales company, until now these functions have frequently been performed by the same person or company in Mexico.

Though Mexico City is currently the prime target for new office space, based on both a large private and public sector requirement, Canadian firms should also investigate office construction opportunities in the growing satellite cities. There is a determined move by many companies and the government to decentralize activities. The neighbouring states of Querétaro, Puebla, Hidalgo and Morelos are prime targets for increased commercial construction.

In late 1993, Canada's Reichmann

brothers publicly outlined their plans for three key developments in Mexico City. Reichmann International L.P., an

association between the Reichmanns and

A one-block area near Mexico City's

A 42-story office tower along the

A 30-building shopping, office and

The company will spend between \$400 and

\$500 million on the first project which is a

mixed business and residential development.

Rebuilding the 20-block plaza, damaged by

the 1985 earthquake, was held up by a battle between city authorities and advocates of

low-income housing. The company plans to

observe the norms and traditions of the city

while providing high quality business

environments to meet the demands of an increasingly sophisticated and international

residential complex on the city's western

G. Soros Realty is developing:

historic center;

financial strip;

outskirts.

business community.

30

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CANADA MENTON INDUSTRY PROFILE

OPPORTUNITIES IN MEXICO - THE CONSTRUCTION SERVICES SECTOR

SOCIAL DEVELOPMENT

In order to contend with a growing population Mexico must continue to build schools and hospitals. As part of the educational plan, over 5,000 new school rooms are constructed annually. As well, the rehabilitation and new construction of hospitals and clinics continues to be a major emphasis of the government's social program.

School construction is administered by the *Secretaría de Educación Pública* (SEP). Hospital construction is handled by three government and *parastatal* groups:

- Secretaría de Salud the Secretariat of Health;
- Instituto Mexicano del Seguro Social (IMSS) the Mexican Social Security and Institutional Health System; and
- Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estados (ISSSTE) — the Federal Worker Benefits System.

9. The Regulatory Environment

The regulatory environment surrounding construction is complex and involves federal, state and municipal laws as well as the business issues of incorporating a company in Mexico and complying with foreign investment regulations. Canadian firms should seek advice from both Canadian and Mexican lawyers on the impact that these regulations will have upon their companies.

ESTABLISHING A CONSTRUCTION COMPANY IN MEXICO

The 1989 Regulations to the Law on Foreign Investment greatly opened Mexican industry to increased participation by foreign investors. Foreign investors are now authorized to establish new business enterprises in Mexico and may hold up to 100 percent ownership interest in many business sectors. Construction services fall into category 6 of the investment regulations. In this category foreign investment is allowed up to 100 percent upon prior approval from the *Comisión Nacional para Inversión Extranjera* (CNIE) — National Commission of Foreign Investment. Approval is considered to be automatic if formal response is not received from the Commission within 45 working days.

Firms considering investing in or establishing a construction company in Mexico are advised to consult the Mexican Investment Board for further information.



INCORPORATING A COMPANY IN MEXICO

Mexico has a number of forms of business organization. The most typical are:

- sociedad anónima (corporation S.A.)
- sociedad anónima de capital variable (corporation with variable capital — S.A. de C.V.)
- sociedad de responsabilidad limitada (limited liability company — S.R.L.)

The first two are the most common forms of business for foreign investors. The only difference between an S.A. and an S.A. de C.V. is with regards to the variable portion of the capital stock, which is usually unlimited for an S.A. de C.V. The S.A de C.V. is used by foreign investors that want the flexibility of increasing or decreasing capital.

Requirements of an S.A.

- a minimum capital investment of NP \$50,000 (Cdn \$20,000) of which 20 percent must be paid in initially
- a minimum of two shareholders

Incorporating a company in Mexico can take one to two months depending on the complexity of the project. It is highly recommended that firms consult a lawyer and tax accountant in Mexico before incorporating. A Canadian law firm or bank may be able to recommend a Mexican law firm. Otherwise, consult the Canadian Embassy in Mexico for referrals.

THE MEXICAN CONSTRUCTION ASSOCIATION

In order to provide construction services in Mexico, whether privately or publicly funded, all companies must be registered with the *Cámara Nacional de la Industría de la Construcción* (CNIC) — the National Construction Association. Foreign companies that are non-resident in Mexico can also register and pay the annual dues.

Registration procedures for foreign companies are the same as for Mexican companies with the exception that they must also present:

- authorization letters from both the Department of Commerce (SECOFI) and the Department of Foreign Affairs (SRE);
- proof of registration at the Department of Finance (Hacienda);
- articles of incorporation; and
- the previous year's Mexican tax form, if applicable.

The Construction Association is an important source of market information for foreign suppliers. It maintains statistics on construction activity, and provides updated information on changes to the laws.

BUILDING PERMITS

In general in Mexico, a landowner must acquire a building permit from local authorities in order to engage in construction. The requirements for permits vary from one state to another and between municipalities. However, the requirements of the *Departamento del Distrito Federal* (DDF) — Federal District Department are the most strict and have been copied, with some modifications, in other areas of the country. In the Federal District, permits must be granted by each *Delegación*, or municipality — there are 16 municipalities in the Federal District. Every project or job-site must have a registered professional site manager who will assume overall responsibility for the work. This person must:

- be an accredited architect or engineer;
- be recognized by the municipality's Acceptance Committee as knowledgeable of the building rules, regulations, codes and standards;
- be accredited as a professional working in the field of construction; and
- be an accredited member of a Mexican professional association.

The project will also require the registration of senior technical personnel to administer and be responsible for the structural integrity of the building(s), the zoning and building design, and the service installations.

32

THE CANADIAN EXPERIENCE

Due to the complexities and the length of time it takes to obtain permits, one Canadian firm found that it pays to retain the services of a local permit agent who is familiar with the permit requirements and who can liaise between the contractor and the government authorities. A zoning compliance certificate (*Constancia de uso de suelo*) will be required. This certificate confirms that the proposed building complies with all the local zoning requirements such as: land usage, building(s) design, size of property, and architectural compatibility. It also ensures that the necessary service infrastructure such as water, sewers, electricity and roads exists or will be developed. An urban impact statement may also be required.

As a part of the building permit application, the management of the project and the owners must submit detailed plans that show compliance with the applicable building codes. Plans must also comply with the General Ecology Law (see below).

Upon completion of construction, a final inspection by the permit authorities is required in order to obtain an occupancy permit.

It is important for a construction company to identify, in the beginning, all the potential costs associated with permits, licensing and service connection fees. These costs vary not only from state to state but from municipality to municipality. In housing construction these regulatory costs can amount to over 20 percent of the price of the home.

BUILDING CODES

Building codes and standards vary from state to state. Again, the standards set by the Federal District Department are generally the most strict and have been modified for use in other regions. The building codes and standards are specified to meet the requirements established in the *Reglamento de Construcciones del Departamento del Distrito Federal* — Federal District Department Construction Regulation Manual for each type of building. The laws are designed to guarantee livability, functionality, sanitation, environmental compatibility, access to transportation, safety in emergencies, structural safety and integration with the urban image of neighbouring buildings. These are broken down into the following categories:

Zoning and building design Building size and types allowed

Service infrastructure

- Sanitation systems
- Water system
- Electrical systems Combustible fuels installations

Structural integrity

Earthquake resistance

Load capacity

Design and construction of concrete structures

- Design and construction of metal structures
- Design and construction of wooden structures
- Designs that are wind resistant

CANADA-MEXICO INDUSTRY PROFILE: Opportunities in Mexico - The Construction Services Sector



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In most cases companies find that North American building codes meet or exceed Mexican codes. However, various regions can have specific requirements. For example, in some sections of Mexico City, the building code calls for a Seismic 4 design. Construction along the Gulf areas of Mexico must resist wind loads of 115 m.p.h.

Canadian companies have found that detailed standards do exist in Mexico, but the degree to which they are enforced can vary. As well, there are heath and safety standards that apply to the building site. Standards are enforced by Health and Safety Committees that are formed by members of management and the work force, according to the number of workers on a project. In addition, social security and labour authorities are authorized to issue safety regulations and inspect the entities' premises in order to evaluate compliance with minimum work standards and special standards developed in accordance with the type of industry or activity. They can also impose sanctions for non-compliance.

The *Reglamento* is updated and published in the *Diario Oficial* — the Mexican Federal Government publication of new laws, similar to the Canadian Gazette. Complete details of technical standards and codes can be obtained from the Mexican Construction Association.

STANDARDS

Product standards are an important consideration for companies exporting capital goods, machinery and building materials to Mexico. Standards are established by the Mexican *Dirección General de Normas* (DGN)— the Mexican Bureau of Standards. This institution establishes the weight and measurement standards for the country. The metric system is used in Mexico and measurements are based on the International System of Units. Generally, Mexican standards follow those that are used in the industrialized countries. Mexico observes the standards set by the American Society of Mechanical Engineers (ASME), and the American Society for Testing of Materials (ASTM).

All imported goods, including building and construction materials, require a quality and standards authorization from the DGN called the "NOM" before they are allowed into the country. DGN publishes quality standards for a wide range of products in its catalogues. Detailed information and copies of DGN standards may be obtained by contacting the *Secretaría de Comercio y Fomento Industrial* (SECOFI), *Dirección General de Normas* in Mexico.

THE USE OF LOCAL LABOUR

Labour wages are quoted on a daily basis. Table 9.1 gives examples of the minimum daily wages paid to skilled labourers in the Federal District. It should be noted that these figures do not include benefits. Also, these are the minimum legal requirements. Actual wages might be as high as two to three times these values, depending on the competitive nature of the labour market in a given region.

There are no regulations which compel nonresident construction firms to use local building materials. However, strong union pressure and explicit contract terms make it necessary to employ a minimum of 80 percent local labour.

Asea Brown Boveri (ABB), of Ottawa undertook a project with CFE which involved a construction component. The construction was handled by a local subcontractor who provided a unionized workforce. ABB based its promised delivery date to CFE on a 7 day a week work schedule. However, the company found that the worker absenteeism rate to be as high as 50 percent on Sundays, regardless of their agreement with the subcontractor. In future, the company will consider bidding projects based on a 6 day per week schedule.

TABLE 9.1 LABOUR RATES

Job Category	Minimum Daily Wage (U.S. \$)	
Mason	6.99	
Rough Carpenter	6.49	
Plasterer/Drywall	6.46	
Steel worker	6.70	
Electrician	6.80	
Plumber	6.70	
Welder	6.90	
Bulldozer operator	7.35	

Source: Promotion Centre for Construction and Housing (CIHAC)

MEXICAN LABOUR LAW

Mexican labour law outlines a very complex system of protection for the worker. The labour code lays down the guidelines on collective bargaining, dismissal, compensation, maximum work hours, vacations, housing benefits, profit-sharing, the right to strike, and social security benefits. These regulations also extend to any foreign companies which directly employ Mexican citizens. In accordance with the law employers must pay the following benefits on behalf of their employees:

- Social security (health care) payments which can be as high as 21.9 percent of the payroll;
- Annual vacation of at least 6 working days to be compensated at 125 percent of salary;
- Annual bonus of at least 15 days salary;
- Profit sharing equal to 10 percent of pre-tax earnings to be distributed among employees; and
- Workers housing program (INFONAVIT) equal to 5 percent of the payroll.

Various other non-legislated benefits are commonplace for construction workers. Transportation to the job-site, the provision of meals, and temporary housing are often included. Thus, benefits can be substantial in terms of total payroll costs. Mexican labour law is quite strict in terms of termination of workers. It is important to get sound advice on this issue when considering a project involving temporary or variable labour needs.



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Environmental Legislation Relating to Construction

To address the growing environmental concerns, the Mexican government introduced tough legislation in 1988. The General Ecology Law addresses: pollution issues; environmental impact and risk assessment; resource conservation; and the enforcement of environmental laws and regulations.

Today, all new industrial construction projects require an environmental impact statement and risk analysis. Construction permits are contingent upon receipt of government approval. The environmental impact statement must be submitted to the *Secretaría de Desarrollo Social* (SEDESOL) — the Secretariat for Social Development. It must contain:

- a description of corporate activities and planned operations;
- an analysis of the natural and socioeconomic environment in the area of operations;
- applicable land-use standards and regulations;
- identification of the environmental impact of the project; and
- outline of the measures employed to mitigate and prevent pollution.

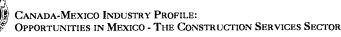
SEDESOL must issue a resolution on the project within 30 days of receipt of the environmental impact statement. Non-compliance with environmental regulations has resulted in the denial of construction permits.

PATENT AND TRADEMARK PROTECTION

Mexico's new intellectual property legislation, which went into force in June 1991, significantly increases protection for companies considering licensing and technology transfer. The Law for the Promotion and Protection of Industrial Property offers the following provisions:

- the initial term for trademarks goes from 5 to 10 years;
- the term for patents goes from 14 to 20 years;
- industrial designs, which encompass industrial models and drawings, now receive 15 years protection instead of the previous 7 year term;
- protection from copyright piracy is increased significantly and extended to computer software;
- Mexico now recognizes internationally accepted markings for trademarks and copyrights; and
- stiff penalties are imposed for infractions of these laws.

As these laws are relatively new and the regulations have not yet been fully implemented, it is recommended that Canadian firms seek legal advice on intellectual property protection.



36

To gain a good understanding of the tax implications of establishing a construction business in Mexico, or even employing a sales agent to solicit business for the company, firms should consult the Canadian Embassy publication, Mexico: Basic Legal Aspects of Doing International Business available from InfoEx. (call InfoEx at 1-800-267-8376 or (613) 944-4000).

TAXATION

Companies that create a permanent establishment in Mexico, or employ a sales agent who has the power to execute contracts will be subject to Mexican taxes on the income earned within the Mexican territory. The corporate income tax rate is 35 percent, reduced from 42 percent in 1991, and employees' salaries are subject to a 35 percent withholding tax. The minimum tax payable by a corporation, in any given year, is 2 percent of the corporation's total fixed assets.

In 1992, Canada became the first country to sign a bilateral tax treaty with Mexico. This eliminates double taxation and may reduce taxes for firms resident in Canada and doing business in Mexico. The treaty supersedes Mexico's tax laws in several areas — notably the taxation of royalty and fee remittances. There is a uniform withholding rate of 15 percent on remittances from Mexico to Canada. This differs from the general Mexican law which provides for up to 35 percent withholding tax on royalty remittances. In addition, the treaty includes limits on rates of withholding tax applicable to dividend remittances, should Mexico institute such a tax.

REMITTABILITY OF FUNDS

As a part of Mexico's campaign to increase foreign investment there has been an easing of restrictions on the repatriation of funds by foreign investors. The important facts for Canadian investors are:

- the free market rate is used for all foreign exchange transactions;
- transfer of profits and dividends is unrestricted provided the investor meets profit-sharing and tax obligations;
- transfer of interest and repayment of principal are unrestricted;
- transfers of royalties and fees are unrestricted;
- repatriation of capital is not explicitly prohibited; and
- repayment of principal is unrestricted for new loans.

Work Permits For Canadians

All persons entering Mexico require a Forma Migratoria, FM, Immigration Form. Different types of work permits exist in Mexico depending on the nature of the work and the privileges the Canadian worker will be granted — FM3s are needed for temporary stays up to a year and FM2s are required for longer stays or immigration. The Mexican Consulate General's offices in Vancouver, Toronto and Montreal, or the Embassy of Mexico in Ottawa will receive applications for FM3s. Applications for FM2s must be submitted directly to the Secretaría de Gobernación, the Secretariat of the Interior, in Mexico by the individual's employer.



It is important to remember that contracts or other legal documents signed in Mexico by persons who have not obtained the proper status for the purpose of doing business in Mexico, in other words business people or individuals conducting business in Mexico who are not in possession of an FM3, may not be considered to be legally binding on the parties concerned

The temporary entry for business persons clause that was contained in the Canada-U.S. Free Trade Agreement (FTA) has been replicated and extended to the North American Free Trade Agreement (NAFTA).

The documentation required to obtain an FM3 must include two pictures of the individual, a passport, a letter from the employer specifying what the person's activities will be while in the country and by whom that person will be remunerated, and payment of a permit fee. The fee will vary depending on the period of validity and nature of the business being conducted. To obtain an FM2 an individual and company must provide the following documentation:

- a letter from the employer stating the individual's position and salary;
- a certified copy of the company's certificate of incorporation, official registration in the national foreign investment register or registration in a Mexican Chamber of Commerce;
- a copy of the most recent corporate tax return;
- for companies with less than 100 employees, a full list of all personnel working in Mexico including their nationalities, salaries and positions within the company; and
- in some cases the company may be asked to indicate the Mexican who will be receiving training from the individual during his or her stay in Mexico. If the permit is subsequently renewed, Secretaría de Gobernación will ask for verification that this training was in fact given to the individuals specified at the outset.

An FM3 can be renewed upon expiration and an FM2 must be renewed annually. Persons being remunerated in Mexico by Mexican firms will need to procure either an FM3 or FM2 through the Secretaría de Gobernación in Mexico.

10. PUBLIC WORKS CONTRACTING

Since publicly funded works still account for a large part of the country's construction activity, it is vital to understand the government procurement process in Mexico in order to participate in this sector of the construction industry. The following gives a brief introduction to the regulations pertaining to public works contracting. However, it is recommended that the reader refer to two additional publications by Foreign Affairs and International Trade Canada that greatly expand on the overall government procurement environment:

- Government Procurement in Mexico
- 鏑 Successfully Bidding for Mexican Government Industrial Procurements (in production)

Contact InfoEx at 1-800-267-8376 or (613) 944-4000

The Purchasing Act (Ley de Adquisición) is the primary piece of legislation controlling all federal government procurement of goods and services. The Public Works Act (Ley de Obras Públicas) is the associated law which regulates federal spending and activities related to public works, defined as all work for the purpose of creating, constructing, maintaining or modifying property, including exploration, localization, drilling, mining and similar activities intended to use and develop surface and underground natural resources.



NAFTA UPDATE

The terms of the NAFTA require Mexico to improve the accessibility for Canadian and American suppliers to information on up-coming public tenders. As of January 1, 1994 tender notifications are published in the *Diario Oficial*. On January 1, 1995 Mexico will introduce a new publication expressly for procurement opportunities.

OPEN BIDDING SERVICE

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In the near future, the Open Bidding Service (OBS) will provide information on upcoming Mexican Government procurement opportunities to its Canadian subscribers. Information can be obtained by calling 1-800-361-4637 or (613) 737-3374.

TENDER NOTIFICATION

When a public entity has decided to acquire goods or services for a public works project it is required, with some limitations, to execute the contract through a public bidding process. To improve the efficiency of the procurement procedure, public tenders may be disregarded for small sum purchases. The thresholds for these purchases are set annually and vary between purchasing entities.

There is no centralized purchasing department within the Mexican federal government. Each government entity (secretariat or *parastatal* enterprise) is responsible for its own procurement program.

For those projects that are open to public bidding, calls to tender must be published in at least two major national daily newspapers. Each purchasing entity has its particular list of preferred publications. *El Excelsior* and *El Universal* are commonly used. In practice, tender notifications (*avisos*) will only be publicized for a few days. It is therefore highly recommended that a Canadian company interested in competing for public works contracts establish a mechanism for scanning the appropriate publications on a daily basis. This might be a local office, representative, or secretary.

BIDDING

The bid notification contains information on the agency or entity issuing the call for bids, a general description of the project, and details on where the bid documents (bases) can be obtained, and the place, date and time that the bids will be opened. There is an administrative fee for bid documents that varies according to the size of the project. This can range from U.S. \$100 to U.S. \$750 dollars.

ACCESSIBILITY TO FOREIGN BIDDERS

Before purchasing the bid documents, it is important to determine whether or not a Canadian company will be eligible to bid on the project. The Mexican government defines two classes of contract — a) contracts for national tender, and b) contracts for international tender. Canadian companies can bid on contracts for national tender but these will require 50 percent Mexican content. With the implementation of the NAFTA a new classification of contracts will result contracts that are valued over the NAFTA thresholds (see Section 12). These contracts will be open equally to Mexican, Canadian and U.S. bidders.



THE CANADIAN EXPERIENCE

Canadian companies that have bid on Mexican government contracts have generally found that the process, though initially quite ominous and often bureaucratic, is fair and not as complicated as first imagined. However, there is a steep learning curve and one should not expect immediate success. By continuing to bid several companies have started to win contracts. Most feel that a local presence is vital to learning about contract tenders and bidding in a timely manner. Those who have had to use it, found the protest mechanism worked.

SNC-LAVALIN,

SNC-Lavalin, of Montreal notes that a contract it won in 1992 was awarded in a manner that it considered to be above reproach. All bids were opened at the appointed time in an open session with independent assessors hired by the client.

NAFTA UPDATE

The Mexican government will have to allow 40 working days between tendering and bid closing for construction projects that are open to NAFTA bidders. The source of financing also impacts the eligibility of foreign bidders. One should check to see if the financing originates from the World Bank or International Development Bank (IDB). World Bank-funded projects will generally include a 15 percent preference for local suppliers. IDB financing can carry a similar 5 percent preference. The Banks' publications are excellent sources of information on upcoming Mexican infrastructure projects which they are funding.

Mexican law mandates a minimum of 10 working days between the tender date and bid closing for supplies, and 20 days for projects or customized products. If tenders are extended internationally 45 days might typically be given.

Bids must be submitted in Spanish.

THE PUBLIC WORKS REGISTRY

Up until July 1991, it was necessary to be listed in the *Padrón de Contratistas de Obras Públicas* — Public Works Contractors' Registry in order to bid on public works projects. This requirement no longer exists at the federal level. However, various state and municipal governments may still maintain contractors' registries.

BID BONDS

It is common practice to request a bid guarantee (*fianza*) with all public works tenders. By law this is set at 5 percent of the bid amount. It must take the form of a certified cheque drawn on a Mexican bank or a bond from a Mexican bonding agency that is acceptable to the government. The bond is fully re-imbursable if the bid is unsuccessful. In some cases, companies bidding on construction projects are expected to carry net assets in excess of a set percentage of the project costs (e.g. 20 percent).

AWARD

Bids are generally opened in public at a time and date established in the bid documents. All other conditions being equal, the contract will go to the lowest bidder. Contracts must be awarded within 30 working days of the bid opening. A contract must be signed within 20 working days of the date that the contractor was notified of the award. There may be a further extension of 10 days should the purchasing entity consider that it is necessary.

PERFORMANCE BONDS

Under the Public Works Law, the contractor is required to provide a performance guarantee in the form of a bond equal to 10 percent of the contract value. Again, this can be in the form of a *fianza* from an accredited Mexican bonding agency. Some purchasing entities will request performance guarantees up to 20 percent of the project value.

CANADA-MEXICO INDUSTRY PROFILE: Opportunities in Mexico - The Construction Services Sector It is important for a Canadian company to be able to count on the on-going presence and technical strength of a local partner who will be in the position to deal with site problems post commissioning of a project. — Trimex

PAYMENT DELAYS

The cost of working capital has been stubbornly high in Mexico, ranging in the 25-30 percent plus bracket. This has a direct impact on prompt payment of accounts by Mexican clients. During 1993, delays occurring on government contract payments were common and such delays had a downstream effect on sub-suppliers. A Canadian company which is supplying construction services to the Mexican government should allow for payment delays and, if possible, build this into third party obligations.

It should also be added that the overall experience of Canadian exporters is positive in terms of eventual full settlement of accounts. Within 15 working days following the formal acceptance of the project, the contractor must guarantee the project by substituting the bond that is in force with another bond that is equivalent to 10 percent of the project value to cover any defects. This guarantee will be in effect for one year after the date that work concludes. At the end of the period, if the government entity is in agreement, it will notify the bonding company to cancel the bond.

Advance Payments

If advance payments are included in the terms of the agreement, contractors must supply a guarantee, in the form of a bond, for the total amount of the advance payment. The bond will be canceled when the corresponding advance payment is totally amortized.

After a public work is finished, despite formal acceptance by the customer, the contractor is responsible for defects and harm caused by poor quality work. The contractor can be held liable under the Mexican Civil Code.

FORMS OF CONTRACT

There are two acceptable forms of contract for public works:

Unit Price Contract (Contrato a precios unitarios)

In this type of contract, the customer is bound to pay the contractor a remuneration that is specified by finished unit. The parties establish an estimated fee that the owner must pay the contractor for each stage of the project. Payment is made as the project progresses, making adjustments for the cost of raw materials and labour due to market fluctuations, provided that this clause has been included in the contract.

The unit price contract is the most widely used in Mexico.

Lump Sum Contract (Contrato a precio alzado)

In this type of contract, the contractor is bound to carry out the project for a fixed price, supplying the necessary labour and materials to finish the project and bearing all risks, except for any delays caused by the customer.

Various other forms of agreement, such as cost-plus contracts are found in private sector projects.

PAYMENT

The Public Works Act specifies that payment must be made within 30 working days of completion and acceptance of the project, unless otherwise agreed upon.



Contract disputes that arise from perceived non-conformities in the tendering process, the award, or the administration of the contract can be appealed to the Secretaría de la Contraloría General de la Federación (SECOGEF) — Secretariat of the Comptroller General. About 2 percent of all government procurement bids are protested annually. Companies that have resorted to this process have generally found their cases to be fairly dealt with.

It is important to note that contracts written and signed in Mexico are subject to Mexican law and the final arbiter, in the extreme case, will be the Mexican courts. To avoid moving disputes through complex and expensive legal procedures, contracts will frequently include a dispute settlement mechanism calling for binding arbitration in Mexico. Increasingly there is a movement towards establishing a tri-national panel of three legal experts with representation from Canada, Mexico and the U.S. to resolve commercial disputes under the NAFTA.

EVOLUTION OF THE PUBLIC WORKS LAW

Traditionally the federal and state governments assumed the role of general contractor for infrastructure projects. They hired subcontractors: design engineers on an hourly basis, construction contracting based on unit prices, and building materials on a lowest cost basis. Today contractors are taking total responsibility for the work.

In recent months significant changes to the Public Works Law have been proposed. These have the dual goals of a) bringing the public works tendering process into line with those of Mexico's NAFTA partners, and b) a general modernization of the law to encourage better quality, pricing and financing within projects. Proposed changes include:

- Improving the transparency of the bid process all participants in the competition will receive a document explaining why their proposal was not accepted.
- Recognizing the importance of technology, not just lowest price more emphasis would be placed on the longevity, engineering and financial management of the project. This would involve increased use of the two-step bid evaluation in which the technical proposal and the economic proposal are reviewed separately.
- Increasing opportunities for small and medium-sized companies or consortia to participate — the rules for subcontracting would be simplified allowing third party contracting without the prior consent of the government entity.

CANADA-MEXICO INDUSTRY PROFILE: Opportunities in Mexico - The Construction Services Sector

"These are changing times. Before one was

metres of concrete, tons of steel, etc. Today one must provide "turnkey" packages, quoting in

terms of cubic metres of treated water, kilowatt-

hours generated, or highway tolls, in

combination with the duration of the project."

CEO, Bufete Industrial

– cubic

accustomed to quoting unit prices -

42

TIPS FOR CANADIAN BIDDERS

It is worth considering the following when bidding on Mexican public works contracts.

Put together a bidding team. Prepare in advance by having all of the players ready for when an interesting contract opportunity comes along. Your bid team should include:

- Your local representative or staff who is continuously scanning the bid notices for opportunities;
- Technical and marketing people required to put the proposal together;
- A tested technical translator that will be able to translate the bid documentation as well as your technical proposal;
- A Mexican bonding company that is reputable and acceptable to the entities you will be dealing with;
- Notaries and/or lawyers that can certify the documentation required in your proposal;
- Contacts at the closest Mexican consulate in Canada that will be required to certify part of your proposal documentation; and
- Contacts at Export Development Corporation, should you be seeking EDC financing for any portion of the contract.

By having all of the players ready in advance, you will be able to react within the narrow tendering window to potential market opportunities.

- Start small. Get to understand the bid process and the competition by bidding on small projects. When you have been successful at this level you can consider scaling up to capture the larger projects.
- Avoid mordidas. Requests for bribes or considerations of any kind should be ignored.
- Use a local partner. This can be a representative, agent or joint venture partner. It is particularly important to locate a partner that has had direct experience with the particular government agency that you wish to deal with.



12. The Impact of NAFTA

The North American Free Trade Agreement (NAFTA) creates tri-lateral opportunities in construction, engineering and architectural services through the provisions negotiated in two of the agreement's chapters — Government Procurement and Cross-Border Trade in Services.

GOVERNMENT PROCUREMENT

The Government Procurement chapter of the NAFTA significantly enhances opportunities for Canadian companies to participate in federal public service projects in Mexico. As of January 1, 1994 Canadian companies compete on an equal footing with their Mexican and American counterparts for public construction, engineering and architectural services contracts over stipulated thresholds as follows:

Contracts with Government entities	Services contracts, except for construction, over U.S. \$50,000
	Construction services contracts over U.S. \$6.5 million
Contracts with Government enterprises	Services contracts, except for construction, over U.S. \$250,000
	Construction services contracts over U.S. \$8.0 million

The thresholds will be indexed every two years based on the U.S. inflation rate.

For Mexico, government entities refers to the 18 federal *Secretarias*, or secretariats, which are roughly similar to Canadian federal ministries. Government enterprises refers to 37 *parastatal* companies, many of which are responsible for considerable investment in infrastructure projects. Eight of the key enterprises which are covered by the agreement and are active in the construction sector are listed below:

Agriculture and Water Resources (SARH) Communications and Transport (SCT) National Defense (SDN)

FEDERAL GOVERNMENT

SECRETARIATS

Trade, Commerce and Industrial Development (SECOFI) Office of the Comptroller General (SECOGEF)

Tourism (SECTUR)

Social Development and Housing (SEDESOL)

Secretariat of the Navy (SEMAR) Energy, Mines and Parastatal Industries (SEMIP) Public Education (SEP)

Fisheries (SEPESCA)

Secretariat of the Interior, (SG)

Finance and Public Credit (Hacienda)

Agrarian Reform (SRA)

External Affairs (SRE)

Health (SS)

Labour and Social Security (STPS)

Office of the Attorney General of the Republic (PGR)



ENGINEERING AND ARCHITECTURAL Services Covered in the NAFTA Government Procurement Chapter

Advisory and pre-design architectural services

Architectural design services

Contract administration services

Combined architectural design and contract administration services

Advisory and consultative engineering services

Engineering design services for foundations and building structures

Engineering design services for mechanical and electrical installations for buildings

Engineering design services for civil engineering construction

Engineering design for industrial processes and production

Engineering design services n.e.c.

Integrated engineering services for transportation, infrastructure turnkey projects

Integrated engineering and project management services for water supply and sanitation works turnkey projects

Integrated engineering services for the construction of turnkey projects

Urban planning and landscape architectural services

PARTIAL LIST OF GOVERNMENT ENTERPRISES COVERED BY NAFTA GOVERNMENT PROCUREMENT PROVISIONS

- building of airports				
- building of ports - oil industry infrastructure - water distribution and treatment systems				
			- construction and rehabilitation of regional road	
			- railroad infrastructure	
- electricity infrastructure				
- building of hospitals				

TRANSITION PROVISIONS FOR MEXICO

In order to account for inequalities in economic development of the three countries, Mexico has negotiated a 10-year period of transition into full compliance with the NAFTA government procurement rules. An annually decreasing percentage of the government contracts that would normally be open to bidders from Canada and the U.S. will be reserved for domestic suppliers. This provision has been aimed primarily at protecting contracts for goods, services and construction services in the energy sector.

In 1994 the Mexican government will reserve for Mexican suppliers:

- 50 percent of the total annual procurement above NAFTA thresholds of goods, services and construction services by PEMEX;
- **50** percent of the total annual procurement above NAFTA thresholds of goods, services and construction services by CFE; and
- 50 percent of the total annual procurement above NAFTA thresholds of construction services, excluding construction services procured by PEMEX and CFE.

After 1994, the reservation will decrease according to the following schedule:

<u></u>									
1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
50 %	45 %	45 %	40 %	40 %	35 %	35 %	30 %	30 %	0 %



Additional offset reserves apply to turnkey or major integrated projects. In these cases, the Mexican government may impose a local content requirement of no more than:

- 40 percent for labour intensive turnkey or major integrated projects; and
- 25 percent for capital intensive turnkey or major integrated projects.

THE IMPACT OF THE NAFTA ON TENDERING PROCEDURES

The Government Procurement chapter of the NAFTA contains provisions to improve the accessibility and transparency of the Mexican government tendering process. Three particularly significant areas are:

- the improved accessibility for Canadian and American suppliers to information on up-coming public tenders — Mexico will introduce a central publication which provides information on all public tenders;
- the extension of bid deadlines to allow equal opportunity to participate for companies from all three countries — typically 40 working days; and
- the collection and publication of statistics on Mexican government procurement.

It is recognized that Mexico will be required to undergo far more changes to its current government procurement processes than its two NAFTA partners in order to meet the obligations of the Agreement. Major adjustments in training and data maintenance systems will be required at many of the largest purchasing entities. In the short-term Canadian suppliers should expect and be prepared to deal with misunderstandings that will undoubtedly arise from the series of changes being introduced in Mexico.

FUTURE NEGOTIATIONS

The NAFTA countries have agreed to commence additional negotiations with a view towards further liberalization of the procurement markets. In particular, the parties will examine the issue of extending the Agreement to include state and provincial government procurement. They will also explore the feasibility of introducing electronic transmission of tender information as an additional or alternate means of publication.



CONCERNS OF THE MEXICAN CONSTRUCTION INDUSTRY WITH RESPECT TO NAFTA

Representatives of Mexican construction companies have expressed the sentiment that NAFTA opens Mexico to U.S. and Canadian construction companies, however enormous barriers to doing business in Canada and the U.S. still exist for Mexican construction companies. While a Canadian company can establish operations anywhere in Mexico and compete on a national basis for construction projects throughout the Republic, Mexican companies would be confronted with state and provincial trade barriers if they attempted to operate in the U.S. or Canada. The Mexican construction industry sees that it will be faced with the challenge of defending its market share of construction projects over the next few years. Sensitivity to this issue is vital when dealing with contacts within the Mexican industry. Canadian companies may find that "partnership" is the key to a successful venture in Mexico.

CROSS-BORDER TRADE IN SERVICES

Chapter 12 of the NAFTA makes provision for national treatment of service providers in the three countries. The Agreement will prohibit Canada, Mexico, and the U.S. from requiring that a service provider from another country establish a residence or a local place of business as a condition to providing the service. Licensing and certification procedures must be "transparent", that is, based on clear standards, and objective criteria. The three countries will work towards liberalization of licensing requirements in such fields as engineering and other professional services.

LICENSING OF ENGINEERS

The NAFTA contains a specific clause pertaining to the temporary licensing of engineers to permit them to practice their engineering specialties in all three countries. In this regard, an agreement of cooperation has been signed between the Association of Consulting Engineers of Canada (ACEC) and the *Cámara Nacional de Empresas de Consultoría*, its Mexican equivalent, to work towards a common accreditation for engineering professionals working in the two countries.

LICENSING OF ARCHITECTS

At present the Committee of Canadian Architectural Councils is undergoing discussions with its counterparts in the U.S. and Mexico to establish guidelines for accreditation of architects to work in the three countries and to examine the possibility of temporary licensing procedures for cross-border services. Until such time as agreements are in place, Canadian architects considering opportunities in Mexico are advised to consider partnering with a local architectural firm.



REFERENCES

- ¹ Banco de Mexico, *The Mexican Economy*, June 1993, pg. 264.
- ² Revista Mexicana de la Construcción, December 1993, pg. 15.
- ³ K. Conradt, *Latin Finance*, Oct. 1993, pg. 89.
- ⁴ G. Newman, "Public Services in Private Hands," Business Latin America, June 14, 1993, pg. 2.
- ⁵ Mexico Investment, Licensing and Trading Conditions Abroad, pg. 14. New York: Business International Corporation. 1991.
- ⁶ ibid, pg. 12.



CANADIAN GOVERNMENT DEPARTMENTS AND SERVICES IN CANADA

HERE TO GO FOR ADDITIONAL ASSISTANCE

DEPARTMENT OF FOREIGN AFFAIRS AND INTERNATIONAL TRADE* (OTTAWA)

Department of Foreign Affairs and International Trade (DFAIT) is the Canadian federal government department most directly responsible for trade development. The **InfoEx Centre** is the first contact point for advice on how to start exporting; it provides information on exportrelated programs and services; helps find fast answers to export problems; acts as the entry point to DFAIT's trade information network; and can provide interested companies with copies of specialized export publications.

InfoEx Centre

Tel: 1-800-267-8376 or (613) 994-4000 Fax: (613) 996-9709

Latin America and Caribbean Trade Division promotes trade with Mexico. There are several trade commissioners at the Embassy of Canada in Mexico City, and there is a satellite office in Monterrey. Trade Commissioners can provide a range of services including introducing Canadian companies to potential customers in Mexico, advising on marketing channels, assisting those wishing to participate in trade fairs, helping identify suitable Mexican firms to act as agents, and compiling credit and business information on potential foreign customers.

Latin America and Caribbean Trade Division (LGT) Department of Foreign Affairs and International Trade Lester B. Pearson Building

125 Sussex Drive Ottawa, ON K1A 0G2 Tel: (613) 996-6547 Fax: (613) 943-8806

International Trade Centres

International Trade Centres have been established across the country as a first point of contact to support the exporting efforts of Canadian firms. Co-located with the regional offices of Industry Canada (IC), the centres operate under the guidance of DFAIT and all have resident Trade Commissioners. They help companies determine whether or not they are ready to export; assist

* Formerly External Affairs and International Trade Canada.

firms with marketing research and market planning; provide access to government programs designed to promote exports; and arrange for assistance from the Trade Development Division in Ottawa and trade officers abroad. Contact the International Trade Centre nearest you:

	British Columbia:	Scotia Tower 900-650 West Georgia Street
		P.O. Box 11610
		Vancouver, BC V6B 5H8
		Tel: (604) 666-0434 Fax: (604) 666-8330
	Yukon:	Room 210 300 Main Street Whitehorse, YT Y1A 2B5
		Tel: (403) 667-3921 Fax: (403) 668-5003
	Alberta:	Canada Place Suite 540
		9700 Jasper Avenue
		Edmonton, AB T5J 4C3 Tel: (403) 495-4782
		Fax: (403) 495-4507
		11th Floor 510-5th Street S.W.
		Calgary, AB T5P 3S2
		Tel: (403) 292-6660 Fax: (403) 292-4578
	Northwest Territories:	Precambrian Building 10th Floor
		P.O. Box 6100
		Yellowknife, NT X1A 2R3 Tel: (403) 920-8578
		Fax: (403) 873-6228
	Saskatchewan:	Suite 401 119-4th Avenue South
		Saskatoon, SK S7K 5X2
		Tel: (306) 975-4400 Fax: (306) 975-5334
		4th Floor
		1955 Smith Street
		Regina, SK S4P 2N8 Tel: (306) 780-7520
		Fax: (306) 780-6679
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N.F. 1. 1	
Manitoba:	7th Floor 330 Portage Avenue P.O. Box 981 Winnipeg, MB R3C 2V2 Tel: (204) 983-8036 Fax: (204) 983-2187
Ontario:	Dominion Public Building 4th Floor 1 Front Street West Toronto, ON M5J 1A4 Tel: (416) 973-5053 Fax: (416) 973-8714
Quebec:	Stock Exchange Tower Suite 3800 800 Victoria Square P.O. Box 247 Montréal, PQ H4Z 1E8 Tel: (514) 283-8185 Fax: (514) 283-8794
New Brunswick:	Assumption Place 770 Main Street P.O. Box 1210 Moncton, NB E1C 8P9 Tel: (506) 857-6452 Fax: (506) 851-6429
Prince Edward Island:	Confederation Court Mall Suite 400 134 Kent Street P.O. Box 1115 Charlottetown, PE C1A 7M8 Tel: (902) 566-7400 Fax: (902) 566-7450
Nova Scotia:	Central Guarantee Trust Tower 5th Floor 1801 Hollis Street P.O. Box 940, Stn M Halifax, NS B3J 2V9 Tel: (902) 426-7540 Fax: (902) 426-2624
Newfoundland:	Atlantic Place Suite 504 215 Water Street P.O. Box 8950 St. John's, NF A1B 3R9 Tel: (709) 772-5511 Fax: (709) 772-5093

World Information Network

FOR EXPORTS

The World Information Network for Exports (WIN Exports) is a computer-based information system designed by DFAIT to help Canada's trade development officers abroad match foreign needs to Canadian capabilities. It provides users with information on the capabilities, experience and interests of more than 30,000 Canadian exporters. To be registered on WIN Exports, call: (613) 996-5701.

PROGRAM FOR EXPORT MARKET DEVELOPMENT (PEMD)

This program seeks to increase export sales by sharing the costs of industry-initiated activities aimed at developing export markets. PEMD is administered by IC regional offices and funded by DFAIT. Activities eligible for PEMD financial support (up to 50 percent of the costs) include:

- participation in recognized foreign trade fairs outside of Canada;
- trips to identify export markets and visits by foreign buyers to Canada;
- project bidding or proposal preparation at the precontractual stage for projects outside Canada;
- the establishment of permanent sales offices abroad in order to undertake sustained marketing efforts;
- special activities for non-profit, non-sales food, agriculture and fish organizations, marketing boards and agencies, trade fairs, technical trials, and product demonstrations (for example); and
- new eligible costs include: product testing for market certification, legal fees for marketing agreements abroad, transportation costs for offsore company trainces, product demonstration costs and other costs necessary to execute the marketing plan.

Support is also provided for certain types of governmentplanned activities, such as outgoing trade missions of Canadian business representatives and incoming missions to Canada of foreign business and government officials who can influence export sales.

For information, call: (613) 954-2858.

INTERNATIONAL FINANCING

DFAIT helps Canadian exporters interested in pursuing multilateral business opportunities financed by international financing institutions (IFI). Canadian exporters and trade associations can access market data, obtain a better understanding of the competition, and determine if an IFI-funded market opportunity is practical and worth pursuing. DFAIT can provide information and advice on the availability of Canadian government-funded assistance programs and can assist companies in developing effective export marketing. For further information contact:

International Finance Division Department of Foreign Affairs and International Trade Tel: (613) 995-7251 Fax: (613) 943-1100

TECHNOLOGY INFLOW PROGRAM

Managed by DFAIT and delivered domestically by the National Research Council, this program is designed to help Canadian companies locate, acquire and adopt foreign technologies by promoting international collaboration. IC also helps in program promotion. The program officers respond to requests to identify technology sources and opportunities for cooperation between Canadian and foreign firms. The program will also help Canadian firms make exploratory visits abroad to identify and gain first-hand knowledge of relevant foreign technologies as well as to negotiate to acquire them. For information, call: (613) 993-3996

INVESTMENT DEVELOPMENT PROGRAM

This program helps Canadian companies find the investment they need. It actively promotes investments that take the form of new plant and equipment, joint ventures or strategic partnerships. It is especially interested in attracting investment that introduces new technology into Canada, a key to creating new jobs and economic opportunities. Investment officers make contact with foreign investors and bring them together with Canadian companies. For information, call: (613) 996-8625.

INDUSTRY CANADA

Industry Canada (IC) was created with a broad mandate to improve the competitiveness of Canadian industry. In the area of small business, it has been given specific responsibility to:

- develop, implement and promote national policies to foster the international competitiveness of industry; the enhancement of industrial, scientific and technological development; and the improvement in the productivity and efficiency of industry;
- promote the mobility of goods, services, and factors of production within Canada;

- develop and implement national policies to foster entrepreneurship and the start-up, growth and expansion of small businesses;
- develop and implement national policies and programs respecting industrial benefits from procurement of goods and services by the government of Canada;
- promote and provide support services for the marketing of Canadian goods, services and technology; and
- promote investment in Canadian industry, science and technology.

IC REGIONAL OFFICES

The regional offices work directly with Canadian companies to promote industrial, scientific and technological development. They help clients recognize opportunities in a competitive international marketplace by providing services in the areas of business intelligence and information, technology and industrial development, and trade and market development. They also promote and manage a portfolio of programs and services.

The following are areas in which IC regional offices have special competence:

- access to trade and technology intelligence and expertise;
- entry points to national and international networks;
- industry sector knowledge base;
- co-location with International Trade Centres connected to DFAIT and Canadian posts abroad;
- client focus on emerging and threshold firms; and
- IC Business Intelligence.

THE BUSINESS OPPORTUNITIES SOURCING SYSTEM (BOSS)

BOSS is a computerized databank that profiles over 26,000 Canadian companies. It lists basic information on products, services and operations that is useful to potential customers. The system was established in 1980 by IC in cooperation with participating provincial governments. BOSS was originally established so that Trade Commissioners posted around the world by DFAIT could find Canadian companies that might be able to take advantage of foreign market opportunities. Today, more than 11,000 domestic and international subscribers use the system not only to locate Canadian suppliers but also to obtain market intelligence and identify market opportunities. The majority of subscribers are Canadian companies.

Call: (613) 954-5031.



MARKET INTELLIGENCE SERVICE

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This service provides Canadian business with detailed market information on a product specific basis. The service assists Canadian companies in the exploitation of domestic, export, technology transfer, and new manufacturing investment opportunities. The intelligence is used by Canadian business in decisions regarding manufacturing, product development, marketing, and market expansion. The information includes values, volume and unit price of imports, characteristics of specific imports (e.g. material, grade, price range, etc.), names of importers, major countries of export, identification of foreign exporters to Canada, Canadian production, Canadian exports, and U.S. imports. Two-thirds of the clientele for this service are small businesses. Call: (613) 954-4970.

REVENUE CANADA

NAFTA Information Desk Revenue Canada - Customs, Excise and Taxation 6th floor 191 Laurier Avenue West Ottawa, ON KIA 0L5 Tel: 1-800-661-6121 Fax: (613) 954-4494

NAFTA Spanish Help Desk

Revenue Canada Customs provides a NAFTA Help Desk telephone line with service available in Spanish Tel: (613) 941-0965

AGENCY

An important possible source of financing for Canadian ventures in Mexico is the special fund available through the Canadian International Development Agency (CIDA) under the Industrial Cooperation Program or CIDA/INC. CIDA's Industrial Cooperation Program provides financial contributions to stimulate Canadian private-sector involvement in developing countries by supporting longterm business relationships such as joint ventures and licencing arrangements. INC supports the development of linkages with the private sector in Mexico encouraging Canadian enterprises to share their skills and experiences with partners in Mexico, and other countries. A series of INC mechanisms help enterprises to establish mutually beneficial collaborative arrangements for the transfer of technology and the creation of employment in Mexico. There are five INC mechanisms which help eligible Canadian firms to conduct studies and provide professional guidance and advice to potential clients. Where a project involves environmental improvement, technology transfer, developmental assistance to women, job training, or job creation, early contact with CIDA's Industrial Cooperation Division is suggested.



CANADA-MEXICO INDUSTRY PROFILE:

OPPORTUNITIES IN MEXICO - THE CONSTRUCTION SERVICES SECTOR

An important CIDA criterion is that the project creates jobs in Mexico without threatening jobs in Canada. In fact, most CIDA-assisted projects have produced net increases in Canadian jobs.

Industrial Cooperation Division Canadian International Development Agency 200, Promenade du Portage Hull, PQ K1A 0G4 Tel: (819) 997-7905/7906 Fax: (819) 953-5024

ATLANTIC CANADA OPPORTUNITIES AGENCY

Atlantic Canadian companies seeking to develop exports to Mexico may be eligible for assistance from the Atlantic Canada Opportunities Agency (ACOA). The Agency works in partnership with entrepreneurs from the Atlantic region to promote self-sustaining economic activity in Atlantic Canada.

The ACOA Action Program provides support to businesses as they look to expand existing markets through the development of Marketing Plans. Efforts include monitoring trade opportunities arising from global economic change; communications efforts to promote the region; trade missions and associated activities, as well as better coordination with federal and provincial bodies that influence trade and investment opportunities.

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ACOA Head Office:	Blue Cross Centre 644 Main Street P.O. Box 6051 Moncton, NB E1C 9J8 Toll free: 1-800-561-7862 Fax: (506) 851-7403
Newfoundland and Labrador:	Suite 801, Atlantic Place 215 Water Street P.O. Box 1060, Station C St. John's, NF A1C 5M5 Tel: (709) 772-2751 Toll free: 1-800-563-5766 Fax: (709) 772-2712
Nova Scotia:	Suite 600 1801 Hollis Street P.O. Box 2284, Station M Halifax, NS B3J 3M5 Tel: (902) 426-8361 Toll free: 1-800-565-1228 Fax: (902) 426-2054
Prince Edward Island:	75 Fitzroy Street 3rd Floor Charlottetown, PE C1A 1R6 Tel: (902) 566-7492 Toll free: 1-800-565-0228 Fax: (902) 566-7098

New Brunswick:

570 Queen Street P.O. Box 578 Fredericton, NB E3B 5A6 Tel: (506) 452-3184 Toll free: 1-800-561-4030 Fax: (506) 452-3285

WESTERN ECONOMIC DIVERSIFICATION CANADA

Western Canadian companies interested in Mexico may be able to secure assistance from Western Economic Diversification Canada (WD). This agency provides financial assistance for projects which contribute to the diversification of the western economy. It acts as a pathfinder to ensure that western businesses are aware of and receive assistance from the most appropriate source of funding, federal or other, for their projects. It acts as an advocate for the west in national economic decision-making and it coordinates federal activities that have an impact on economic growth in the west. It also plays a role in promoting trade between western Canada and markets around the world. Inquiries about the Western Diversification Program and other activities of the department can be directed to any of the following regional offices:

Manitoba:	P.O. Box 777 Suite 712	export financing to fore and services.	ign buyers of Canadian goods
	The Cargill Building 240 Graham Avenue Winnipeg, MB R3C 2L4	For information on the fu contact any of the following	
	Tel: (204) 983-4472 Fax: (204) 983-4694	Ottawa (Head Office):	151 O'Connor Street Ottawa, ON K1A 1K3
Saskatchewan:	P.O. Box 2025 Suite 601 S.J. Cohen Building		Tel: (613) 598-2500 Fax: (613) 237-2690
	119-4th Avenue South Saskatoon, SK S7K 5X2	Public Information:	Tel: (613) 598-2739
	Tel: (306) 975-4373 Fax: (306) 975-5484	Vancouver:	Suite 1030 One Bentall Centre
	Toll free within Regina city limits Tel: (306) 780-6725		505 Burrard Street Vancouver, BC V7X 1M5 Tcl: (604) 666-6234 Fax: (604) 666-7550
Alberta:	Canada Place, Suite 1500 9700 Jasper Avenue Edmonton, AB T5J 4H7 Tel: (403) 495-4164 Fax: (403) 495-7725	Calgary:	Suite 1030 510-5th Street S.W. Calgary, AB T2P 3S2 Tel: (403) 292-6898
	Toll free within Calgary city limits Tel: (403) 292-5382	Winnipeg:	Fax: (403) 292-6902 8th Floor
British Columbia:	P.O. Box 49276 Bentall Tower 4 1200-1055 Dunsmuir Street Vancouver, BC V7X 1L3 Tel: (604) 666-6256 Fax: (604) 666-2353		330 Portage Avenue Winnipeg, MB R3C 0C4 Tel: (204) 983-5114 Fax: (204) 983-2187 (serving Manitoba and Saskatchewan)
	Toll free within the Province Tel: 1-800-663-2008		and the second

EXPORT DEVELOPMENT CORPORATION

EDC is a unique financial institution that helps Canadian business compete internationally. EDC facilitates export trade and foreign investment by providing risk management services, including insurance and financing, to Canadian companies and their global customers.

EDC's programs fall into four major categories:

- · Export credit insurance, covering short- and mediumsized credits.
- · Performance-related guarantees and insurance, providing cover for exporters and financial institutions against calls on various performance bonds and obligations normally issued either by banks or surety companies
- · Foreign investment insurance, providing political risk protection for new Canadian investments abroad.
- Export financing, providing medium- and long-term oods

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CANADA-MEXICO INDUSTRY PROFILE:	
OPPORTUNITIES IN MEXICO - THE CONSTRUCTION SERVICES SECTOR	935



Toronto:	Suite 810 National Bank Building 150 York Street P.O. Box 810 Toronto, ON M5H 3S5 Tel: (416) 973-6211	Canadian companies hoping to succeed in the Mexican marketplace may require additional technology to improve their competitiveness. The National Research Council (NRC) works with Canadian firms of all sizes to develop and apply technology for economic benefit. The Council
London:	Fax: (416) 862-1267 Suite 1512 Talbot Centre	supervises the Industrial Research Assistance Program (IRAP), a national network for the diffusion and transfer of technology.
	148 Fullarton Street London, ON N6A 5P3 Tel: (519) 645-5828 Fax: (519) 645-5580	The IRAP network supports the process of developing, accessing, acquiring, implanting, and using technology throughout Canadian industry. IRAP has been in existence for 40 years and has acquired a reputation as one
Montreal:	Suite 4520 800 Victoria Square P.O. Box 124 Tour de la Bourse Montreal, PQ H4Z 1C3 Tel: (514) 283-3013 Fax: (514) 878-9891	of the more flexible and effective federal programs. IRAP takes advantage of an extensive network that includes more than 120 regional and local offices, 20 provincial technology centres, the Council's own laboratories and research institutes, federal government departments, and technology transfer offices in Canadian universities. The IRAP network also extends abroad through the technology counsellors attached to Canadian posts in some 18 foreign
Halifax:	Purdy's Wharf, Tower 2 Suite 1410	countries. For more information or the name of the IRAP officer nearest you, contact the following:
	1969 Upper Water Street Halifax, NS B3J 3R7 Tel: (902) 429-0426 Fax: (902) 423-0881	IRAP Office National Research Council Montreal Road Building M-55 Ottawa, ON K1A 0R6 Tel: (613) 993-5326

Fax: (613) 952-1086



KEY CONTACTS IN CANADA

PROFESSIONAL ASSOCIATIONS

Canadian Construction Association (CCA) 85 Albert Street Ottawa, Canada K1P 6A4 Tel: (613) 236-9455 Fax: (613) 239-9526

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Association of Consulting Engineers of Canada (ACEC)

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The Canadian Council for the Americas (CCA) is a nonprofit organization formed in 1987 to promote business interests in Latin American and Caribbean countries. The CCA promotes events and programs targeted at expanding business and building networking contacts between Canada and the countries of the region. It also publishes a bimonthly newsletter.

The Canadian Council for the Americas (CCA) Executive Offices, Third Floor 145 Richmond Street West Toronto, ON M5H 2L2

Tel: (416) 367-4313 Fax: (416) 367-5460

Canadian Exporters' Association (CEA) 99 Bank Street, Suite 250 Ottawa, ON K1P 6B9 Tcl: (613) 238-8888 Fax: (613) 563-9218

Canadian Manufacturers' Association (CMA) 75 International Boulevard, Fourth floor Etobicoke, ON M9W 6L9 Tel: (416) 798-8000 Fax: (416) 798-8050

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Canadian Freight Forwarders Association (CIFFA) Box 929 Streetsville, ON L5M 2C5 Tel: (905) 567-4633 Fax: (905) 542-2716

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The Embassy of Mexico, Mexican Trade Commissioners in Canada, and Mexican consulates can provide assistance and guidance to Canadian companies in need of information about doing business in Mexico.

Embassy of Mexico

130 Albert Street, Suite 1800 Ottawa, ON K1P 5G4 Tel: (613) 233-8988 Fax: (613) 235-9123

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CANADA-MEXICO INDUSTRY PROFILE: Opportunities in Mexico - The Construction Services Sector

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Note: to telephone Mexico, D.F. dial: 011-52-5 before the number shown; for contacts in other cities in Mexico, consult the international code listing at the front of your local telephone directory for the appropriate regional codes. Commercial Division The Embassy of Canada in Mexico Schiller No. 529 Col. Polanco Apartado Postal 105-05 11560 México, D.F. México Tel: 724-7900 Fax: 724-7982

Canadian Consulate

Edificio Kalos, Piso C-1 Local 108A Zaragoza y Constitucion 64000 Monterrey México Tel: 443-200 Fax: 443-048

KEY CONTACTS IN MEXICO

MEXICAN GOVERNMENT DEPARTMENTS AND AGENCIES

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Federal Electricity Commission Comisión Federal de Electricidad Río Ródano No. 14 Col. Cuauhtemoc 06598 Mexico, D.F México Tel: 553-7133 Fax: 553-6424

Secretariat of Social Development (Subsecretariat of Housing) Secretaría de Desarrollo Social - Subsecretaría de Vivienda Av. Constituyentes No. 947 Col. Belén de las Flores 01110 Mexico, D.F. México Tel: 271-1441 Fax: 271-1659

Housing Fund for Commercial Banks Fondo de Operación y Financiamiento a la Vivienda (FOVI) Av. Ejercito Nacional 180 Col. Anzures 11590, Mexico, D.F. México Tel: 255-3644 Fax: 203-7304



Housing Pension Fund for Private Sector Employees Instituto del Fondo Nacional para la Vivienda de los Trabajadores (INFONAVIT) Barranca del Muerto No. 280 Col. San Jose Insurgentes 01029 Mexico, D.F. México Tel: 660-2779 Fax: 660-3418

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National Tourism Development Fund Fondo Nacional de Fomento al Turismo (FONATUR) Insurgentes Sur No. 800 03100 Mexico, D.F México Tel: 687-7437/ 600-4222 Fax: 687-7533

Mexican Port Authority Puertos Mexicanos (Portuarios) Municipio Libre 377, Piso 11 Col. Santa Cruz Atoyac 03310 Mexico, D.F México

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Col. Juárez 06600 Mexico, D.F. México Tel: 553-7670/7940 Fax: 286-5497 Mexican Institute for Social Security Instituto Mexicano de Seguridad Social Durango No. 291 Col. Roma 06700 Mexico, D.F México Tel: 553-8429 Fax: 206-6785

Institute for Safety and Social Security for Public Service Employees Instituto de Seguridad y Servicios Social de los Trabajadores del Estado (ISSSTE) Callejon Via San Fernando No. 12 Col. Barrio San Fernando Tlalpan 14070 Mexico, D.F México Tel: 606-2121 Fax: 606-5766 0

Secretariat of Public Education

Secretaría de Educación Pública Argentina No. 28, Piso 2 Col. Centro 0620 Mexico, D.F. México Tel: 521-9574 Fax: 510-4075

School Construction Program

Comite Administrativo del Programa Federal de Construcción de Escuelas (CAPFCE) Calle Vito Alesaro No. 380 Col. Florida 01030 Mexico, D.F. México Tel: 659-5896/557-1757 Fax: 554-6685/6422

Department of the Federal District Departamento del Distrito Federal Dirección General de Construcción y Operación Hidráulicas Via Miguel No. 507 08400 Mexico, D.F. México Tel: 650-2664

Federal Roads and Bridges Commission Caminos y Puentes Federales de Ingresos y Servicios Conexos (CAPFISC) Av. Plan de Ayala No. 629 Lomas del Mirador 62350 Cuernavaca, Morelos México Tel: (73)-11-5400 Fax: (73)-16-0519



Secretariat for Commerce and Industrial Promotion Bureau of Standards Secretaría de Comercio y Fomento Industrial Dirección General de Normas Av. Puente de Tecamachalco No. 6 Col. Fuentes de Tecamachalco Estado de México México Tel: 589-9877/9592/9589

National Chamber of the Construction Industry Cámara Nacional de la Industría de la Construcción Periférico Sur No. 4839, Parques del Pedregal 14010 Mexico, D.F México Tel: 665-0424/1500 Fax: 606-6720

Promotion Centre for Construction and Housing Centro Impulsor de la Construcción y la Habitación, A.C. (CIHAC) Av. Minerva No. 16, Col. Credito Constructor 03940 Mexico, D.F México Tel: 661-0844/662-5085 Fax: 661-0600

National Chamber of Commerce for the City of Mexico Cámara Nacional de Comercio de la Ciudad de Mexico (CANACO) Paseo de la Reforma No. 42, Piso 3 Col. Juarez 06048 Mexico, D.F México Tel: 592-2677/65 Fax: 592-3403

National Chamber of Transformation Industry Cámara Nacional de la Industría de Transformación (CANACINTRA) Av. San Antonio No. 256 Col. Napoles 03849 Mexico, D.F México Tel: 563-3400 Fax: 598-9467

The Canadian Chamber of Commerce in Mexico La Cámara de Comercio de Canadá en México c/o Royal Bank Hamburgo 172, Piso 5 06600 Mexico, D.F. México Tel: 207-2400 Fax: 208-1592 Association of Concessionaires Asociación Mexicana de Concesionarios Blvd. de Miguel Cervantes 61 Irrigación 11500, Mexico D.F. México Tel: 557-2021 Fax: 557-2020

Mexican Association of Firms Specializing in Installation for Construction Asociación Mexicana de Empresas del Ramo de Instalaciones para Construcción, A.C. San Antonio No. 319 Col. San Pedro de los Pinos 03800 Mexico, D.F México Tel: 611-5414 Fax: 611-5456

Mexican Association of Tourism Property

Developers Asociación Mexicana de Desarrolladores Turisticos, A.C. Viaducto Rio Bercera No. 11 Col. Napoles 03810 Mexico, D.F México Tel: 687-7196/669-4630 Fax: 687-7196

Association of Private Industrial Parks

Asociación Mexicana de Parques Industriales Privados, A.C. Genova No. 33-902 Col. Juarez 06600 Mexico, D.F México Tel: 207-4934 Fax: 208-3822

Nacional Association of Potable Water and Sanitary Sewer Operators Asociación Nacional de Organismos de Agua Potable y Alcantarillado Xola No. 1458 Col. Navarte 03020 Mexico, D.F México Tel: 530-9621

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Fax: 203-4102



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Mexican Cement and Concrete Institute Instituto Mexicano del Cemento y del Concreto (IMCYC) Insurgentes Sur No. 1846 Col. Florida 01030 Mexico, D.F México Tel: 660-2778/3198 Fax: 534-2118

National Advisory Board for Wood in Construction Consejo Nacional de la Madera en la Construcción, A.C. Quintana Roo 141-603 Col. Hipódromo Condesa 06170 Mexico, D.F México Tel: 564-5007 Fax: 273-0933

Mexican Association of Fibro-Cement Manufacturers

Asociación Mexicana de Fabricantes de Fibro-Cemento, A.C. Reforma No. 30, Piso 1 Col. Centro 06040 Mexico, D.F México Tel: 533-4441/207-2254 Fax: 286-7723

Association of Consulting Engineers Cámara Nacional de Empresas de Consultoría Miguel Laurent No. 70, Piso 3 03100 Mexico, D.F México

College of Architects of Mexico

Colegio de Architectos de México Av. Constituyentes No. 800 Col. Lomas Altas 11950 Mexico, D.F. México Tel: 570-0007 Fax: 259-5423

OTHER ORGANIZATIONS

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CANADA-MEXICO INDUSTRY PROFILE:



OPPORTUNITIES IN MEXICO - THE CONSTRUCTION SERVICES SECTOR

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CANADA-MEXICO INDUSTRY PROFILE:

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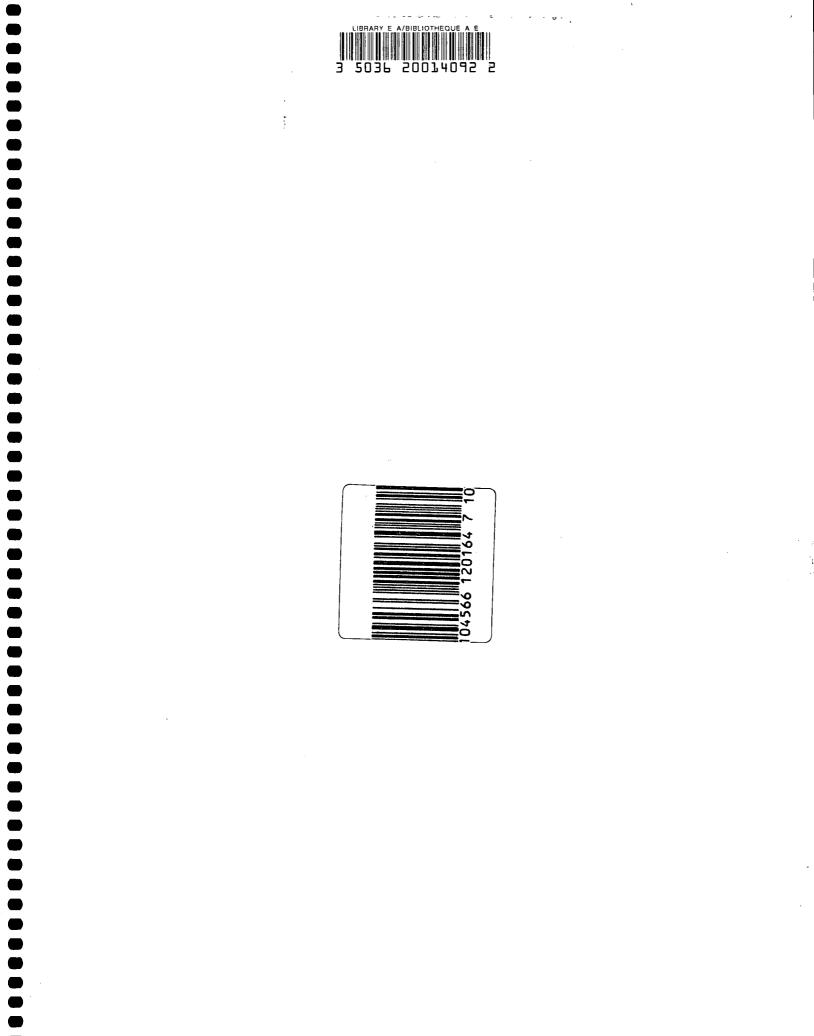
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