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PROSPERITY CONSULTATIONS

Construction and Capital Projects

A Contribution to the



PROSPERITY INITIATIVE

This report has been prepared by a private sector consultation group at the request of the Honourable Michael Wilson, Minister of Industry, Science and Technology and Minister for International Trade as a contribution to the Prosperity Initiative. This document is one of a series of reports setting out the conclusions and recommendations arising from intensive consultations on the competitiveness challenges facing major industry sectors across Canada.

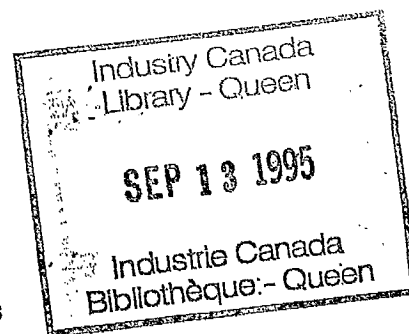


A contribution to the PROSPERITY INITIATIVE

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The Honourable Michael H. Wilson, P.C., M.P.
Minister of Industry, Science and Technology and
Minister for International Trade
House of Commons, Room 515-S
Ottawa, Ontario
K1A 0A6

JUN 23 1992



Dear Mr. Minister:

**Re: Prosperity Initiative
Construction and Capital Projects
Sector Consultation Group Report**

The Construction and Capital Projects Sector Consultation Group is pleased to submit its report on issues and recommendations regarding Canada's prosperity and international competitiveness. We see this as an initial step to an ongoing process of government consultation with the industry to address the issues contained in the report. Each of the associations who participated are anxious that the issues they have raised are given active consideration by the government.

Our report is made up of three sections:

1. Priorities and Recommendations

Eight issues the Committee members believe are the most urgent requiring early attention from industry and governments.

2. Summary Report

This section responds on a point by point basis to the consultation discussion papers "Learning Well ... Living Well" and "Prosperity Through Competitiveness". It broadly represents the views of the individual association members of this committee.

3. Committee Members' Reports

Each committee member and his association have prepared detailed reports on their subsectors of the construction industry. We believe your secretariat will find these documents most useful for determining its overall findings.

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The Construction and Capital Projects Sector Committee members, with interests as diverse a design, public works, housing, major projects, and representing a range of interests from individual entrepreneurs to large multi-national firms, have worked co-operatively and enthusiastically on your agenda. We believe this Initiative is a vital part of the current constitutional debate, and that it should form the basis of a true strategic plan for Canada's future.

We look forward to discussing our report with you in the near future.

On behalf of the Construction and Capital Consultation Group, I respectfully submit this report.



J.R. Baker
Chair
Construction and Capital Projects
Sector Consultation Group

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 - **Canadian Home Builders' Association**
 - **Royal Architectural Institute of Canada**

PART 1

GROUP MEMBERS

CONSTRUCTION AND CAPITAL PROJECTS CONSULTATION GROUP

MEMBERSHIP

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PART 2

PRIORITIES AND RECOMMENDATIONS

(aussi disponible en français)

**Prosperity Initiative
Construction and Capital Projects Sector**

PRIORITIES AND RECOMMENDATIONS

1. Government Leadership

- The elected members of the government must take appropriate action on the solicited advice of this sector's stakeholders.
- Governments (federal, provincial, regional and municipal) must facilitate the enhancement of competitiveness throughout the country.
- Governments must base their economic decisions by constantly referring to the market place, and on continuously improving the competitiveness of the nation.
- This competitiveness based decision making strategy invariably will have short term adverse political implications. Industry must vigorously support these initiatives.

2. Infrastructure

- There is an urgent need to maintain, and improve, the nation's infrastructure to enhance Canada's competitiveness. This sector is prepared to assist governments in developing strategies that will meet this need as well as offsetting the impact of business cycles.

3. Financing

- Government must continue its debt elimination programs, as the nation's total debt has a large impact on our economy's efficiency and competitiveness.
- Capital Projects in both public and private sectors require new and innovative financing. User pay and build-own/operate-transfer methods are worth pursuing.
- It is essential that Canadian bankers become knowledgeable partners in project financing, and that their organizations develop managers who understand the unique characteristics of the construction and capital projects business.

4. Education and Training

- The sector strongly supports the concept of the Canadian Labour Force Development Board and is prepared to take an active role in facilitating both formal education and training, and on the job training.
- A national approach to education, training and certification must be adopted by industry and governments.

5. Research, Development, and Technology Transfer

- The sector must lead the growth of business and labour (stakeholder), funded research, education training, and advocacy. Governments are key stakeholders and must actively support the sector's work in research, development, technology transfer and education.
- Procurement practices should encourage innovation (i.e. value engineering) and governments should lead, by example, in these concepts.

6. Taxation

- There is a need to harmonize taxes among federal and provincial governments, without increasing prices, and the tax system must be competitive in the international market place.
- The test for all forms of taxation must be that they do not impede Canadian industry's competitiveness in the international marketplace. They must enhance Canada's export potential.

7. Internal Trade

- Trade restrictions employed by provinces and municipalities must be eliminated as soon as possible.
- This sector, through its associations, is prepared to provide strong support for government initiatives to end these non-competitive, restrictive practices.

8. External Trade

- Federal and provincial governments (and in some cases, municipal) must rationalize and co-ordinate their activities in the international marketplace.
- This sector strongly recommends the establishment of a federal government agency for international capital projects which would take a leading role in fostering and funding international projects.

- Canada's foreign aid programs should be tied to the delivery of goods and services by Canadian firms.
- Canada's international project financing must be competitive. The federal government, together with Canadian chartered banks, the World Bank and the International Monetary Fund, should develop methods and techniques that will give Canadian industry a fair opportunity to compete in the global capital project market.

PART 3

SUMMARY REPORT

(aussi disponible en français)

A Summary of Submissions To The Sector Consultation Group: Construction and Capital Projects

Introduction

There is a growing recognition that the construction and capital projects sector is a significant part of Canada's economy and that the sector has a strong role to play in the country's well being. Construction and construction-related activity in Canada totalled almost \$106 billion in 1990 (42 percent residential and 58 percent non-residential), equivalent to approximately 15 percent of GDP. Employment in home building/renovating, contracting, architectural, engineering and other related activity totals over 1,000,000 employees. Table 1 provides a more detailed profile on the industry.

The Canadian construction sector is competitive in the domestic market. Construction contracts issued to foreign-owned firms represent less than 7 percent of the total activity. This success, in large measure, is due to strong competition among Canadian firms and extensive specialization, particularly among the trades. Over the 1970-86 period, Canada's construction industry experienced a steady gain in productivity performance with an average annual increase of 2.8 percent - a better performance than that achieved in the U.S.

Productivity growth will remain an essential ingredient in the construction sector's ability to compete, and a competitive construction sector will benefit the entire economy. For example, a 10 percent increase in efficiency through improved management, optimum utilisation of labour, capital and materials, and improved building technologies can contribute \$10.6 billion of direct savings on the \$106 billion spent annually in construction. These savings translate directly into more competitive Canadian products and services in both domestic and export markets.

The construction sector is generally well positioned to meet the challenges to be faced in the 1990s. The sector is well developed regionally and has access to competitively priced inputs and specialized and technically competent managerial skills. However, the future competitiveness of the sector will be dependent upon the industry's ability to utilize advances in construction management systems, new materials, and other technology.

Other challenges facing the industry include improving its capability to undertake very large industrial and commercial projects on a turnkey basis in both the domestic and the international markets; the availability of skilled labour; a changing regulatory, legislative, and financial environment; and increased international competition.

The recommendations contained in the members' submissions which follow relate to these challenges and, in the opinion of the Construction and Capital Projects Sectoral Consultation Group, are key to the prosperity of this industry in an increasingly complex and competitive world.

Table 1: A Profile of the Construction Industry

Construction and Construction Related Activity	Break Out/ Comparison	
Output (1990) \$106 Bn Construction is a large segment of the economy.	Contract Work	- \$77 Bn
	In house	- \$29 Bn
Inputs (1990) \$106 Bn	Labour	- \$33 Bn
	Other	- \$28 Bn
	Materials	- \$45 Bn
Customers (1990) \$106 Bn	Housing	- \$45 Bn
	Service	- \$12 Bn
	Utilities	- \$15 Bn
	Gov't & Institutions	- \$19 Bn
	Mfg & Primary	- \$15 Bn
Employees (1987) The industry employs 11 per cent of Industrial Workers	Contractors	- 44%
	In-house	- 20%
	Suppliers/Distributors	- 8%
	Engineers & Architects	- 8%
	Manufacturing	- 20%
Return on Equity (1984-87) - Is less than manufacturing	Construction	- 8.45%
	Manufacturing	- 9.88%
	All Industries	- 8.54%
Profits (1989) Margin before tax is small relative to other sector	Construction	- 3.9%
	Manufacturing	- 8.9%
	All Industries	- 9.64%
Government (1990) Buys 56% of Nonresidential Construction	Services	- \$12 Bn
	Mfg. & Primary	- \$15 Bn
	Public Sector	- \$34 Bn

Source: Statistics Canada and The National Information Base

Issues

The issues and corresponding recommendations in this summary represent only a portion of the issues, action plans, and recommendations contained in the members' reports. For a full discussion of the issues presented, the reader should refer to each submission and the recommendations contained in those reports.

1.0 Learning

Given that labour force growth is expected to slow from above 7 per cent a year in the 1980s to about 4 per cent by the year 2001, there is concern that the general quantity and quality of individuals applying for a construction position will be declining at a time when skill requirements are increasing. In particular, members of this sector are concerned with the alarming dropout rate, of up to 50 per cent, in apprenticeship programs.

Further, with the increasing use of technology, there is additional uncertainty as to whether Canada is preparing students adequately for employment. Construction, like many other industries, is constantly adapting and evolving and will require workers to have a sound education in basic skills, reading and numeracy.

1.1 Basic Skills

With respect to basic skills, several suggestions and recommendations have been put forward. The Canadian Construction Association's (CCA) response to the government's consultation paper, "Learning Well...Living Well", notes:

- The emphasis should be on the basics in elementary and secondary school;
- The length of time of instruction in the school year should be reviewed with respect to other developed countries;
- National education standards and a Master Teacher designation deserve serious consideration;
- Parent associations should learn more about the industry.

There is a desire to see more technically oriented courses offered in elementary and secondary schools, as noted in the submission by The Royal Architectural Institute of Canada (RAIC):

" The absence of any treatment of "design" in the elementary and secondary school curriculum in Canada has often been identified as one of the single most detrimental factors to the advancement of the practice and development of architecture in Canada".

This sector is also concerned about the image of construction and related professions and would recommend that:

- The elementary and secondary school system encourage more women to enter the "industry" and technical trades in general.

Actions that the industry itself can take to enhance the desirability of work in the "industry" are reflected in the submission of the Association of Consulting Engineers of Canada (ACEC):

- Firms could take a pro-active role in their local education system (adopt a school program);
- Firms could be more involved in co-op education programs.

Attracting young people into apprenticeship programs has also been hampered by image problems and the failure, by some, to recognize the value and income opportunity of employment in trades and construction professions. Initiatives are already underway by organizations such as ACEC, CCA, and the Canadian Home Builders' Association (CHBA) together with Canada Mortgage and Housing Corporation (CMHC), and various training trust funds to counter this poor image, but more needs to be done.

1.2 Apprenticeship/Training

Members agree that the concept of the Canadian Labour Force Development Board is a positive initiative which deserves continued support. In particular:

- As part of that initiative, members suggest that the Apprenticeship Sub-Committee should be given high priority.

It is also suggested that:

- apprenticeship programs could become more integrated into education, a success story in European countries. As well, apprenticeship programs could be extended to include more occupations;
- higher priority should be given to encourage more occupations to follow the lead of the Red Seal program, which has set national standards for trades.

The notion that Canada's private training efforts lag behind those of other countries needs to be examined. Canada's private training expenditures are significant. The CCA points to results from a private survey that suggests about 3 percent of operating expenditures are being used to train workers. Further, Canadian firms currently support training efforts with every payroll - about \$1.8 billion of unemployment insurance money is being directed into training.

Given that society is spending sizeable amounts on training, the question of value for the money spent needs to be raised. Are our apprentices equal or superior to those of any other nation?

To meet this challenge, there is a need to:

- continue and enhance shared programs to upgrade the skills and specialization of trades/occupations through such instruments as the Industry Adjustment Service Agreement and the Training Trust Fund/Labour Market Adjustment Grants under the Canadian Job Strategy Program and;
- give higher priority to training courses that assist the adjustment of workers from other industries and enhance skills among building trades;
- recognize the diversity that exists in the industry and the resulting special training needs, such as those of the renovation sector of the home building industry;
- develop the residential construction component of the labour demand model to provide an assessment of demand and supply of labour;
- inject more competition into the institutions that provide in-class trades training, to make them more responsive and flexible, and to promote innovation. Suggestions include private training centres or trade training vouchers.

However, the need for training is not limited to trades, as the RAIC points out:

"The future of continuing education initiatives in the profession has emerged as a major focus for the RAIC, the provincial associations [for architects] and the University Schools of Architecture. It is clear that, given challenges in this field, collaborative initiatives will be in order".

A similar perspective is presented by the Canadian Home Builders' Association (CHBA) with respect to the ongoing need for continuing education of building inspectors to help promote, rather than hinder, the innovation process.

Industry, in partnership with various levels of Government and with labour, is working in addressing some of these challenges. For example, the CHBA has worked with CMHC and Employment and Immigration Canada (EIC) in developing and implementing training programs on management and technical issues, and both the CCA and the CHBA have initiatives related to training and apprenticeship.

1.3 Immigration

Immigration has traditionally been a significant source of skilled tradespeople. As the growth of a skilled labour force slows in the 1990s, immigration may again be an important source of skilled labour for this sector. As such, the point score ratings established for immigration with respect to skilled building trades require review. Changes in the rating system could be made to ensure that shortfalls between the requirements for labour in the construction industry and the supply from domestic sources could be met by skilled immigrants from other countries.

2.0 Innovation

Most innovation takes place by the manufacturers of construction material and equipment, rather than by the practitioners, such as engineering firms. This may be the result of the firm-price public tendering system, in which little leeway is allowed for designers or contractors to innovate. The tried and true method is usually used. As well, it is difficult to patent construction technologies, and firms are typically too small to support their own research and development (R & D). The industry is, however, willing to adopt new technologies once they have been demonstrated to be cost effective. The Technical Research Committee of the CHBA, for example, continues to provide a unique and effective instrument for pooling and coordinating the research activities of both private and public sector organizations.

For these reasons, construction R & D and technological diffusion needs public support:

"Coordination of the research and diffusion efforts of the various departments and agencies [of governments eg. The National Research Council (NRC), CMHC, Energy Mines and Resources (EMR) and Industry, Science and Technology Canada (ISTC)] is essential in this era of restraint...The public/private partnership in technology development and diffusion is of critical importance to the continued improvement in the quality and cost of production of Canadian housing." (CHBA)

Technology transfer is just as important as the development of technology with respect to the construction industry. Construction R & D in other countries is easily accessible to Canadians, as long as there is effective means to transfer these findings.

The Industrial Research Assistance Program (IRAP) has been an effective vehicle for the diffusion of technology and should receive a renewed commitment from government. This program should also be broadened to recognize the special needs of different parts of the sector, such as renovation.

As well:

- "Leadership in R & D must come from the industry itself, including the buyers of construction services, designers, contractors and manufacturers" (CCA);
- Alternative and value engineering is cost effective. Purchasers should actively encourage their designers and contractors to offer innovative alternatives;

- Domestic R & D must be prioritized nationally and coordinated across all interested parties (including provincial and federal government departments) to gain full value for money spent;
- There should be a closer working relationship between all university engineering, architectural and business faculties and industry (ACEC);
- More joint R & D efforts between private firms can also be promoted, in a favourable tax and profit environment; Public/private ventures, such as the R-2000 home, should be increased and promoted (CHBA);
- Under the auspices of CMHC, the National Housing Research Committee could provide a useful forum for achieving co-ordination among the various public and private organizations involved in housing research (CHBA);

3.0 Financing

3.1 Taxation

It is the opinion of the consultation group that the tax system should be made more equitable and that taxes, or tax measures, that hinder the ability of Canadian firms to compete should be changed.

Payroll taxes erode the working capital of Canadian employers and inhibit their ability to compete. The 1991 federal budget proposal to limit the amount of provincial capital and payroll taxes which companies could deduct from federal corporate tax, would only serve to compound the situation. While the government has decided to delay the implementation of this measure for one year, members agree that the measure should be withdrawn completely.

Members also agree that federal and provincial taxes should be harmonized, whenever possible, to simplify and streamline the tax system. However, this harmonization must not impose additional costs on consumers of construction products and services. CHBA points out that:

" Unless there are specific provisions to allow for reduced tax rates on renovations and private rental construction, as well as new housing ownership, there will be a further increase in housing costs in the event of harmonization of provincial taxes with the GST."

Inequities in the tax system and the effects of the GST need to be reviewed and addressed.

- Mobility and equipment expenses for construction workers should be given the same tax treatment as for other professions;
- The RAIC discusses both the issue of remitting tax on work in progress and the treatment of the GST in the calculation of fees;
- " It is imperative that there be greater understanding and co-ordination among governments with respect to the way in which their taxation policies affect the cost base of housing. This should be the focus of formal study by government and industry in the immediate future." (CHBA)

3.2 Infrastructure

Canada must find innovative solutions to the problem of how to finance the building and repair of infrastructure. Expenditure in this area has recently been severely restricted by the tightened fiscal circumstances facing government at all levels. Even so, solutions must be sought on all possible fronts including the areas of financing, planning and technical innovations.

For example, the CCA recommends " that the federal government provide, on a cost-shared basis with the provinces, financial support for the resurfacing and reconstruction of the 25,000 km of primary highways linking the country." User pay methods, such as toll roads, built and financed by the private sector, as suggested by the Association of Consulting Engineers of Canada (ACEC), is another option, that should be considered.

The CHBA, in its submission, discusses municipal infrastructure at length in its section, "Adequate Planning For Growth and Infrastructure Needs".

Recommendations from the CHBA include:

- Recognition of the need to plan for growth which calls on municipal, regional and provincial governments to prepare realistic projections of growth and coordinate planning;
- Recognition of the need to finance new infrastructure. Options include pooling of municipal tax revenues, cash transfers from provincial governments or borrowing;
- Sensitive disposal of government land to ensure that such land is sold in an orderly manner at market prices, and to ensure that small and medium-sized firms can participate competitively in the process.

With respect to municipal infrastructure, the CCA suggests that federal assistance, in the form of catch-up funding to municipalities, be provided. This funding would be conditional on the early re-organization of municipal infrastructure funding to put it on a user-pay basis.

In a supplemental to their report, ACEC has proposed that all options regarding municipal infrastructure financing should be considered in the context of requiring municipalities to develop Asset Management Programs that reflect the value of the buried and surface infrastructure.

3.3 Banking

There is a general perception that there is a lack of understanding in the banking industry with respect to the construction industry. The financial industry in general is not as competitive as it could be, and this affects the price paid by construction firms for financing and financial services.

" For some time the construction industry has expressed concern that Canada's banking community has an insufficient understanding of its particular needs... Some of CCA's member firms have reported, for example, that their banks automatically assume all construction transactions are high risk ventures and as such are often discriminated against, vis-à-vis other industries." (CCA)

In its submission CHBA points out "that harmonization and updating of the policies, legislation, regulations and on-going supervision of financial institutions to eliminate regulatory overlap and duplication between the provincial and federal governments would enhance the competitiveness of the financial sector - thereby benefiting the housing industry."

As an example of industry initiatives in this area, CCA has established a Special Banking Committee to liaise with representatives of the Canadian banking community, and the CHBA/CMHC have sponsored a report, "The Changing Financial Environment - What It Is Doing To The Housing Industry", which details the complexity of resolving financial problems facing the home building industry.

In addition, it has also been suggested that Canada's construction sector become more educated in the financial industry on issues that affect Canada's capability to finance projects, domestically and internationally.

For these reasons, the members are of the view that there is a need by the construction industry, the financial institutions and governments to continue to examine and find solutions to problems of mutual concern.

4.0 Domestic Market

4.1 Internal Barriers to Trade

There is consensus that internal trade barriers need to be dismantled, for reasons of cost and efficiency, and to enable Canadian firms to gain advantages of a larger domestic market in order to develop an ability to compete in export markets. To the extent that Canada has managed to standardize regulations and break down barriers, it has created a larger uniform domestic market compared to the non-standardized, fragmented domestic markets of many of our competitors.

To foster this advantage:

- "Governments at all levels must ensure that their programs and policies do not result in preferential sourcing of persons, capital, services or goods from one region to another" (CCA);
- This goal of a "common market" should be embedded in the constitution but should not be over-ridden by regional development or equalization policies (CCA);
- "Provincial and municipal governments should minimize the requirement for local professional practice licensing of trades, and eliminate policies which favour local firms in competitive bids for building contracts" (CHBA);
- National accreditation programs for professionals should be encouraged. The recent success of the Architectural Profession in this respect should be noted (ACEC/RAIC).

4.2 Joint Venturing\Consortia

The majority of the engineering and commercial building industry is composed of small firms. To meet the growing competition from large international competitors at home and abroad, consideration needs to be given to developing a Canadian competition policy that provides an environment where joint venturing and consortia arrangements are encouraged.

4.3 Government as a Purchaser

In an effort to stimulate innovation, and to reward technological advances, federal and provincial governments could, where applicable, move to a Quality Based Selection (QBS) system for awarding contracts to the professions. (QBS emphasizes qualifications and competence in relation to the scope and needs of the particular project versus a selection system that uses price as a primary criteria.)

This is reiterated by both ACEC and RAIC. For example:

"The Architectural profession maintains that a quality based selection process is in the best interest of the federal government as a client, and the government has a responsibility to play a lead role in Canadian society, reflecting a higher set of values with respect to the development of architecture in the built environment of Canada" (RAIC); and

"Government's role must be to "facilitate" the development of a strong domestic and international consulting industry.... This can be facilitated by adopting a QBS approach to procurement. The government can also assist in developing the industry by consistently applying to all departments and agencies contracting out policies instead of doing in-house "engineering" ; this will also reduce their costs." (ACEC)

It was also suggested that governments take the lead and set the example in encouraging innovation by encouraging design alternatives and value engineering.

4.4 Bankruptcy/Insolvency Legislation

Governments must respect the integrity and the sensitivity of the "pyramid-like" contracting structure characteristic of construction projects. This structure, composed of a delicate chain of individual contracts, has been supported by the provinces and territorial governments through legislation which prevents funds which are ear-marked for construction projects from being diverted to other creditors.

- Lien and other legislation that protects this process should not be over-ridden by government garnishee power or other such measures (CCA);
- There is no need for new payroll taxes to fund protection that already exists in the system (CCA).

The Group suggests governments need to work more closely with the sector when examining changes to the legislation.

4.5 Regulation

There must be a concerted effort on the part of all stakeholders, including governments at all levels, to reduce the time and costs required to obtain permits. To that end, industry, governments and labour must work towards the harmonization of regulation across all jurisdictions and constituencies.

"The steady proliferation of regulatory and legislative requirements which impinge upon the day-to-day operations of the Canadian-based firms from all levels of government within Canada has created a domestic environment in which it is becoming more and more difficult to deliver a product which can ultimately be cost competitive for the desired quality" (CCA);

"There are serious concerns that regulation is leading to significant inefficiencies in the housing industry and is also leading to a situation where the financial resources and expertise required to conform with the regulations are restricting the entry of firms into the industry" (CHBA).

While each submission was concerned with different elements of regulation, all members expressed concern over the lack of coordination and the ongoing jurisdictional disputes concerning the environment, as they apply to non-residential and residential construction, and members agree that:

- Jurisdictional disputes concerning environmental assessment, permits and regulation must end;
- The National Building Code must continue to evolve to encourage innovation while protecting quality;
- Local variances in building codes should be eliminated and provinces that have not adopted province-wide building codes modelled on the national code should do so;
- The evaluation system for new products should be streamlined;
- Training and education of building inspectors should be kept current with new processes;

- Provincial licensing of trades which hinders movement of workers should be stopped;
- Rationalization of the regulatory environment surrounding the development of residential land so as to eliminate duplication of regulations and streamline the approval process;
- Examination of the state of the rental housing sector ... with the purpose of taking action to restore the rental housing market as a viable component of Canada's housing industry;
- Rationalization of the regulatory environment of the financial sector;
- Privatization should be considered if publicly funded bodies cannot deliver vital services in an efficient, cost-effective and economically viable manner.

5.0 Trading

Increased international trade in construction and construction-related products is seen by members as a tremendous, untapped opportunity. However,

" International construction work accounts for less than two per cent of the Canadian construction industry's business volume each year. This is due in large part to the fact that fewer than 100 Canadian construction firms have been active in international markets." (CCA)

Members suggest that part of the reason for this poor record is that despite efforts from all governments, the industry is not marketing its products for export effectively. There tends to be duplication of activities among the provinces and the federal government and the effort lacks an export strategy both in terms of targeted markets and kinds of products that are promoted.

As well, members point out that Canadian firms are not playing on a level playing field. As noted in ACEC's submission,

"Many large projects require a full package of services (technical, engineering, construction, finance, management, training etc). A government can be supportive in developing innovative financing vehicles to allow Canadian Consultants to compete on a level playing field."

Competitors often have the participation of national banks and high level government officials and politicians. As well, their governments often provide very attractive concessional financing, directly or indirectly.

In response, individual members recommend that industry and government work together to:

- review the export financing practices of all major competitors and, in conjunction, look at what Canada is doing concerning concessional financing (CCA);
- adopt a Team Canada approach, that includes government, business and financial interests on a project by project basis (CCA);
- include more capital projects in development plans and establish an International Capital Projects Office or agency (CCA);

- negotiate reciprocal access to foreign markets (CCA);
- re-tie Canadian official development aid, for the direct benefits of Canadian firms as well as the indirect benefits of increasing awareness of Canadian products and expertise (CCA);
- re-focus trade missions with staffing policies aimed at developing knowledge through experience (CCA);
- review competition and tax policies that interfere with the firms' ability to compete internationally (CCA);
- concentrate marketing efforts in sectors where Canada has recognized expertise, through such technological advances such as the R-2000 program, or advances in manufactured housing - currently being promoted by the Manufactured Housing Institute. (CHBA);
- establish a Building Products Export Council (CHBA);
- eliminate the import of substandard building products (CHBA);
- increase the awareness of smaller firms with respect to export opportunities (ACEC);
- increase the number of foreign students and exchanges to promote Canadian awareness - Canadian firms could consider sponsoring more foreign students both financially and otherwise to increase their numbers (CCA).

6.0 Partnerships

Partnerships between industry, government and labour are considered to be an important part of this sector's prosperity initiative. Current examples of partnerships in this sector include work by the industry with: EMR in developing the R-2000 technology, the NRC in IRAP, EIC in developing training standards, ISTC in policy and technology programs, and CMHC as a critical link for the housing industry in its work and funding of R & D.

In addition:

- This group strongly recommends continued support for the Canadian Labour Force Development Board;
- A Team Canada approach to International Trade is required in a partnership that includes government, financing and business interests;
- The Associations in this sector are prepared to work with all relevant government departments to formulate a comprehensive and effective export strategy;
- The Associations represented on this committee are prepared to undertake more responsibility with respect to coordination of R & D;
- Several of this sector's members are currently working to bridge the knowledge and communication gap that exists across complementary industries and organizations;
- Governments must continue to build partnerships, across departments and with associations, to promote technical advances in the industry;
- There is a need for the national government to coordinate activities of all levels of government, industry and labour to develop "fiscal, tax, regulatory and other framework policies that are compatible, fair and do not work at cross-purposes."
(Prosperity Through Competitiveness);
- This sector supports a Council of the Federation, as proposed in Shaping Canada's Future Together, which would meet to decide issues of intergovernmental coordination and collaboration.

7.0 Conclusion

The sector designs and builds Canada's housing, industrial facilities, and infrastructure for future generations. The future viability of the industry is important to the country's well being.

The challenges facing the construction and capital projects sector are many. The industry is willing to work in partnership with labour and governments to meet these challenges. The Construction and Capital Projects Sector Consultation Group looks forward to the response of governments, labour and industry to the challenges contained in the detailed reports that form part of this submission.

PART 4

GROUP MEMBERS' REPORTS

- **Association of the Consulting Engineers of Canada,**
Response to the Prosperity Initiative, Sectoral Consultation Group,
"Construction and Capital Projects", March, 1992
- **Canadian Construction Association,**
Response to the Consultation Paper "Prosperity Through
Competitiveness", March, 1992
Response to the Consultation Paper "Learning Well...Living Well",
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- **Canadian Home Builders' Association,**
Competitiveness of the Housing Industry, A Response to the
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- **Royal Architectural Institute of Canada,**
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ASSOCIATION OF CONSULTING ENGINEERS OF CANADA



RESPONSE OF THE
ASSOCIATION OF CONSULTING ENGINEERS OF CANADA

PROSPERITY INITIATIVE
SECTORAL CONSULTATION GROUP
"CONSTRUCTION INDUSTRY & CAPITAL PROJECTS"

MARCH 9, 1992



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1 INTRODUCTION

This response represents the views of the Association of Consulting Engineers of Canada. It has been prepared in response to an invitation to participate by ISTC, and it reflects the position taken by the Association in previous briefs and representations to the Federal Government. We have identified specific actions that should be taken to address the various issues.

2 GENERAL AGREEMENT

Our Association is in full agreement with the basic thrust of the Prosperity Initiative. We believe that Canada has to become more competitive on the domestic and international scene in order to earn the right to enjoy the quality of life we have become accustomed to, let alone improve upon it. We use the word "earn" specifically to reinforce the fact that we cannot continue to enjoy many things we take for granted in the face of the globalization of trade and the pressure on all levels of government to obtain "more for less" in their procurement practices.

3 EDUCATION

ACEC will work closely with our Member Organizations in encouraging our member firms to take a more pro-active role in the local education system. The objective is to increase the awareness of students of science and technical subjects and to raise the profile of engineering as a desirable career. This can be done by engineers and firms establishing a close link with the guidance departments; "adopt a school" program, sponsoring of scholarships and like actions.



With CCPE, EIC and the Academy of Engineering, ACEC will co-sponsor the National Engineering Week called Festival of Engineering.

ACEC will encourage its member firms to participate in co-op education, thus providing increased opportunities for young students to gain valuable experience and provide for their education. But the success of this co-op education is directly related to the level of activity in the consulting engineering sector; the recent economic conditions are not conducive to the development of this program.

4 TECHNOLOGY

ACEC will work with its member firms in seeking ways to increase the linkages between the R&D community and the application of technology. This can be enhanced by providing secondment opportunities, and by joint R&D projects within an environment of increased R & D funding.

ACEC member firms can also promote dedicated R&D efforts given an appropriate tax structure and profit base to support such initiatives.

5 COMPETITIVENESS AND PRODUCTIVITY

ACEC promotes competition based upon qualifications. This process can ensure that those firms with advanced technology and techniques, experience and innovative approaches are given full credit and selected on their ability. Selection of professional services based upon cost competition is diametrically opposed to this concept.

On the International scene, Canadian Consultants have historically done well, but you need a strong successful domestic base to develop the expertise and finance



the development of export markets. To develop the domestic base requires QBS (qualification based selection) and contracting out by domestic clients, particularly the Federal and Provincial governments.

6 GOVERNMENT'S ROLE

Government's role must be to "facilitate" the development of a strong domestic and international consulting industry. ACEC pledges to work diligently with governments to assist them in developing a supportive strategy in this regard.

Government can adopt procurement policies that support excellence instead of mediocrity. This can be facilitated by adopting a QBS approach to procurement. The government can also assist in developing the industry by consistently applying to all departments and agencies contracting out policies instead of doing "in-house" engineering; this will also reduce their overall costs. This is not the case presently.

7 FINANCING GROWTH

ACEC supports the philosophy of governments improving the efficiency of their institutions by buying engineering services on a qualification basis instead of doing "in-house" engineering. Studies are available that prove the cost effectiveness of using consulting engineers.

ACEC promotes the concept of renewing Canada's infrastructure through the private sector through the re-establishment of toll roads for those highways that would be built and financed by the private sector. Appropriate tax systems would have to apply. Also new taxes levied for infrastructure renewal (i.e. gasoline taxes) should be dedicated to such purposes this could be done using the "trust fund" approach.



ACEC requests that the government of Canada endeavour to reestablish a level-playing field between countries in the financing of international projects, particularly for ODA. Since this goal of a level-playing field will be difficult to achieve in the present competitive international market place, the Government of Canada must consider maintaining and increasing the use of concessional financing until a level playing-field objective is attained.

8 BUILDING PARTNERSHIPS

ACEC has advocated in the past the establishment of public/private partnerships that would combine the strengths of the private sector with the special expertise of some government departments (expertise not available in the private sector). These would be established to pursue special export projects and to compete against foreign consortia which often include strong government capabilities that are subsidized.

ACEC will cooperate with various government departments to pursue these joint partnerships on an as-required, project-by-project basis. This mechanism could be very useful in transferring staff and knowledge to the private sector as government downsizes.

9 ENHANCING CAPITAL PROJECT EXPORTS

ACEC would work with CIDA, EA, and EDC in developing mechanisms that are supportive of a more competitive export industry. Many large projects require a full package of services (technical, engineering, construction, finance, management, training, etc.). A government can be supportive in developing innovative financing vehicles to allow Canadian Consultants to compete on a level playing-field with foreign firms. The Government can also assist by cooperating with ACEC in the sponsorship of Canadian Consultant staff



secondment to the ILA's, patterned after the current arrangement with the World Bank.

In the area of Official Development Aid (ODA), the government should concentrate its efforts in sectors where Canada has a recognized expertise thereby allowing the private sector to build up its delivery capability for the long term; such sectors should be selected on the basis of our demonstrated ability to effectively deliver products and services required to promote development.

After consultation with private sector associations, the government should promote the delivery of ODA through niche or emerging sectors that are sometimes in their early stages of development but that offer growth potential for canadian industry.

The government should also ensure that leverage with multilateral and regional agencies becomes an objective of ODA and that it be defined in terms of Canada's foreign policy objectives of which our commercial interests are a significant part.

CANADIAN CONSTRUCTION ASSOCIATION

(aussi disponible en français)

Response to the Consultation Paper
"Prosperity Through Competitiveness"

To

*The Hon. Michael Wilson, P.C., M.P.
Minister of Industry, Science and Technology*

March 1992

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Executive Summary

The Canadian Construction Association stands firmly behind a united Canada which has as its foundation a strong, national and competitive economy.

CCA's submission respecting *Prosperity Through Competitiveness* covers six topics:

- 1) learning
- 2) innovation
- 3) financing
- 4) Canada's domestic market
- 5) trading, and
- 6) partnerships.

Learning

CCA has long-held the view that Canada's competitiveness depends on a well-educated and well-trained workforce. Developing a consensus within the nation respecting education and training will be difficult, however. While some initiatives have been undertaken to allow for cooperation among stakeholders, numerous obstacles remain.

CCA supports the direction of the new Canadian Labour Force Development Strategy and its approach to develop local and provincial training boards to direct the development of regional training and adjustment programs. We also recognize the need to coordinate the efforts of both levels of government respecting regional development, restructuring and training.

While CCA concurs that numerous challenges face the country's learning system, we do not support the assertion made by government that Canada's private sector training efforts lag behind those of our major competitors.

Ensuring that the skills and knowledge of Canadian workers remain relevant to new and changing needs is a challenge to be borne by all stakeholders in Canada. Unfortunately, given the constraints of most contractors, this necessary upgrading often conflicts with other firm priorities.

Innovation

Construction R & D efforts must be integrated, prioritized and centrally controlled with national priorities being set and undertaken in the most cost-effective manner. An effective system for the transfer or diffusion of technology must also be established in Canada and existing contracting practices in the construction industry must be examined and altered where necessary, with a view to placing both the costs and risks associated with technological innovations with the ultimate beneficiaries.

Financing

To remain competitive, CCA believes the Canadian economy must furnish an attractive investment climate which includes an efficient tax regime in order to obtain sufficient capital. It is also critical that the nation's public infrastructure is maintained to support this economy.

CCA believes, that wherever possible, federal and provincial tax structures should be harmonized, particularly federal and provincial sales tax regimes. The practice of introducing further payroll taxes should also be curbed in Canada.

CCA concurs that efforts should be undertaken to address the knowledge gap between Canadian entrepreneurs and financial institutions and is currently addressing construction concerns with the financial community.

CCA continues to assert that Canada's future prosperity as a nation is dependent upon its ability to maintain an efficient infrastructure. In this regard, the federal government must not shirk from its responsibilities.

Canada's Domestic Market

Canada's competitive ability is primarily influenced by two factors. The first deals with the extent to which the cost of compliance with domestic framework and regulatory policies, as well as the relative cost of essential services furnished by government, impede the ability of Canadian firms to provide their goods and services at competitive prices domestically and internationally. The second relates to the extent to which internal trade barriers have limited the access of Canadian firms to their own domestic markets, further

impairing their ability to compete internationally. In both instances Canada must adopt policies to improve the country's competitive strengths.

Trading

Canadian success stories in the international capital projects market are limited and are often inhibited by a number of competitive weaknesses, including firm size and experience, government support and export financing.

CCA remains committed to the principles of trade liberalization through such instruments as multilateral and bilateral negotiations. It continues to call for reciprocal access to foreign markets which are afforded opportunities in Canada.

The government should examine the export financing instruments of all major competitors to ensure that Canadian firms can operate on an equal footing. It should also re-tie its Official Development Assistance Plan.

It is incumbent on the government to increase its support for export initiatives both politically and by providing the resources required for Canadian firms to compete abroad.

Federal and provincial governments should also expand their educational programs related to international trade and Canadian architects and consulting engineers should be encouraged to involve Canadian contractors in their projects overseas, particularly those funded by Canada.

Partnerships

CCA concurs that there is a need to develop a wider understanding and consensus among all Canadian stakeholders to address common economic challenges, priorities and strategies.

We support the constitutional proposal that a Council of the Federation be established to decide on issues of intergovernmental coordination and collaboration and believe one area to immediately investigate is environmental assessments.

Introduction

The Canadian Construction Association (CCA) welcomes this opportunity to present its views on the federal government's consultation paper, *Prosperity Through Competitiveness*.

CCA is the national voice of the construction industry in Canada and represents more than 20,000 member firms from coast to coast. These firms include general contractors, specialty contractors, heavy constructors and roadbuilders, industrial contractors and manufacturers and suppliers of construction materials, principally involved in, but not limited to, non-residential construction.

The volume of work performed by the construction industry last year exceeded \$90 billion and accounted for the employment of more than 700,000 Canadians.

CCA is well-aware that Canada's future prosperity as a nation is dependent upon its ability to compete both domestically and internationally.

Canada's construction industry has played a major role in contributing to the economic well-being of this country, by providing the physical capital and infrastructure required to build a prosperous and competitive nation.

It is for this very reason that construction contractors are concerned with the future of the country and why the Canadian Construction Association stands firmly behind a united Canada which has as its foundation a strong, national and competitive economy.

CCA's submission on the government's prosperity paper will cover six topics:

- learning
- innovation
- financing
- Canada's domestic market
- trading, and
- partnerships.

In addition to this submission, CCA has encouraged its members from coast to coast to participate in the community-based prosperity consultations being organized by the Prosperity Secretariat and has also actively participated in the portfolio discussions orchestrated by Industry, Science and Technology Canada.

Learning

The Canadian Construction Association concurs with the statement made in *Prosperity Through Competitiveness* that, "to succeed as a nation, we must succeed as individuals."¹

¹ *Prosperity Through Competitiveness*, p.8

CCA has long held the view that Canada's competitiveness depends on a well-educated and well-trained workforce and that a country's prosperity is directly linked to the skills of its people.

As one of the largest employers in the country, the construction industry has also recognized the need to harness a skilled labour force to compete in the global marketplace. With construction apprentices accounting for the largest share of all apprenticeship training in Canada, this need is of particular concern to our industry.

In recent years CCA has significantly expanded its programs to work with the school system to encourage young Canadians into the construction industry, including a special program to encourage young women and other designated groups within the employment equity portfolio. It has also worked with the Canadian Labour Market and Productivity Centre, Statistics Canada and the Canadian Employment and Immigration Commission to examine the startling drop out rate of young Canadians in apprenticeship programs and in the general school system.

These activities and other observations on the government's consultation paper *Learning Well....Living Well* are elaborated on in CCA's submission to the Honourable Bernard Valcourt.

To address some of the specific questions raised in the learning chapter of *Prosperity Through Competitiveness*, we have the following observations and recommendations to make respecting partnerships, Canada's training effort and the changing needs of skilled workers.

Partnerships

Building effective partnerships with management, labour and government for a common goal is never an easy task. It should come as no surprise, therefore, that developing a consensus in Canada with respect to education and training will be formidable.

That being said, most stakeholders in the country have come to realize that the time has come to tackle the inability of our education and training systems to provide all Canadians with the necessary skills to survive in the current economic climate.²

The federal government's new labour force development strategy, in fact, may provide the very vehicle required to enable management, labour and social groups to participate in the policy development and program delivery of labour force programs in Canada.

² "Success In the Works - A Policy Paper," Employment and Immigration Canada.

The creation of the **Canadian Labour Force Development Board**, reforms within the unemployment insurance system to direct more funds to training and a growing federal-provincial consensus to working together on labour force development initiatives also provide further evidence of an enhanced level of cooperation respecting education and training in Canada.

This transition has begun and the Canadian Construction Association believes the federal government has embarked on the correct path with these initiatives to develop a life-long learning philosophy.

While many obstacles continue to lay ahead, CCA also supports the approach of developing provincial and local training boards to direct the developments of regional training and adjustment programs in Canada.

With respect to regional development, restructuring and training, CCA agrees there is a critical need to coordinate the efforts of both levels of government in the same manner that the Canadian Labour Force Development Board has assembled all interested stakeholders.

In this regard, the provinces of Quebec and Ontario are currently developing economic and industrial strategies that will focus and support key industrial and technical sectors.

This strategy, so successfully used by Japan for the last half century, requires the coordination and cooperation of all levels of government as well as business and labour partners.

Canada's Training Efforts

While the Canadian Construction Association concurs that numerous challenges face the country's learning system, we do not unequivocally endorse the assertion made in the government's prosperity paper which suggests that Canada's private sector training efforts lag behind those of our major competitors.

There is a wide body of opinion, for example, which refutes the findings of the Statistics Canada study referred to in *Prosperity Through Competitiveness* — the basis for which the government makes its claim. Many who have criticized the study argue its major weakness was its definition of training and that as a result many respondents did not accurately report the amount they spent on training.

A new study, initiated by the **Canadian Labour Market and Productivity Centre** may shed further light on the subject. In the meantime, CCA has surveyed its own membership from coast to coast on the subject of training and has determined that 77 per cent of respondents reported that they invested in employee training, with most spending an

average of close to three per cent of operating expenditures to train their employees.³

With \$1.8 billion of unemployment insurance funds currently being directed to training, many Canadian employers are also of the view that they are supporting Canada's training efforts with every payroll.

The Changing Needs of Skilled Workers

Ensuring that the skills and knowledge of Canadian workers remain relevant to new and changing needs is a challenge to be borne by all stakeholders in Canada.

In the fiercely competitive bidding arena of the construction industry, firms quickly learn to incorporate new products and technologies to adapt and compete. To that end, the "invisible hand" of the competitive market place remains perhaps the strongest incentive for firms to keep their training current.

Unfortunately, given the size constraints of most contractors, this necessary upgrading often conflicts with other requirements which keep their key tradespeople and personnel in constant demand.

³ CCA *Construction Input* poll, November 1991

In this regard, CCA looks forward to receiving some guidance from the local and provincial boards of the Canadian Labour Force Development Board which will provide a stronger linkage to what the private sector requires and what education and training systems are delivering.

Innovation

In the June 25 - July 5, 1991 issue of *The Economist*, a report entitled "A Survey of Canada" made the following observations on Canada's relative competitive position in the international community:

"In general, the growth of Canadian productivity is declining; yet, if Canada is to remain a high-wage economy, it has to be a high-productivity one. Annual productivity growth, which had been 2.3 per cent in 1946-73, fell to 0.9 per cent in 1973-90. And the growth of Canadian manufacturing productivity has slowed relative to all the other members of the Group of Seven rich countries. Cost competitiveness relative to the United States has declined particularly sharply...

... even in industries like pulp and paper, Canada's biggest commodity export, the country may be losing its edge: the delivered cost of Canadian newsprint in 1989 was \$753 a tonne, compared with \$570 in Sweden and \$485 in the south of the United States...

It is also said that Canadian firms are reluctant to embrace new technology and, even more serious, to spend money on research; Canadian spending on R & D had dropped to 1.33 per cent of GDP by 1989, lower than that of any other country in the Group

...

*of Seven. Then there seems to be a general lack of inventiveness; whereas 7,246 Americans and 1,889 Germans took out patents in physics in 1987, only 150 Canadians did. This may reflect a wider failure of the education system; though by any measure Canada spends a lot on education, it does not seem, in the eyes of many, to be getting value for money."*⁴

Correct or not, the observations made by *The Economist* are echoed in the government's consultation paper and present Canada with a significant challenge to remain innovative and competitive in the global marketplace.

To respond to this challenge, the Canadian Construction Association established a special **Research & Development Task Force**, which was charged to examine Canadian priorities for construction R & D, how R & D is funded in other countries and how funding might be generated in Canada. The findings and recommendations of this Task Force form the basis of opinion for CCA's observations on innovation.

Canada's Resource - Based Industries

CCA concurs with most of the analysis made by Michael Porter in his report, *Canada at the Crossroads* that:

"Given its abundant factor endowments, Canada's heavy emphasis on resources is not surprising. Yet the sustainability of these industries' competitive advantage is in question. Depletion of resour-

...

⁴ *The Economist*, June 25 — July 5, 1991, p. 14 (Canada Survey Supplement)

ces is a threat to both renewable resource industries, such as fisheries, where a number of actors can upset projected equilibrium levels, and non-renewable resource industries, where new sites are often more remote and therefore more expensive to exploit.

Canada's biggest problem is likely the emergence of lower cost competitors. Basic factor advantages are increasingly replicated by countries such as Venezuela in aluminum, or Brazil in pulp and paper. Apart from the resource costs themselves, Canada does not generally have strong cost positions in activities that are driven by labour rates, productivity, or the age and efficiency of capital stock. In these areas, Canada has often failed to make the necessary investments, such as upgrading process technology to increase the efficiencies in production, that would yield a stronger position. Unless Canada upgrades its resource-based industries, it will be trapped in segments where investments tend to be inflexible and where its marginal costs are higher than major competitors ..."⁵

"Increase the sophistication of the natural resource sector. Resource-based industries have been and will remain a mainstay of Canada's economy. But threats exist to the sustainability of Canada's position in many resource-based industries — threats such as declining real commodity prices, the emergence of low-cost foreign suppliers, and technologically-driven changes in end-markets. In the future, Canadian resource producers will be under unprecedented pressure to increase productivity, use more sophisticated technology and specialized skills, and develop more sophisticated and differentiated products."⁶

R & D in the Construction Industry

As compared to its major competitors, Canada's construction industry invests very little in research and development, with most privately financed R & D being carried out by

⁵ *Canada at a Crossroads*, Michael E. Porter, p. 68

⁶ *Ibid*, p. 73

the manufacturers of construction materials and not industry practitioners such as engineering firms.

One of the obvious reasons for the relatively low R&D expenditures by Canadian construction firms, and even more importantly by Canadian designers, is the manner in which construction is purchased in Canada using the firm-price public tendering system.

Most, if not all of the decisions affecting the quality, cost-effectiveness and innovativeness of a given project are made during the design or pre-construction phase and are within the control of the project designers. It would be reasonable to expect therefore, that project designers would be constantly engaged in seeking out innovative solutions and new technological adaptations and, hence, R & D.

Canadian design consultants, however, are seldom given the time nor latitude to entertain such notions or to undertake the kind of research which would enable them to introduce technological innovations with a view to rendering the ultimate product more cost-effective. More importantly, Canadian design consultants normally provide their services for a fixed fee which leaves little or no margin to investigate new or perhaps more cost-effective solutions. They are therefore forced by these constraints to go with the well-tried, traditional or safe design.

Correspondingly, Canadian construction contractors are not only expected but must, in order to comply with their contractual obligations, construct solely in accordance with the specific design specified, and for the firm price quoted.

It is contended that it is not necessarily the lack of new technology which hinders innovation in construction, but the manner in which construction goods and services are procured in Canada.

Technological innovations and the resulting increase in competitiveness benefit the buyer of construction services who either markets the final product or relies on the efficiency of the means of transportation, etc., and not the contractor or the design engineer. If it is the buyer of the service who benefits from an innovative solution, therefore, many argue the costs associated with the required research and development and the financial risks should be borne here. This distribution of risk and cost is not easily achievable through the usual contracting practices employed on the majority of construction projects in Canada.

Technology is an essential ingredient of improved competitiveness, but by itself it is insufficient. Means must be found to provide incentive (as opposed to the currently prevailing potential penalties) to develop and to apply more cost-effective technology. This is particularly important with respect to facilities and/or structures whose ultimate cost

is not governed by the market forces. Corporations which tend to design their own facilities and market their own products already have such an incentive and they are probably already involved in suitable research and development, but they are in the minority. Small and medium-sized firms, however, often have little or no in-house research or engineering capabilities and therefore must use the public tendering route, as do many government-financed enterprises.

Unfortunately, buyers of construction services are often their own worst enemies both because they wait until the last minute before they retain designers for their projects and because they restrict the designer's ability (both in time and money) to investigate alternate solutions and, at times, even to complete the design prior to tender call. Starting construction with incomplete drawings will, sooner or later, lead to disputes and eventually to litigation. It has occurred more than once that the owner paid more for his lawyer defending a claim than to the designers for the entire project.

It should also be realized that construction benefits from the research and development efforts of other industries. Many of the technological innovations, for example, which to some extent revolutionized construction, were not the result of formal research and development. The use of structural steel and steel reinforced concrete, as a structural system for buildings and bridges, was almost entirely the result of the invention of the Bessemer process of steelmaking, and the introduction by practising engineers of steel

members into a long series of evolutionary improvements in structural design. Competing technologies often represent the best impetus for applied research. The significant advances in the design of steel structures occurring in the sixties and seventies, for example, came about in response to the gains made by prestressed concrete. The introduction of natural gas to heat residential houses was a direct answer to the aggressive drive by the power commissions to convert houses to electric heating. These are but a few examples of a long list of innovations benefitting the buyers of construction services in the last generation.

Given Canada's large but sparsely populated country and its limited financial and human resources, it must be very discriminating in the selection of suitable R&D projects. There is no justifiable reason, even if it were achievable, to research every possible problem we may encounter. Construction R&D in other countries is easily accessible to Canadians, as long as we have the effective means to transfer these findings. We must be prudent, therefore, and should not compete with the research institutions of others just for the sake of individual pride. The proliferation of competing Canadian research organizations, whose efforts are totally uncoordinated, deprives us of significant sums of money which otherwise could be used for productive research.

The Canadian Construction Association's Task Force on Research and Development argues that the question we should be asking is not whether the total money spent on

construction R&D is enough, but do we spend what we have wisely and to the benefit of our economic well-being.

The potential contribution of research initiatives in Canadian engineering schools should also not be overlooked but should perhaps be redirected as suggested in the following excerpt from a November 1991 report entitled *Engineering Research In Canadian Universities* authored by the Canadian Academy of Engineering:

"Engineering researchers in Canadian universities could be making a much greater contribution to the well-being of the country. Improvements in our economy and our welfare are closely linked to the kinds of research and development which will improve our competitiveness and enhance the quality of our products. Achievement of these improvements will require engineering research more than any other and should be accomplished through a greater cooperation between the universities' engineering faculties, industry and the other elements of the user society.

*Regrettably, much of the research conducted by engineering professors and their students is directed more toward contributing to the world's store of scientific knowledge rather than to the solution of engineering issues of significance to Canada ..."*⁷

Construction R&D efforts must be integrated, prioritized and centrally controlled. National priorities must be established as opposed to supporting the pet priorities of a select few. Steps should then be taken to ensure that these defined needs are satisfied in the most cost-effective manner. The leadership in this venture must come from the

⁷ *Engineering Research in Canadian Universities*, the Canadian Academy of Engineering, p.1

industry itself, including the buyers of construction services, designers, contractors and manufacturers.

An effective system for the transfer or diffusion of technology must also be established. Technology transfer is just as important as the development of technology, particularly with respect to the construction industry. The development and manufacture of construction equipment is concentrated in a select number of countries and yet is used world-wide. Similar facilities are constructed in various countries, often using identical designs. Knowledge recognizes no boundaries. There is a considerable knowledge base available but no one can keep abreast of all such developments individually.

With respect to the observations made in the learning chapter of *Prosperity Through Competitiveness* on encouraging students in the fields of science, engineering and technology; as aforementioned, the Canadian Construction Association has programs designed to attract youth to the construction industry, which, relies heavily on these disciplines. These are elaborated on in our submission respecting *Learning Well.... Living Well*. Moreover, CCA regularly sponsors awards for innovation in the construction industry and also has a national thesis competition for undergraduate engineering students in Canadian universities.

Finally, the Canadian Construction Association believes existing contracting practices in the industry must be examined and altered where necessary with a view to placing both the costs and the risks associated with technological innovations with the ultimate beneficiaries.

Financing

The challenges facing Canada in financing future investments is immeasurable. To remain competitive our economy must furnish an attractive investment climate which includes an efficient tax regime in order to obtain sufficient capital. It is also critical that our public infrastructure is well-maintained to provide the underpinning support to this economy.

In this regard, CCA has the following observations and recommendations to make regarding taxation, capital requirements and infrastructure.

Taxation

CCA concurs with the federal government that Canada's tax regime must be in line with our international competitors and that whenever possible, federal and provincial tax structures should be harmonized. ⁸

⁸ *Prosperity Through Competitiveness*, p.20

We have long called for the integration of federal and provincial sales taxes, for example, and continue to urge the federal and provincial governments to come to some resolve respecting the GST. Without such a resolve, Canada's tax system will remain complex and far from being attractive to foreign investors.

The ability of Canadian firms to compete in their own market yet alone internationally is also constrained enough without the further burden of payroll taxes being imposed. To that end, the Canadian Construction Association has consistently objected to the introduction of payroll taxes in Canada because they erode the working capital of Canadian employers and inhibit their ability to compete.

CCA reiterated this message last fall before the House of Commons Standing Committee on Consumer and Corporate Affairs when we objected to the introduction of a Wage Earner Protection Fund. Canadian employers cannot continue to bear such tax burdens, nor can the country if it expects to attract investment.

CCA also remains strongly opposed to the measure announced in the Federal Budget of 1991 designed to limit the amount of provincial capital and payroll taxes subject to deduction from federal corporate tax. While we are pleased the government has decided to delay the implementation of this measure for one year, we believe it should be withdrawn altogether.

The Canadian construction industry functions in a highly competitive bidding arena. This measure would have variable impacts between companies, thus distorting their ability to compete. In CCA's view, taxes should never become the measure of the market share to be gained by a particular business.

Capital Requirements

As *Prosperity Through Competitiveness* accurately notes, the availability of capital, particularly equity capital, is critical to many sectors of the Canadian economy, including the construction sector.

For some time the construction industry has expressed concern that Canada's banking community has an insufficient understanding of its particular needs and that despite its overwhelming contribution to the overall economy (15 per cent of the GDP) it does not receive the attention or treatment it deserves.

Some of CCA's member firms have reported, for example, that their banks automatically assume all construction transactions are high-risk ventures and as such they are often discriminated against vis à vis other industries. In addition, in a recent survey of CCA's

membership, 40 per cent of respondents expressed dissatisfaction with their banks.⁹

To address these concerns the Canadian Construction Association has established a Special Banking Committee to liaise with representatives of the Canadian banking community. Through such meetings, CCA hopes to assist with the knowledge gap between financial institutions and entrepreneurs and at the same time assist its members in dealing with such institutions.

Infrastructure

The Canadian Construction Association maintains that Canada's future prosperity as a nation is dependent on its ability to maintain an efficient infrastructure.

A well-maintained infrastructure is essential for the efficient distribution of goods and materials in any developed nation and is critical for the safeguard of public health and the promotion of tourism.

The primary, secondary and tertiary sectors of our economy have all come to depend on the nation's infrastructure for their development and prosperity and in recent years

⁹ CCA *Construction Input* Poll, September 1991

most industrialized countries of the world have come to recognize the importance of maintaining their public infrastructures. Moreover, Industry, Science and Technology Canada has recently determined a direct link between competitiveness and public infrastructure spending.¹⁰

Unfortunately, most of the infrastructure (roads, bridges and sewer and watermain systems) in Canada is in decay and has suffered from a severe lack of investment for years. If this serious problem is not addressed soon, there is no doubt the nation's ability to compete will be severely hampered.

CCA has been on record for close to a decade in calling upon the federal government to accept its responsibilities with the nation's infrastructure.

Regarding the national highway system in Canada, CCA recommends that the federal government provide, on a cost-shared basis with the provinces, financial support for the resurfacing and reconstruction of the 25,000/km of primary highways linking the country. CCA is of the opinion that the federal government can no longer deny its role in the upkeep and expansion of the national highway system, while at the same time taxing motorists with increasing regularity at the fuel pumps.

¹⁰ CCA/ISTC National Informational Base on the Construction Industry

For municipal infrastructure, CCA supports federal assistance to aid municipalities to rebuild their infrastructure. Interim aid should be provided as catch-up funding, which is conditional on an early re-organization of municipal infrastructure funding to put it on a user-pay basis.

Canada's Domestic Market

The Canadian Construction Association has a number of observations and recommendations to make regarding the issues raised by the consultation paper respecting the need to ensure a healthy, vibrant and competitive domestic market.

There is no question that the underlying proposition embraced by *Prosperity Through Competitiveness* in this area — that the "ability of Canadians to compete abroad is determined at home" — is absolutely fundamental and irrefutable.¹¹

This competitive ability is primarily influenced by two factors. The first deals with the extent to which the cost of compliance with domestic framework and regulatory policies, as well as the relative cost of essential services furnished by government, impede the ability of Canadian-based firms to provide their goods and services at a competitive

¹¹ *Prosperity Through Competitiveness*, p. 25

price in both international markets as well as the domestic market, which is increasingly open to foreign competitors. The second relates to the extent to which internal trade barriers have limited the access of Canadian-based firms to their own domestic markets, thereby impairing their ability to develop the capacity to compete internationally. In addition, the intrusion of government-orchestrated regional protectionist policies within the domestic market have not allowed those firms operating in the protected markets to develop and fine-tune the necessary skills to compete successfully in the global marketplace.

Framework and Regulatory Policies

CCA concurs with the consultation paper's conclusions that Canada's long-term productivity and the competitiveness of Canadian-based firms ultimately depend upon complementary and coherent laws and regulations governing the domestic marketplace, so that available resources are applied to best effect. To ensure that end, framework and regulatory policies, in seeking to attain their primary objectives, must not be insensitive to, nor impair, either directly or indirectly, the ability of Canadian-based firms to operate and thereby compete with foreign-based firms on a cost competitive basis. The steady proliferation of regulatory and legislative requirements which impinge upon the day-to-day operations of the Canadian-based firm from all levels of government within Canada have created a domestic environment in which it is becoming more and more difficult

to deliver a product which can ultimately be cost competitive for the desired quality. Studies indicate that the relative increase in such "soft costs" to Canadian-based construction firms has a much more dramatic impact on the ultimate cost of the construction product than either labour or material costs.

Framework and regulatory policies at the federal, provincial and even the municipal level must be harmonized to avoid conflict, duplication and uncertainty. They must also not threaten the necessary structure and methods traditionally relied upon by the construction industry to deliver its product.

Finally, framework and regulatory policies must not discourage or impair the inflow of foreign capital and investment supporting the operations and opportunities of Canadian-based firms.

Competition Policy

The contracting sector of the construction industry numbers some 130,000 firms. Of that total, approximately five per cent represent large firms which are responsible for nearly 60 per cent of the total annual construction output. The vast majority of construction firms in Canada are therefore small businesses, as are CCA's members. In order for these firms to compete for the larger contracts both domestically and internationally, it

is absolutely essential that both competition and applicable tax policies do not impede nor complicate the ability of Canadian firms to pool their resources and capabilities through joint venturing and consortia arrangements. In fact, such policies should encourage these opportunities. This is especially important when Canadian-based firms seek to compete against the large foreign consortia which often have the unlimited support of their governments. This point is elaborated on in CCA's observations on trading.

Bankruptcy/Insolvency Legislation

The regulation of creditor rights and the establishment of the priority rights of creditors through bankruptcy and insolvency legislation and related legislation is of extreme importance to the continued viability and therefore prosperity and competitiveness of the Canadian construction industry. The "pyramid-like" contracting structure that is typical of the construction project is a delicate chain of individual contracts which relies ultimately on the continuous and unimpeded flow of construction funds from the apex of the pyramid to each level below. This is so since invariably construction goods and services are supplied from the bottom of the pyramid upwards and in advance of payment. Payment is then made from the top downwards after delivery, but through intermediaries in most cases. Therefore, when payment ceases at any point in the chain as the result of bankruptcy, insolvency or other cause, the resulting impact is felt by all. It is ex-

tremely vital that framework and regulatory policies serve to reinforce this structure rather than threaten its integrity.

Provincial and territorial legislatures have all enacted special legislation, generally called "lien legislation," which provides statutory support and protection to the vital pyramid construction contracting structure described above. It essentially affords certain rights and remedies to those within the pyramid structure which rank above the rights of other creditors and which are intended to ensure that funds ear-marked for construction projects cannot be diverted to uses or creditors outside the pyramid structure. Framework and regulatory policies which directly or indirectly over-ride or conflict with provincial/territorial lien legislation are therefore an obvious threat to the viability and prosperity of Canadian construction firms.

A current example of just such a devastating threat is the exercise of Revenue Canada's garnishee power under **Section 224 (1.2)** of the **Income Tax Act** in a construction setting. This legislation seeks to over-ride provincial/territorial lien legislation and render such statutory trust and lien safeguards wholly inoperative in the face of Revenue Canada's collection powers. CCA has challenged this measure, pointing out the serious undermining ramifications it has for the construction industry. It is interesting to note that a Saskatchewan court has recently declared these legislative provisions to be **ultra vires**,

the legislative authority of the Parliament of Canada also noting its undermining impact on lien legislation and the construction industry in general.¹²

CCA has also challenged both federal and provincial legislative initiatives to provide for special "wage-earner protection" on the basis that such measures are not needed in the construction industry where lien legislation and other protection peculiar to that industry already provide adequate protection for construction wage-earners. Such duplication is unnecessary and creates needless uncertainty. Likewise, similar legislation at both the federal and provincial levels without a coordinated and harmonized approach can only create uncertainty for all Canadian businesses. Proposals to fund such mechanisms through an employer payroll tax totally disregard the need to provide a domestic regulatory environment which assists rather than impedes the ability of Canadian firms to prosper and compete in a global environment (see financing).

Environmental Regulatory Policy

The jurisdictional confusion and uncertainty which has recently plagued environmental reviews and assessments of construction projects must end. Construction contractors require a regulatory environment in which they are allowed to proceed to completion once a construction project has been given a "green light". To accommodate this need all levels of government must coordinate their assessments (see partnerships).

¹² *TransGas Ltd. v. Mid-Plains Contractors Ltd., et al.*
(Sask. Q.B. - November 1, 1991 - MacPherson C.J.Q.B. - unreported)

Employment Equity

CCA has been successful in ensuring equal opportunity for employment in the construction industry through a voluntary, industry-led and coordinated program. As a result, the construction industry is currently exempt from the **Federal Contractors Program** and similar compulsory contract compliance regulations which, as demonstrated by the U.S. experience, add a significant and needless cost to construction operations and which, if imposed upon the Canadian construction industry, would lessen the ability of Canadian firms to compete.

Delivery of Government Services

Governments in Canada frequently either deliver or regulate a number of services which are vital to the on-going operations of Canadian industry and business. It is imperative that such essential services, when provided by governments or government-regulated entities (i.e. public utilities, transportation, mail, etc.), are delivered in an efficient, timely and cost-effective manner. Government regulatory bodies must maintain a proper balance in the regulation of the rates charged by the providers of such essential services to ensure that the users of such services can maintain and even enhance their competitive position. Such services must be delivered in a "business-like" manner. If publicly-funded bodies cannot deliver these services in an efficient, cost-effective and economically viable manner, privatization should be considered.

Governments, on the other hand, should not themselves become competitors with the private sector. In order for the Canadian construction industry to be competitive and prosper in an international context, it must have access to all possible domestic construction opportunities. Volume contributes to capacity, which in turn will increase competitive ability. Currently, however, governments, particularly at the provincial and municipal levels, continue to look in-house for a number of their construction needs. This is also true at the federal level, particularly in the dredging area. In the vast majority of these cases, the decision to look in-house rather than contract-out for construction needs is not determined by comparisons of value and cost but by political considerations and poor labour relations strategies with public service unions. Governments at all levels within Canada must not continue to deny the private sector access to domestic construction opportunities if they expect the Canadian construction industry to achieve the capacity, expertise and necessary resources it requires to compete effectively in the international market.

Internal Trade Barriers

CCA has consistently expressed its unwavering opposition to regional preference policies in any form whatsoever and at all levels of government within Canada and has continuously conveyed this message to government in the strongest possible terms.

CCA maintains that the survival and growth of the Canadian construction industry rely heavily upon competition and mobility. The industry, by its very nature, is cyclical, characterized by dramatic shifts and surges in demand, both by region and by sector. It is, therefore, absolutely essential for construction contractors to have unrestricted access to those changing domestic markets.

Preference policies present artificial barriers to mobility and contribute to the further fragmentation of an already limited domestic market. Such practices undermine any notion of a truly Canadian economic union.

In a global environment where barriers continue to fall internationally, it is ironic that it is often easier for a Canadian contractor to do business in another country than in a neighbouring province or territory.

The Canadian construction industry has long endorsed the competitive tendering system as the best means by which purchasers of construction services can be assured of obtaining the desired quality at the best possible price. Interprovincial trade barriers seriously threaten the fundamental integrity of this system. Not only is the ability of Canadian firms to compete freely and openly considerably compromised, but also the value the industry has to offer its clients.

Construction contractors must always compete, particularly if their industry is to be successful in meeting the challenge of foreign markets and foreign competition. Inter-provincial trade barriers and preference policies of government operate to remove the need for local firms to develop this much-needed capability.

As the federal government points out in its publication *Canadian Federalism and Economic Union*:

*"In the past, governments have often overlooked the costs of internal barriers. In some cases, they have recognized the broader costs but judged them to be tolerable in view of the benefits accruing to specific beneficiaries — individuals, groups or regions."*¹³

There is no hard evidence to suggest that preference policies have been successful in enhancing regional development or growth over a long-term period. They invariably result in higher costs to governments which are ultimately borne by taxpayers. While limited short-term benefits may accrue to a very small and select group of local firms, the added costs are absorbed by all.

These practices inevitably invite reciprocal, retaliatory measures in neighbouring jurisdictions which will act to inhibit true growth of local economies, which must eventually

¹³ *Canadian Federalism and Economic Union*, p. 17

look to outside markets for continued growth. It is probably a more realistic view that, for the reasons cited, interprovincial trade barriers over the long term do more to stifle local regional development and growth than to improve it.

CCA also considers provincial preferences in the procurement area to be a violation of the Charter of Rights and Freedoms, particularly with respect to the guarantees respecting mobility rights. It has long expressed the view that the federal government has a responsibility to bring about the elimination of such barriers in order to ensure a truly Canadian economic union.

In this regard, CCA supports the federal government's efforts to address this serious issue in its constitutional proposals, specifically the amendment of Section 121 of the Constitution to, "enhance the mobility of persons, capital, services and goods within Canada by prohibiting any laws, programmes, or practices of the federal or provincial governments that constitute barriers or restrictions to such mobility." ¹⁴

We cannot support the proposed exception in the amended common market clause of the Constitution, however, respecting legislation promoting regional development or equalization, for many of the reasons already cited. While CCA supports the promotion

¹⁴ *Canadian Federalism and Economic Union*, p. 22

of regional development and regional parity, governments at all levels must ensure that their programmes and policies in that regard do not result in preferring the sourcing of persons, capital, services or goods from one region to the detriment of other regions within Canada. By allowing such an exception to exist, the government is tacitly encouraging the perpetuation of the problem. It, itself, has recognized that "many of our internal barriers arose from intentions to address particular objectives, in the area of social policy, regional development, industrial development, and so on." ¹⁵ The inclusion of such an exception, therefore, is clearly contradictory to the government's own-stated objectives.

As we outlined to the **Special Parliamentary Committee on a Renewed Canada**, CCA is also of the opinion that the government should move more quickly to implement the amended common market clause to truly demonstrate its commitment to eradicating such trade irritants.

Given the substantial work that has already been undertaken on the subject, CCA believes the new section should come into force well in advance of the government's proposed July 1, 1995 date.

¹⁵ *Canadian Federalism and Economic Union*, p. 20

Furthermore, CCA remains adamant that the urgent need to create a true economic union within Canada requires the constitutional protections suggested in the federal government's constitutional proposals. While joint discussions, such as those under the auspices of the Joint Committee of Ministers on Internal Trade Within Canada, are an important supplementary foundation for this objective, it is CCA's view that a constitutional protection is absolutely necessary.

Bilateral discussions between the federal government and the provinces under some form of internal GATT process as an alternative to constitutional safeguards will not suffice. The history of trade negotiations as an effective means to reduce or eliminate trade barriers in the procurement of services or public works has been dismal. The current GATT Procurement Code for example does not cover the procurement of public works and services nor does the U.S.—Canada Free Trade Agreement.

While the Committee of Ministers on Internal Trade has achieved a modest agreement regarding goods procurement, the path has been a long and arduous one with the result being a compromise document considerably lacking in its originally intended aims. In addition, no discussions of any meaningful value have been held as of yet on public works or services procurement, despite the fact the Committee was originally established almost six years ago.

Trading

International construction work accounts for less than two per cent of the Canadian construction industry's business volume each year. This is due in large part to the fact that fewer than 100 Canadian construction firms have been active in international markets.

Despite this record, however, Canadian contractors have developed an excellent reputation internationally and have worked successfully in the United States, the Caribbean, the Middle East and the Americas for several years.

Unfortunately, Canadian success stories in the international capital projects market continue to be limited and are often inhibited by a number of competitive weaknesses, including firm size and experience, government support and export financing. The risk borne by contractors in such ventures is also significant.

Firm Size and Experience

International competition for capital projects is both fierce and complex. It is commonplace for Canadian firms to compete with foreign firms many times their size which have as their base huge domestic markets and like economies. In most cases the export networks of these foreign firms have been developed over a significant period of time

and are closely tied to colonial or other political links. Moreover, the cost data accumulated by these firms in many countries, as well as their knowledge of the nations, and often those in power, is significant.

The Canadian contractor, by contrast, is often a neophyte to export markets and cannot match the multinational financial strengths of his competitors.

Government Support

Often, the greatest competitive advantage of foreign firms in international contracting relates to the support they receive from their governments while pursuing work. This support is frequently very extensive involving the respective President or Prime Minister of the country, senior ministers, ambassadors and trade commissioners. The King of Sweden, for example, frequently participates in trade missions for his country.

Unfortunately, there is a body of opinion from the contracting community active in international construction from this country that believes such support is lacking in Canada.

Team approaches are also used by many of Canada's competitors in international construction, where a concerted consortia is established which links government, business and financial interests to successfully bid on a project. Canada has also yet to develop

this successful approach. Many argue this is one of our significant downfalls:

"The structure of the Canadian capital projects industry (lacking of common interest, relatively weak financial state, lack of trust between contractors, engineers, manufacturers and bankers) and the highly competitive climate in Canada are the main causes for the lack of competitiveness and aggressiveness of the industry in overseas markets." ¹⁶

Export Financing

Perhaps the most widely perceived competitive advantage of other countries involved in international construction pertains to project financing. In this regard, many Canadian contractors have experienced instances where foreign competitors have utilized advantageous financing to secure a given project; financing which in the view of Canadian contractors, cannot be matched in Canada.

It is common, for example, for major national banks to support the initiatives of contractors in many of the nations which compete with Canada for construction work. Irrespective of regulated OECD agreements, it is also not rare for foreign governments to provide very attractive concessional financing rates to secure work. In recent years, Canada has adopted the reverse approach and has limited its concessional financing.

¹⁶ An Overview of the Export of Capital Projects: Opportunities for Change
Avocet International Ltd. for The Department of Regional Industrial Expansion,
p.60

Observations and Recommendations

In addressing many of the trade related questions posed in the government's *Prosperity Through Competitiveness* discussion paper, the Canadian Construction Association makes the following observations and recommendations respecting Canadian trade policies and trade promotion mechanisms.

1) Trade negotiations

CCA remains committed to the principles of trade liberalization through such instruments as the multilateral (GATT) and bilateral trade negotiations. We concur it is essential to combat protectionist pressures at every opportunity and that at the same time we maintain interests in as many foreign markets as possible.

Actively involved with the Sectoral Advisory Group on International Trade for both the Free Trade Agreement between Canada and the United States and the ongoing Uruguay round of GATT talks, CCA continues to call for reciprocal access to foreign markets which are afforded opportunities in Canada.

In Korea, for example, Canadian contractors continue to be denied access to the public tendering process yet in recent years several Korean construction firms have secured lucrative contracts in Canada.

2) *Export financing*

The government should examine the export financing instruments of all major competitors to ensure that Canadian firms can operate on an equal footing. In the process it should revisit its current financing programs such as CIDA credit mix as well as those successfully used in the past such as Section 31 financing.

3) *Tied-aid*

Canada should follow the example of other developed nations by re-tying its aid to Canadian products and services and include more capital projects in its Official Development Assistance plan.

Tied-aid is one of the major factors that has facilitated exposure to international markets to many of Canada's competitors and has allowed them to remain leaders in the international arena. The sooner Canada reties its aid, the sooner it will enable more Canadian contractors to catch up to their foreign counterparts.

Contrary to recent government statements, the Canadian Construction Association continues to maintain that tied-aid is the best means to achieve the objective of assisting countries in need and at the same time returning benefits to Canada.

It is not uncommon for Canadian untied aid to be squandered by recipient countries or for Canadian equipment and/or facilities built by Canadian grants to be left to rust for lack of local capability, training or desire. Under the full management and guidance of a Canadian team, these risks would be significantly minimized.

Aside from the direct benefits which accrue to recipient countries and Canada through tied-aid initiatives, there are indirect benefits to Canada as well including the exposure Canadian firms realize in many of these nations; exposure which in the long run can only help these firms compete in the global marketplace.

4) *Government support*

It is incumbent on the government to increase its support for export initiatives both politically and by providing the resources required for Canadian firms to compete abroad.

Canadian political leaders should emulate the proactive activities undertaken by other leaders in the Western world and elsewhere in the support of export activities and should promote Canadian interests at every opportunity.

Canadian trade commissions and embassies throughout the world should also be adequately staffed by competent individuals whose sole responsibilities are to iden-

tify business opportunities for Canadian firms. To accommodate this, the frequency or relocation of our offices overseas and in Ottawa should be timed to enable these individuals to truly become effective in their posts. Frequent changes of our representatives detract from the advantages of continuity, both for Canadian business, and for the host country's government and business people.

By contrast, competing nations from Europe and the Far East remain in their posts for much longer periods and are often more effective in their posts.

As the consultation paper *Prosperity Through Competitiveness* observes, "Exporters require a sophisticated understanding of market conditions, barriers and opportunities if they are to realize their market potential."¹⁷

In this regard, the government should coordinate its organization in the area of international trade and improve the information flow between its departments and from its posts abroad to exporting industries. The establishment of an International Capital Projects Office could provide such a one-stop shopping instrument for interested exporters. This proposal, originally put forth by Industry, Science and Technology Canada, should be reexamined.

¹⁷ *Prosperity Through Competitiveness*, p.35

5) *Educational efforts*

Federal and provincial governments should expand their educational programs related to international trade in Canadian universities and colleges so that young Canadians can be exposed to new markets and explore export opportunities. Likewise, more foreign students should be encouraged to receive their education in Canada where they will learn about our country and, in the future, hopefully influence increased trade with us.

6) *Team Canada approach*

Canadian architects and consulting engineers should be encouraged to involve Canadian contractors in their projects overseas, particularly those funded by Canada. As aforementioned, this team approach is successfully used by several of our competitors.

Partnerships

CCA concurs that there is a need to develop a wider understanding and consensus among all Canadian stakeholders to address common economic challenges, priorities and strategies.

We also agree the time has come to begin coordinating the activities of both levels of government. Best articulated in the prosperity paper, there is a critical need to develop, "fiscal, tax, regulatory and other framework policies that are compatible, fair, and do not work at cross-purposes." ¹⁸

"In this regard CCA supports the federal government's constitutional proposal that a **Council of the Federation** be established to decide on issues of intergovernmental coordination and collaboration." ¹⁹

One area which requires the immediate attention of both federal and provincial governments as a candidate for streamlining is environmental assessment.

CCA maintains that concerns relating to the preservation of the environment should transcend jurisdictional boundaries. The existing regulations in Canada respecting environmental assessments are plagued with interjurisdictional inconsistencies which have led to a duplication of assessments, causing great uncertainty.

¹⁸ *Prosperity Through Competitiveness*, p. 39

¹⁹ *Shaping Canada's Future Together*, p. 42

CCA continues to advocate that a singular, scientific environmental assessment and review process be adopted in Canada which, while recognizing multijurisdictional responsibilities, would avoid unnecessary duplication.

Notwithstanding the federal government's proposed legislation before Parliament, Bill C-13, all levels of government must take steps to coordinate their assessments immediately.


Conclusion

The Canadian Construction Association has appreciated this opportunity to present its views on the federal government's consultation paper on prosperity.

We believe, that for Canada to prosper and remain competitive, it must maintain a well-educated and well-trained workforce, adapt to changing technologies and furnish an attractive investment climate. It must also maintain its public infrastructure and foster an economic environment free of internal and external barriers to trade which promotes the free movement of goods, services and people.

To this end, all governments and other stakeholders such as management and labour must develop partnerships and work together for the common good of the nation and its people.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'J.C. Halliwell', written over a large, stylized circular flourish.

J.C. Halliwell
President

-
- *Prepared by Michael Makin, CCA's Director of Government and Public Relations, with assistance from Michael Atkinson, CCA's Senior Director and John DeVries, CCA's Director of Human Resources.*

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**RESPONSE TO THE CONSULTATION PAPER
"LEARNING WELL ... LIVING WELL"**

To

*The Honourable Bernard Valcourt
Minister of Employment & Immigration
March, 1992*

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Executive Summary

CCA's submission respecting **Learning Well ... Living Well** covers three main topics:

- 1) Education
- 2) Apprenticeship
- 3) Perception of Trades and Technology

Education

CCA recommends that education must become challenging and focus on the basic educational building blocks of literacy and numerical skills that will enable Canadians to enjoy life-long learning.

National education performance standards need to be implemented with full public disclosure.

The proposal for a Master Teacher designation deserves serious study. A specialized training program combined with frequent exchanges with industry and the research community could possibly make education more challenging and make the classroom more integral to the economic fabric of the country.

The length of time of instruction during the school year should be evaluated with a view to meeting the educational performance of our competing developed nations.

The educational system needs to confront the misfit between student/parent expectation and reality with regard to post-secondary continuation rates. Overwhelmingly, parents and students are oriented to participation in university and college, yet only about one third to one half of students actually do so.

Apprenticeship

The CCA believes apprenticeship training offers significant new opportunities and that it can be integrated more effectively into the education system to provide our youth with realistic post-education opportunities and to bring about a closer relationship between industry and the education system.

The potential opportunities within apprenticeship should be explored on a tripartite basis with the Canadian Labour Force Development Board playing a critical leadership role.

The CCA recommends that a greater degree of competition be injected into the provision of in-class trades training in order to maximize the training investment, to spark innovation in training and to ensure trades training materials and methods are up to date.

Perception of Trades and Technology

Students, parents, teachers and society in general do not have negative attitudes to Skilled Trades occupations. In most cases there is a blissful lack of knowledge and understanding of the nature of skilled trade work which results in an overall attitude of indifference and lack of relevance towards a skilled trade career.

The CCA believes students in the later secondary school grades need to be provided with knowledge based experiential programming to fill that void of knowledge.

Skills Canada is a national organization whose mission is to promote technical and skilled occupations as desirable career options. Primarily active in Ontario, Skills Canada should be supported in all ten provinces.

Introduction

The document *Learning Well ... Living Well* and national consultations are viewed by CCA as a valuable exercise to focusing the divergent viewpoints that exist across the country on the objectives of our education system and aligning them with national priorities.

The word focus is an apt term as it seems our tremendous investment and effort in educating the populace has become unfocused in its attempt to be everything to everyone.

CCA is the national voice of the construction industry in Canada and represents more than 20,000 member firms from coast to coast. These firms include general contractors, specialty contractors, heavy constructors and roadbuilders, industrial contractors and manufacturers and suppliers of construction materials, principally involved in, but not limited to, non-residential construction.

The volume of work performed by the construction industry last year exceeded \$90 billion and accounted for the employment of more than 700,000 Canadians.

The CCA is but one association to bring its views to this national consultation and does not pretend to be an authority on education but is rather an authority on employing the end product of our education systems.

This brief has been prepared from the perspective of a vitally important sector to Canada's overall competitiveness whose strength is critically dependent upon the skills, the ingenuity and the productiveness of its workforce. The CCA therefore is pleased to offer comments on the ability of our education system to prepare students for employment; to profile the success of apprenticeship in the construction industry; to examine the potential of expanding apprenticeship; and finally to comment on the need to enhance the knowledge and perception of trades and technology occupations.

Education

How well are Canadian schools preparing students for employment?

Without a thorough survey, CCA can provide only a response based on ongoing dialogue with member firms and with our network of local and provincial construction associations. The general view is that there has been a decline or depreciation from a generation ago in the basic skills in the individuals leaving the school system. The other significant comment often heard is one of attitude, that there appears to be a greater level of complacency among the youth of today than ever before.

The comments have no scientific foundation and may be coloured by nostalgic yearning for an earlier and better time.

However, when one reviews the statistics regarding illiteracy, drop-out rates, the high levels of unemployment existing at the same time as skill shortages, against the evidence that Canada ranks fourth in overall public expenditure on education per capita ¹, one has to question whether or not there has been a depreciation in our educational standards and the ability of formal education to prepare students for employment.

Two statistics bear repeating and closer commentary:

- Three of 10 students (100,000 a year) still drop out before finishing high school.
- Four of 10 adults (38 percent) have some difficulty with everyday reading and math demands.² According to a Southam Press survey in 1987, this would include an astonishing 8% of university graduates, 32% of professionals, 24% of executives/owners/managers and 20% of skilled labour.³

¹ World Competitive Report, IMEDE and FORUM, 1990

² Learning Well ... Living Well, page 5

³ Literacy in Canada - Research Report, Southam News, 1987

The above figures from Statistics Canada have been much publicized and are seen as the rallying cry for educational reform. In light of the importance of these statistics, the CCA would recommend to the Steering Committee that a closer analysis of the figures be undertaken.

The 30% drop-out rate is based on Statistics Canada analytical procedures and has been criticized for possibly overstating the case. For example, in the National Capital Region at the Ottawa and Carleton School public school boards, where each student who leaves is contacted, counselled and counted, the drop-out figures are much lower. The Ottawa board boasts a 7.8% drop-out rate, the Carleton board 5.4%. According to the Ottawa Authorities, the Carleton Board figures would be roughly 15% if they used the same approach for determining drop-out rates as Statistics Canada.

The illiteracy figures from Statistics Canada and from the Southam Press survey are of grave concern and appear to be verified by the general observations passed along by construction employers, apprenticeship committees and trades training centres in the industry.

This survey evidence is a serious indictment of the weakness of our formal education system. It is troubling to have a high drop-out rate but it is more disconcerting to

have an educational system graduating students from high school, college and even university without the essential basics.

The Federal Government should understand that the construction industry has evolved into a complex and skill demanding environment. New technologies, new products, new construction practices and the constant requirement for innovation has altered the character of this industry. Every trade occupation from the general labourer to the skilled electrician has undergone significant evolution in the last generation alone and we expect this will continue in the future.

Individuals coming into the construction industry must be equipped with the educational prerequisites to be able to solve problems, innovate and absorb ongoing training. An often held perception that "brute force and ignorance" is the common denominator of the construction workforce is far from the reality that a career in most construction trades is challenging and requires a solid base of education including good math and literacy skills.

The construction industry will be one of several industrial sectors in the future seeking qualified individuals for a construction or skilled trade occupation. In the face of demographic statistics which indicate that the labour force will grow annually by 180,000 in the nineties compared to 300,000 in the 1970s, the construction industry is concerned

that the general quantity and quality of the individuals applying for a construction position will be declining at a time when the skill requirements are increasing.⁴

In the final analysis, Canada's educational system is not passing the critical litmus test of providing all Canadians with basic skills necessary for employment.

It seems apparent that throwing money at the system is not the solution as we already spend \$45 billion on education which places us in the top three in terms of the percentage of Gross Domestic Product (GDP). In 1989, Statistics Canada estimates in round figures for schools were \$28 billion; for universities \$9 billion; for colleges \$3.6 billion and for vocational training \$3.6 billion. In total they amounted to 7.7% of GDP, and \$1,685 per capita.⁵

So where do we go wrong when Canada invests so much money in education?

The CCA would support a number of the findings of the **Report on The Human Resource Development Committee of the National Advisory Board on Science and Technology** entitled "**Learning to Win: Education, Training and National Prosperity**".

⁴ Success in the Works, CEIC Policy Paper, 1989, page 2

⁵ Education in Canada - A Statistical Review, Statistics Canada, 1990

The report which was submitted to the Prime Minister in April 1991 examined among many issues the diseconomies that lie between the high investment in education and the dismal results in terms of Canada's competitiveness.

It was the Committee's considered view that even after accounting for the extra and worthwhile demands placed on education such as education in a second language, accommodation of multiple cultures and much of the responsibility for the social adjustments and orientation of Canada's youth, there remains huge diseconomies unexplained.

To quote from the Committee's report

"In brief, they can be thought of in three categories: (1) the failure to dispel the complacency of a significant proportion of the middle majority who see high school and college chiefly as a social experience or as activities which interfere with their lives; (2) the squandering of the abilities of those at the bottom who either drop out of high school and/or fail to retain the basic skills of literacy; and (3) the squandering of the talents of the best and brightest at the top on underachievement, on a steady brain drain, or on an overcrowding of the high-paying but peripheral professions in terms of national wealth creation. Together, these three groups of students waste the bulk of public expenditures on education today".⁶

⁶ Learning to Win: Education, Training and National Prosperity, page 4

The Committee identifies the main enemy as complacency among Canadians who have yet to realize or admit that their heritage of natural resources is no longer of itself paying their way. "Getting the message out there is a real crisis, and that the means to avert it are in their hands, should help develop their courage to manage and to get involved".

The other factor affecting the complacent middle majority group identified by the Committee is a symptom of our modern society. To quote the study:

"The additional factor in shaping their attitudes is that school is no longer the most exciting part of childhood, as it used to be. The excitement of the world outside the classrooms has made school seem dull and irrelevant in a voluntary and involuntary environment of TV, video, computers, Nintendo, organized sport, sex and violence, rock and rap, fad and fashion."⁷

The CCA finds considerable merit in the observations of this Committee Report submitted to the Prime Minister. The importance of "getting the message out" has been pursued by the federal and provincial governments in initiatives such as the current Prosperity Initiative, establishment of the Canadian Labour Force Development Board, provincial training reforms as well as concurrent provincial education reviews.

⁷ Learning to Win: Education, Training and National Prosperity, page 5

CCA Recommendations on Education

1. Education must become challenging and focus on the basic educational building blocks of literacy and numerical skills that will enable Canadians to enjoy life-long learning. In this respect Canada should take a lesson from our foreign competitors who believe that schools are for basic education. Colleges, universities and vocational schools are the places for options, self-realization and specialization.
2. National educational performance standards need to be implemented with full disclosure. The Province of Quebec has demonstrated the benefits by revealing the aggregate scores of schools in province-wide exams. With such standards in place and reliable output measures, Canadians will be able to assess and campaign for improvements in their region. It would be reasonable to anticipate a shrinkage of the drop-out and illiterate group as well as an up-scaling of the standards of the complacent majority.
3. One interesting proposal in the Report of The Human Resource Development Committee (NABST) was the recommendation of a Master Teacher program in which "Master" teachers act as mentors and trainers for beginning teachers. "Becoming a Master Teacher would be a prestigious, financially rewarding, and rigorous process involving an individually tailored study plan, and frequent exchanges with industry and the research environment."

The concept of a Master is quite familiar to the construction industry which relies heavily on the apprenticeship training system to produce skilled workers. The training hierarchy of a master tradesman, a journeyman and an apprentice has been a successful model for several centuries in many disciplines and certainly could be applied to the teaching profession.

CCA supports this proposal as a positive step to making education more challenging and making the classroom more integral to the economic fabric of the country.

4. The length of time of instruction during the school year should be evaluated with a view to meeting the educational performance of our competing developed nations.

5. The education system at the high school level needs to confront the misfit between student/parent expectation and reality with regard to post secondary continuation rates. Overwhelmingly, parents and students are oriented to participation in university or community college after leaving high school. Yet only about half to a third of students who expect to enter university or community college actually do so.⁸ For those who enter university, two out of five students don't get a degree within five years.⁹

At the core of the issue is what one industry journal observed is the emergence in the last generation of a great social lie. This journal noted that the "great lie" says any student leaving high school and not going on to college or university is a failure and secondly that a college or university degree is automatically attached to a high income.¹⁰

These perceptions have worked against occupations in trades and technology and more will be said about the perception of a career in trades later on in this submission.

Apprenticeship

Apprenticeship training is the primary training approach used in the industry for our skilled workers. Construction trade apprentices account for the majority of all registered apprentices in the country. The 1989 national Apprenticeship Task Force report found that 53.4% of the 128,782 registered apprentices were in construction for the year 1987.

⁸ Report on Skilled Trades and Career Selection, Prof. John Walsh, 1989, page 4

⁹ Ottawa Citizen Editorial, Oct. 10, 1991 (Editorial respecting University Education Analysis by Dr. Stuart Smith, Commissioned by The Association of Universities and Colleges of Canada)

¹⁰ Journal of Commerce Editorial, 1991

As the leading employer of apprentices, CCA feels duty bound to offer some detailed comments about apprenticeship training.

Apprenticeship training has served the construction industry quite satisfactorily through the history of the Nation. In fact, its roots can be traced back to the Middle Ages where in kingdoms and dukedoms across Europe, people specialized in various trades such as blacksmiths, woodworkers and cobblers to name a few. Development paths started at an early age where a young boy would work with a master tradesman and work his way up to a journeyman's status over several years. The term journeyman was used because the young trainee would then be sent on a journey to practice and refine his trade around the countryside. After a journey of several years, the tradesman would settle in and begin his master work in one location. As a master craftsman, he would engage an assistant as his own mentor had done, and repeat the cycle.

Apprenticeship training has become incorporated into the educational and labour force development systems of most industrialized nations since those early roots. In countries like Austria and Germany, apprenticeship training is more extensively relied upon to provide labour force development and training. In Germany, apprenticeships are available not only in the skilled trades, but for most occupations in general.

Consider that in Germany, their federal training institute has detailed job profiles and appropriate training plans for 439 different occupations. In Canada, a total of 170 apprenticeable trade occupations are identified in the 1990 "Ellis Chart" of provincial apprentice training programs. Apprentices in countries such as Austria and Germany account for approximately 7% of civilian employment while in Canada apprentices represent approximately 1%.¹¹

The CCA believes apprenticeship training can be integrated more effectively into the education system to provide our youth with realistic post-education opportunities and to bring about a closer relationship between industry and the education system.

This does not infer adoption of a German style education and apprenticeship system within Canada but identifying and incorporating those positive features of Germany's system into Canada.

The features of early initiation to career planning, student evaluation of aptitude at an early age, streaming of students, formal vocational training or apprenticeship at age 14 to 16 are some examples worthy of closer scrutiny.

¹¹ Apprenticeship Task Force Report. Part IV of the CLMPC Task Force Reports on Labour Force Development..

Apprenticeship training offers significant potential to the educational system, government and to business and labour. The potential needs to be explored and CCA believes the Canadian Labour Force Development Board should play a critical role in this investigation.

In all provinces but Quebec, apprenticeship training relies to a great extent on the community college system for the in-class training sessions. The college system has had a virtual monopoly on trades training through the years and is generally perceived as performing a competent job with trades training. There is also a commonly held view that the college system in the absence of competition, has evolved burdened with many inefficient and wasteful features which reduces the rate of return on our training investment.

The CCA recommends that a greater degree of competition be injected into the provision of in-class trades training.

Competition in the form of private training centres or in the form of trades training vouchers to colleges for apprentices should be explored in order to keep training costs down, to ensure trades training materials and subject matter are up-to-date and to spark innovation in training.

Innovation needs to be injected into training programs to address issues such as high drop-out rates from apprentices due to lengthy apprenticeship periods. Options such as modular training, while controversial to many needs to be seriously investigated.

In-class training modules available to apprentices to complete at their preference, especially in times of unemployment, combined with the potential for time credits for job-site skill performance are possible incentives to apprentices to stay with the trade and complete the training early.

The flexibility to enrol in an in-class trades training session on short notice as a result of a lay off is largely not possible in the current college system and is compounded with the bureaucracy of provincial apprenticeship branches. Competition would introduce greater availability of in-class instruction to apprentices and would also create a pre-employment trades training option for many of today's youth who leave school without fundamental job skills.

Perception of Trades and Technology

Earlier on in this paper, reference was made to the misfit between student/parent expectation and reality with regard to post-secondary continuation rates.

Society has unfortunately embraced the proposition that college or university is the superior development path and secondly the ideal occupations are not in wealth creation but rather in wealth administration (accounting, finance, law) or wealth reallocation (politics, public service, education, social service). It is interesting to compare Canada to Japan for three key occupations. In Japan there is approximately 4 engineers to every one in Ontario; 1 accountant to every 14 accountants in Ontario; and 1 lawyer to every 39 lawyers in Ontario.¹²

One of the most significant studies on perceptions of skilled trades careers was undertaken in 1988 by the Kitchener, Waterloo and Guelph Training Advisory Council.

The Council surveyed high school students (2,545 responses); parents (966 responses), employers (113 responses) and apprentices/journeymen (939 responses) in an effort to get a better understanding of the forces at work in shaping the post-secondary school choices made by students.

The study confirmed that for both students and parents, they are overwhelmingly oriented to participation in university or community college programs after leaving high school. Approximately 70% of students and over 80% of parents expected university and college to follow high school.

¹² Learning to Win: Education, Training and National Prosperity, page 5

With respect to skilled trade occupations both parents and students held a positive perception of the good job prospects in skilled trades and their value as occupations. The study found that students generally held these perceptions yet knew very little of what is involved in skilled trade work. The attitude of students was described as "skilled trades are fine - but not for me". In the same vein, parents recognize the value of skilled trades but did not see them as relevant to their children. Of particular note in the study was the extremely low expectation of female respondents for participation in skilled trade occupations.

The study illustrates the previously identified basic inefficiency of our education and labour force development activities. Our society has created a tremendously expensive education system that responds to our obsession to non-wealth creating occupations which are secured primarily in university and community college. The reality is that only one-third to one-half of students who expect to attend post-secondary school actually do so and for those who do attend university, two out of five do not get a degree within five years.

There is an educational cost and a personal cost here which is difficult to assess but needs to be addressed within the discussions on educational reform.

The CCA believes students in the later secondary school grades need to be provided with knowledge based experiential programming regarding skilled trades to fill that current void of information.

Initiatives such as "Skills Canada" address this issue and need to be supported across all ten provinces. Skills Canada is a national organization whose mission is to promote technical and skilled occupations as desirable career options, to develop excellence in both technical and leadership skills with youth and to develop human resources as our competitive edge in the global marketplace.

Skills Canada began in 1989 as a pilot project in Simcoe County, Ontario and has caught the enthusiasm of students, educators and the private sector. By making skills fun through the formation of school-based clubs and through competitions, the status and knowledge of a skilled trade is rising.

Since 1989, the demand for the programs of Skills Canada has grown tremendously to the point that over 80 schools and colleges take part in Ontario. Expansion to Alberta, British Columbia and Quebec is underway. In 1992, the Ontario Skills Competition will feature 400 competitors who have won a skills contest within their school or college campus. In 1994, Skills Canada will hold the first Annual Canadian National Skills

Competitions. It is initiatives such as these that will truly bring about an improved awareness of what a skilled trade involves to the student, the teacher and the parents.

In the previous section on education the proposal for a "Master" teacher designation was endorsed as a promising proposal to enhance the teaching profession and to make the classroom more integral to the economic fabric of the country. By having teachers undertake frequent exchanges with industry and the research environment in the pursuit of a Master designation, significant benefits in the quality of career advice by teachers in skilled trades and technology can be achieved.

Teachers and guidance counsellors were identified by students in the Kitchener study as a major source of information and advice yet the contact between teachers and the rest of the working world seems to be fragmentary and sporadic. In a 1982 Science Council of Canada survey, only 39% of secondary teachers felt they were able to convey the nature and process of engineering and technological activities effectively. At middle school levels the proportion dropped to 26.5% and at the elementary level to only 14.1%. Less than half of the secondary school teachers had visited an industrial plant, and only 21% had received classroom visits from industrial personnel. Sixty percent of elementary teachers and a third of all teachers claimed no contact with or knowledge of industry. It is no surprise that the challenges and changes occurring in technology, in skilled trades and in industry are not reaching the upcoming generation through the classroom.

Conclusion

The Canadian Construction Association has appreciated this opportunity to participate in the Federal Government's consultation on prosperity and specifically to provide our views on the need to examine our educational and labour force development system.

At the outset, CCA stated that the strength of this industry in Canada and globally is critically dependent upon the skills, the ingenuity and productiveness of its entire workforce. Canadian builders are second to none and are quite proud of our reputation for innovation and capability in building this nation.

To maintain our leadership in the future requires an effective educational and labour force development system. Individuals entering the construction industry in the future must come equipped with the essential basic educational skills in order to accept constant training, to be able to innovate and to solve problems. In this respect construction is similar to most industrial sectors in its future human resource requirements.

The CCA hopes the comments provided in this submission will be of value to the National consultations and that they will be seriously addressed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John C. Halliwell", written over a large, stylized circular flourish.

John C. Halliwell
President

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CANADIAN HOME BUILDERS' ASSOCIATION

**COMPETITIVENESS
OF THE
HOUSING INDUSTRY**

FINAL REPORT

**A Response to
the Federal Government
Prosperity Initiative**

from

The Canadian Home Builders' Association

March, 1992

COMPETITIVENESS OF THE HOUSING INDUSTRY

EXECUTIVE SUMMARY

This paper was prepared in response to the federal government's **Prosperity Initiative** regarding ways to promote Canada's economic security and prosperity within the context of protection of the environment. The CHBA supports the objectives and principles established by the federal government in the consultation paper **Prosperity Through Competitiveness**. The strength and growth of the economy is the foundation of the Canadian quality of life. Enhanced opportunities for income and employment are essential for Canada to maintain and improve upon the standard of living which its citizens have come to enjoy. In the new highly competitive world economy, Canadian workers and businesses will need to be more productive if they are to survive and prosper.

The housing industry is very important to the federal government's competitiveness strategy. By improving efficiency in the production of housing, the overall goal of lowering the cost of doing business in Canada is enhanced. This assists in promoting the competitiveness of the economy and improves the prospects of domestic industries in international markets. Also, the state-of-the-art technology being developed and used in the housing industry offers the potential for Canadian companies to use the domestic housing product as a platform from which to promote exports of building products, technologies and expertise to other countries. This can assist in providing the resources required for further research and development.

The paper outlines a large number of issues which must be addressed by government in full consultation with the housing industry in order to enhance the efficiency of the industry in Canada. A review of the actions that the CHBA believes are required are summarized below:

Human Resources, Training and Labour Mobility

- An on-going assessment of the demand and supply of labour in the housing industry - Employment and Immigration Canada (EIC) is currently developing a residential construction component for their labour demand model. This is urgently required to develop the capacity of the industry to meet the future demand for new housing and renovation work in Canada.
- Adequate apprenticeship training for young Canadians entering the housing industry - the Canadian Labour Force Development Board has established the National Apprenticeship Committee to examine this issue. There is an urgent need for the Committee to complete its work and, with industry input, for EIC to act on the recommendations.
- Standardization of training, upgrading and certification programs for trades among provinces and territories - EIC, in co-operation with provincial authorities and the Canadian Council of Directors of Apprenticeship, has

established the "Red Seal" program to address this issue. More attention is required with respect to upgrading the skills of trades. The program currently covers many construction trades with more being added.

- Upgrading and specialization of the skills of trades in the industry to take advantage of new technologies - EIC is acting in this area, mainly through the Industry Adjustment Service Agreement and the Training Trust Funds/Labour Market Adjustment Grants under the Canadian Job Strategy Program. Work in this area must be given a higher priority.
- Immigration of required construction trades into Canada - EIC must review the point score ratings established for potential immigrants with skilled trades to ensure that shortfalls in the supply of skilled trades from domestic sources can be met through immigration.
- Encouragement of mobility of construction workers - EIC, the Department of Finance and other federal departments, as well as provincial and municipal governments, must examine their programs and policies to ensure that disincentives to the mobility of construction workers are minimized. In particular, Unemployment Insurance and the treatment of mobility related expenses for tax purposes require examination in this regard.

Investment in Research and Development and Technology Transfer

- Renewed commitment to technology development and diffusion - there is a danger that the essential process of research, development and diffusion of building technology might suffer due to the current fiscal problems faced by all levels of government. Improvements in the quality and cost of building and renovating Canadian housing depend on continued public sector participation and there is a requirement for a renewed commitment by government in this area.
- Co-ordination of the research and diffusion efforts of the various government departments and agencies - in this era of fiscal restraint, it is essential to co-ordinate the efforts of the various federal and provincial departments and agencies active in this area to ensure that the housing industry benefits to the maximum extent possible.

Under the auspices of Canada Mortgage and Housing Corporation (CMHC), the National Housing Research Committee could provide a useful forum for achieving co-ordination among the various public sector organizations involved in housing research. The role of this Committee must be recognized and given much greater emphasis and must be fully utilized by all participants. As the federal government's principal actor in the housing area, CMHC, through the Committee, must strengthen its co-ordination of research activities.

With respect to technical and technological research, development, demonstration and diffusion, the Technical Research Committee of the CHBA continues to provide a unique and effective instrument for co-ordinating the research activities of both private and public sector organizations.

- Promotion of R-2000 technology - Energy, Mines and Resources Canada (EMR), in partnership with the housing industry and with significant input from Environment Canada, must become much more active in the promotion of the positive environmental and energy-related features of the R-2000 product. A national marketing plan for R-2000 is required to ensure that Canadians benefit from this important technology to the maximum extent possible. The federal government should also promote the application of R-2000 technology to social housing and the renovation sector.
- Recognition of the special needs of the renovation sector - the CHBA has called on the federal government to act on a comprehensive set of policies for the renovation sector to meet the special needs of this sector in terms of technology development and diffusion, training and education, and consumer information.

Management Processes and Practices

- Continuation and enhancement of on-going programs for improvement of management skills and technical knowledge - working together, the industry and government must continue to facilitate the process of upgrading of the management skills and overall professionalism in the housing industry. CMHC, the national, provincial and local home builder associations and the warranty programs all have important roles to play in this area.

CMHC must continue to provide market information and to undertake research in important areas such as housing for seniors, immigrants and the disabled. The Corporation must ensure that the market information and the results of the research are distributed as widely as possible in the housing industry.

- Recognition of the special training needs of the renovation sector - management training programs specific to the needs of the renovation sector must be a priority for CMHC.
- Development of renovation-specific market intelligence must also be a priority for CMHC.

Internal Trade

- Abolition of protectionist licensing and procurement practices - provincial and municipal governments should minimize the requirement for local licensing of trades and eliminate policies which favour local firms in competitive bids for building contracts.

International Trade

- Development of an export strategy for Canadian building products, technology and expertise - the federal government, in consultation with industry, must develop a strategy whereby Canadian exports can benefit from the advances which have been made in building technology in Canada. The Building Products Export Council proposed to be established by Industry, Science and Technology Canada (ISTC) and Canadian building products manufacturers could provide a promotional vehicle to help exports of building products. However, further initiatives are required to tap the potential for exports of products, technologies and expertise. For exports of manufactured housing, the federal government should support the activities of the Canadian Manufactured Housing Institute.
- Investigation of the problem of substandard imports - the federal government must investigate and take appropriate action on the alleged problem of imports of building products into Canada which do not meet Canadian standards. This must be undertaken in co-ordination with provincial and local code-enforcement authorities.

Government Regulations, Codes and Standards

- Continuing evolution of the National Building Code in a manner which provides the necessary protection for building quality while enhancing opportunities for innovation - the Canadian Commission on Building and Fire Codes should pursue, as a long-term objective, the development of verifiable performance based provisions for the building code.
- Continuing pressure for adoption of the National Building Code in order to eliminate local variances in codes - provinces which have not yet adopted province-wide building codes modelled on the National version should do so as soon as possible.
- Streamlining the evaluation system for new products - the Canadian Construction Materials Centre must continue to play an important role in the evaluation of innovations in building products. Care must be taken to ensure that the evaluation of new products is undertaken in as expeditious a manner as possible.
- Training and education of building inspectors to ensure that they are up-to-date with current building techniques and do not unnecessarily inhibit the process of diffusion of new building technologies - the Building Officials Association with support from the Occupational Analysis Branch of EIC should undertake an occupational analysis to determine the skills and training guidelines for building inspectors.

Alternatives for enhancing the efficiency of the municipal inspection function (including possible privatization of this function) need to be explored. Also,

professional standards for the private home inspection industry need to be established.

- A centralized code interpretation centre should be established at the National Research Council.
- Clarification of the jurisdictions, criteria and measures for assessing environmental requirements for housing to ensure that they do not hinder development unjustifiably - the appropriate jurisdictional responsibilities of the various levels of government with respect to the environment must be clarified. Also, in co-operation with the provinces and in consultation with the housing industry, Health and Welfare Canada and Environment Canada must establish clear and realistic criteria and measures by which the safety of new housing developments can be ensured.
- Rationalization of the regulatory environment surrounding the development of residential land so as to eliminate duplication of regulations and streamline the approval process - governments at all levels must recognize the necessity of balancing the legitimate concerns of the public with respect to regulation of the housing industry with the need to maintain a competitive housing market with an adequate supply of land. The ACT initiative offers an important opportunity to reduce the complexity of the regulatory system while maintaining essential planning control over the development process. The initiative should be extended for at least two more years to permit more projects and more transfer of information on the positive results to date.
- Examination of the state of the rental housing sector - federal and provincial governments must urgently examine the problems in the rental housing market with the purpose of taking action to restore the rental sector as a viable component of Canada's housing industry. The current regulatory, taxation and investment environments for rental housing must be reformed if there is to be a renewal of private investment in rental construction. There is also an urgent requirement to examine alternatives for cost-effective provision of rental housing assistance to needy Canadians.
- Rationalization of the regulatory environment of the financial sector - harmonization and updating of the policies, legislation, regulations and on-going supervision of financial institutions to eliminate regulatory overlap and duplication between the provincial and federal governments would enhance the competitiveness of the financial sector - and thereby benefit the housing industry.

Government-Imposed Costs

- Recognition of the role of government-imposed costs in the escalation of the price of housing - governments at all levels must review their taxation policies as they affect the housing industry. It is imperative that there be greater

understanding and co-ordination among governments with respect to the way in which their taxation policies affect the cost base of housing. This should be the focus of formal study by government and industry in the immediate future.

- Examination of alternatives to ever-higher development charges as the principal means of financing the infrastructure required for new development - with reduced transfers from provincial governments, municipalities must examine new ways of financing required new infrastructure. The current reliance on development charges is escalating the cost of housing in an unacceptable way. This is seriously undermining the competitiveness of many Canadian municipalities.
- Examination of improvements in municipal servicing standards to achieve lower costs and superior quality - municipal governments must recognize the effect that standards for servicing have on the cost of new housing. Despite a litany of evidence that current standards require improvements, municipalities have not addressed this issue. In promoting lower-cost housing, there is a role for provincial governments in encouraging and, if necessary, requiring municipalities to adjust standards to a reasonable level.

Adequate Planning for Growth and Infrastructure Needs

- Recognition of the need to plan for growth - to accommodate new growth, municipalities must plan for it. This requires the preparation of realistic projections of growth and the reflection of the implications of this growth in planning for new land development. In large regions, it is essential that growth projections of individual municipalities recognize the need to accommodate both the volume and character of demand at the regional level. Regional and provincial governments have a responsibility to ensure that local municipalities do not discourage particular types of housing but, instead, plan for a range of development options that will accommodate as wide a spectrum of incomes and housing types as possible.
- Recognition of the need to finance required new infrastructure - in regions where most growth occurs in outlying municipalities which do not have access to the more substantial tax base of the central area, provision must be made for financing of needed infrastructure. Among the variety of options available are pooling of municipal tax revenues, cash transfers from provincial governments and borrowing to finance needed infrastructure.
- Sensitive disposal of surplus government land - in disposing of surplus land, governments must ensure that land is sold in an orderly manner at market prices. Also, the arrangements for disposal of government land should ensure that small and medium-sized firms can participate competitively in the process.

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COMPETITIVENESS OF THE HOUSING INDUSTRY

INTRODUCTION

This paper has been prepared as a response to the federal government's **Prosperity Initiative** regarding ways to promote Canada's economic security and prosperity within the context of protection of the environment. The federal government has released several discussion papers including one entitled **Industrial Competitiveness - A Sectoral Perspective** which includes a discussion of the competitiveness of the construction sector.

In general, the principles and objectives established by the federal government in the consultation paper **Prosperity Through Competitiveness** are supported by the Canadian Home Builders' Association (CHBA). The strength and growth of the economy is the foundation of the Canadian quality of life. Enhanced opportunities for income and employment are essential for Canada to maintain and improve upon the standard of living which its citizens have come to enjoy. In the new highly competitive world economy, Canadian workers and businesses will need to be more productive if they are to survive and prosper.

Governments have a major role to play in ensuring that: adequate human and financial resources are provided for research and development; the workforce has the necessary mix of skills; required infrastructure is put in place and maintained; and government regulations and taxes do not unnecessarily inhibit the ability of the economy to compete internationally. The **Prosperity Initiative** is a sensible attempt to identify the areas where Canada requires change if it is to compete successfully in the global economy. However, coming as it does in this time of challenge with respect to the Constitution, the industry is concerned that the initiative will not receive the attention it deserves - and requires.

The CHBA is committed to participate in this process. The Association welcomes this opportunity to present the views of the housing industry with respect to the competitiveness of the industry and, in particular, to make recommendations to improve the industry's competitiveness - with resulting benefits for the industry, consumers (homebuyers and renters), as well as the Canadian economy as a whole.

In addition to this brief introductory section, the paper is comprised of three major sections:

- **The context - a description of the housing industry** - this section presents a brief description of the industry and a review of current and expected future challenges which will have an impact on the competitiveness of the industry.
- **Issues related to the competitiveness of the housing industry** - this section presents a discussion of eight major areas which directly affect the competitiveness of the housing industry, as well as the actions which are required to enhance efficiency (and hence competitiveness) in the industry.

- **Strategy for a competitive industry** - this section identifies the key areas in which there are opportunities to enhance industry competitiveness, as well as the actions required to achieve the goal of a more competitive housing industry.

The discussion in this paper builds on previous work undertaken by CHBA as well as others active in the housing industry in Canada. For further background on many of the issues presented in this paper, readers should consult the following reports:

- **CHBA, Development of the Renovation Sector of the Canadian Home Building Industry: A Strategic Plan, 1988.**
- **CHBA, Discussion Paper on Canadian Federalism and Economic Union, 1992.**
- **CHBA, Housing in Canada - Submission to Deputy Prime Minister and Minister of Finance for Pre-Budget Consultations, 1992.**
- **CHBA, Housing Quality in Canada: The Issues, 1989.**
- **CHBA, Response Document on Housing Quality, 1990.**
- **CHBA, Strategic Plan for the '90s, 1991.**
- **CHBA, The Canadian Housing Industry and the Environment, 1991.**
- **CHBA and Joint Human Resource Committee (Industrial Adjustment Service Agreement), three reports: Home Builders Task Analysis, Terms of Reference for Human Resource Study, Career Path Model.**
- **Canadian Labour Market and Productivity Centre, Report of the CLMPC Task Forces on the Labour Force Development Strategy, 1990.**
- **Caskie, Don, Renovation in the 1990s: The Industry's Viewpoint, prepared for CHBA, 1987.**
- **Clayton Research Associates, The Changing Financial Environment: What it is Doing to the Housing Industry, prepared for CHBA and CMHC, 1991.**
- **Hansen, A.T. Consulting Services, Innovation and Building Codes - A Study into Performance Codes, prepared for CMHC and NRC, 1991.**
- **James F. Hickling, Technology Transfer and Innovation in the Canadian Residential Construction Industry, prepared for CMHC, 1989.**

THE CONTEXT - A DESCRIPTION OF THE HOUSING INDUSTRY

This section presents a brief description of the housing industry and a review of current and expected future challenges facing the industry. The section provides a context for the discussion in the next section of the major issues which affect the competitiveness of the housing industry.

- **Housing - a diverse industry** - the housing industry is comprised of a wide variety of actors. Broadly defined, the industry includes not only firms involved in land development, infrastructure construction and the building and renovation of housing, but also those which provide the goods and services used in these activities. The latter are of particular interest in terms of export potential, including building products, technology and expertise.

Homebuilders are the focal point of the network of firms in the industry: they bring together the necessary products, labour and information, navigate the web of regulatory requirements, organize the various inputs into a smooth and efficient production schedule and package the result into an attractive, saleable product for the homeowner or renter.

- **Mostly small firms in homebuilding** - there are a vast number of homebuilding companies in Canada - roughly 20,000 in 1986, the latest year for which data are available. Of these, three-quarters were very small companies with revenues of less than \$250,000. Less than 8 percent of the companies had revenues of \$1 million or more in 1986. Sub-contractors, who provide the trades necessary to build the housing, also tend to be relatively small companies.
- **Homebuilding - a highly competitive business** - with relatively free entry and exit for firms, the industry's margins have traditionally been very tight. There is intense competition based on both price and quality. This competition has promoted the efficiency of the industry and improved the cost and quality of its product - housing.
- **Housing very important to the economy** - spending on new housing and renovation totalled \$42 billion (roughly 7 percent of Canada's Gross Domestic Product) in 1990. Housing activity directly or indirectly resulted in the generation of almost 1.3 million person-years of employment in a variety of different industries across the country.
- **Environmental concerns also important for housing** - housing has a major impact on the environment. Concerns about the effect of development on farmland and areas which are environmentally sensitive as well as energy and resource conservation issues have an important effect on both the processes and costs involved in the construction and operation of housing.

- **Housing - key to Canada's competitiveness** - the housing industry is very important to the federal government's competitiveness strategy. As a major industry in Canada and as the provider of an essential service, competitiveness in the housing industry keeps the cost of doing business in Canada low and thereby assists in the competitiveness of other domestic industries internationally. An inefficient housing sector, with rising costs, would impose a burden on other industries whose workers must pay more to secure housing, thus driving up demands for higher wages.

In addition, as an industry which has developed state-of-the-art technology for use in housing construction, the housing industry's product represents a platform from which there is considerable potential to promote exports of high-quality Canadian building products and expertise to other countries. However, technology is a two-edged sword; if Canada falls behind, technical innovations in other countries (e.g. automated building technology) could threaten Canadian suppliers in both domestic and foreign markets.

These competitiveness considerations are becoming increasingly important with the globalization of the Canadian economy and the opportunities (and threats) emerging from the Canada-U.S. free trade agreement, the possibility of a North American free trade agreement and Europe '92.

- **Volatile annual changes in new housing activity** - housing starts are highly cyclical. They fluctuate with changes in the economy, affordability and consumer confidence. In the most recent cycle, housing activity peaked at 246,000 starts in 1987, up from a low of 126,000 in 1982. After the 1987 peak, starts declined progressively to 156,000 in 1991. With the expected economic recovery in 1992 and beyond, starts are forecast to increase significantly over the next few years.
- **Changing demands for new housing in the 1990s** - with the aging of the baby boom generation and increased levels of immigration, the volume and character of the demand for new housing in Canada will change in the 1990s. High levels of immigration are expected to bolster the volume of activity as demand from the baby boom generation wanes in the 1990s. However, a much more segmented market will emerge due to increased numbers of people in the move-up buyer age groups during the decade. Increasing housing demand from the elderly population will also affect the character of housing activity.

The changing demands on the industry in the 1990s will be reflected not only in the housing unit itself, but also in the site and neighbourhood:

- dwelling units: the design of the interior and exterior spaces, amenities and special features will have to be assessed against the specific needs of emerging market niches - seniors, empty-nesters, families with/without children, the disabled, singles etc., including a range of incomes in each demand segment.

- neighbourhood environment: developers will have to pay more attention to site design, including the location of the homes on their lots and in the neighbourhood, integrated community facilities, pedestrian and vehicular routes, open spaces and grading.

- **Renovation spending increasing in importance, more stable than new building** - spending on repairs and improvements to existing housing totalled an estimated \$21 billion in 1991, slightly more than spending on new housing. In contrast to new housing, renovation spending is relatively stable; it has increased progressively over the postwar period in response to the aging and growing housing stock and changing consumer preferences and occupant needs.

Given its importance to the housing industry, it is critically important that renovation be recognized as a distinct sector of the housing industry with unique needs. As noted throughout this paper, governments must take account of the distinct role and nature of the renovation sector in planning policies and programs for the housing industry.

- **Many challenges for the housing industry in the 1990s** - in addition to the volatile and increasingly segmented markets for its product, the prospects of more moderate growth (and, depending on immigration, possible declines) in new housing demand and the rising importance of renovation activity, the housing industry faces major challenges in the coming decade. Among the more important challenges which the industry will be facing are:

- increased government intervention - the industry is already subject to a great deal of regulation which (as is discussed in the next section) reduces efficiency. With growing concerns about the environment and pressure for environmentally-friendly products and processes, it is clear that pressure for regulation of the industry will increase.
- restrictive government budgets - fiscal restraint at all levels of government threatens to increase the already heavy costs which the housing industry must bear. Higher taxes, development charges and other government-imposed costs have already resulted in much higher costs for the industry and its product - housing. Further increases in taxes and restrictions on government spending in critical areas, such as new and existing infrastructure, threaten to exacerbate the problems faced by the housing industry.
- more concentration in the industry - the financial strength required to operate in the increasingly restrictive regulatory environment, as well as the generally higher costs expected in the 1990s, threaten to increase concentration in the industry. Larger companies are better able to bear the costs and gain the expertise required to survive in the new environment in which the housing industry operates. There is a concern that this could threaten competitiveness in the industry, resulting in higher costs, diminished quality and restricted choice.

- **Important role for the federal government in housing, particularly CMHC** - it is extremely important that the federal government maintain a leading role in the housing field. Canada must have a **national** housing policy. The federal government has a responsibility to promote the vital role of housing in Canada's well-being, social objectives, economy and cultural identity. Housing is a very broad area; it includes a variety of government responsibilities - some of which are most appropriately addressed at the provincial level but many of which require national involvement. For example, only the federal government can promote basic national standards across Canada and redistribute the resources required to attain those standards. Also, only the federal government can deal with large financial institutions on approximately equal terms.

As noted throughout this paper, the CHBA believes it is essential that a strong federal presence be maintained in the housing area. In particular, Canada Mortgage and Housing Corporation (CMHC) is considered to play a critical role in the effective operation of the housing industry. An integrated perspective on the federal role in housing can only be brought by a single national housing agency such as CMHC. The Corporation's **Strategic Plan 1992-1996** and **1991 Policy and Research Initiatives** demonstrate the breadth and importance of CMHC's role as the federal focus in housing. Continuing success in meeting the housing needs of Canadians and in supporting efficiency and competitiveness in the housing industry could not be achieved nearly as well, if at all, if the functions were scattered across competing governments and departments.

Competitiveness is key to ensuring that the housing industry continues to produce housing that is affordable and environmentally sustainable. The industry is an important part of the Canadian economy and an important component of the federal government's **Prosperity Initiative**. It is essential that the concerns affecting the competitiveness of the housing industry (outlined in the next section) be addressed to ensure that the industry continues to fulfil its role in the Canadian economy and society in as efficient a manner as possible.

ISSUES RELATED TO THE COMPETITIVENESS OF THE HOUSING INDUSTRY

This section presents a discussion of eight major areas on which action is considered to be required to enhance the competitiveness of the housing industry in Canada. These include:

- Human resources, training and labour mobility;
- Investment in research and development and technology transfer;
- Management processes and practices;
- Internal trade;
- International trade;
- Government regulations, codes and standards;
- Government-imposed costs; and
- Adequate planning for growth and infrastructure needs.

Each of these is discussed below under three headings: background, key issues and the actions required to address the issues and improve the efficiency and competitiveness of the housing industry.

HUMAN RESOURCES, TRAINING AND LABOUR MOBILITY

Background

The housing industry involves the extensive use of a variety of skilled trades and equipment operators as well as unskilled workers. For the efficient operation of the industry, it is essential that workers with the appropriate skills be available when they are required by the intricate scheduling which is a characteristic of the housing industry. Shortages of workers or lack of appropriate skills can lead to delayed or poor quality construction, questionable safety practices and inefficiencies. These lead, ultimately, to increased costs for the industry - and higher priced, poorer quality housing for Canadians.

Key Issues - Human Resources, Training and Labour Mobility

The significant issues relating to human resources, training and labour mobility in the housing industry include the following:

- There is an adequate supply of labour in the housing industry in most parts of Canada at the present time (partly due to the downturn in housing activity), however, there are serious concerns that shortages may occur among some trades in the future due to a variety of factors:

- the aging of the labour force - in some critical trades (e.g. bricklayers), large numbers of workers are approaching retirement age.
 - erosion of the size of the labour force available to the housing industry because of periods, such as the present, when low activity levels idle many workers. Some of these workers seek opportunities in other industries. They are no longer available to the housing industry when activity levels recover.
 - low volumes of young Canadian workers seeking employment in the trades which are important to the housing industry - in some quarters this has been linked to the lack of effective apprenticeship programs such as those available in European countries.
 - the on-going need for up-grading and specialization of skills in the industry to take advantage of new technologies.
 - the low priority attached to building trades in the selection of workers suitable for immigration to Canada.
 - the lack of a comprehensive information base on the future labour needs of the industry in relation to the expected supply of labour.
- In general, the labour force in the housing industry is very mobile - workers in the industry move from city to city as the demands of the market shift. Also, due to the cyclical nature of the industry, workers in some areas of the country may be idle while there are shortages in other areas. Mobility is essential to the efficient operation of the industry. However, there are concerns within the industry that mobility is hindered by some of the actions of government:
 - provincial licensing of construction trades in Quebec makes it difficult for workers to move to the province to work on a temporary basis.
 - the income tax treatment of employment-related expenses (such as travel costs) for workers in the industry does not promote mobility.
 - some government "safety net" programs, such as the unemployment insurance program, reduce the incentive for workers in the housing industry (as well as other industries) to move to other areas to find work.

Actions Required - Human Resources, Training and Labour Mobility

Many of the issues outlined above are already being addressed but further actions are required. Specific actions which are either underway or required in the area of human resources, training and labour mobility in the housing industry include the following:

- An on-going assessment of the demand and supply of labour in the housing industry:
 - Employment and Immigration Canada (EIC) is currently developing a residential construction component for their labour demand model.

There is an urgent need for the information from this model to assess the future demand for labour in the industry.

- Adequate apprenticeship training for young Canadians entering the housing industry:
 - the Canadian Labour Force Development Board has established the National Apprenticeship Committee to examine this issue. There is an urgent need for the Committee to pursue its work on a priority basis and for EIC to act on the recommendations.
- Standardization of training, upgrading and certification programs for trades among the provinces and territories:
 - EIC, in co-operation with provincial authorities and the Canadian Council of Directors of Apprenticeship, has established the "Red Seal" program whereby skilled trades can obtain interprovincial certification which allows them to move freely from one part of Canada to another. This apprenticeship program currently covers many compulsory and voluntary construction trades with more being considered. More attention is required to upgrade the skills of trades.
- Upgrading and specialization of the skills of trades in the industry to take advantage of new technologies:
 - EIC is acting to increase the competency and skills of the industry's work force through a variety of programs. The two most frequently-used programs include the Industry Adjustment Service Agreement and the Training Trust Funds/Labour Market Adjustment Grants under the Canadian Job Strategy Program.
 - training courses in these areas need to receive a higher priority. In planning new courses designed to recycle redundant workers from other industries, EIC and their provincial counterparts must recognize the requirement for (and benefits from) promotion of such training for existing and potential construction workers.
- Immigration of required construction trades into Canada:
 - EIC must review the point score ratings established for the immigration of skilled building trades to ensure that shortfalls between the requirement for labour in the housing industry and the supply from domestic sources can be met by skilled immigrants from other countries.
- Encouragement of mobility of construction workers to areas of high demand:
 - the federal government, through the Department of Finance, EIC and other departments as appropriate, as well as provincial and municipal governments, must examine existing programs and policies to ensure

that they do not act as a disincentive to the movement of underutilized construction workers in areas with low levels of activity to other areas where shortages are occurring. In particular, Unemployment Insurance and the treatment of mobility-related expenses for tax purposes require examination in this regard.

INVESTMENT IN RESEARCH AND DEVELOPMENT AND TECHNOLOGY TRANSFER

Background

The productivity and competitiveness of the housing industry is enhanced by the application of new technologies into the building process. In Canada, this process has benefitted from a public/private partnership arrangement under which governments assist with both the research and development activity and the transfer of new technologies to the private sector - which is responsible for the construction of virtually all housing. While the technology used in housing construction in Canada is among the best (if not the best) in the world, there is a constant need for improvement as superior products and technologies are developed.

There are a number of factors which inhibit the process of innovation in the housing industry: changes in application can create major problems for a proven product if the new usage does not perform properly; the regulatory environment does not promote change; and the preponderance of small firms in the industry makes it difficult to develop and transfer innovation. While many past studies have lamented the slow process of innovation in the housing industry, in fact, the production process and products used in new housing have undergone significant changes over the past several years. The public/private sector partnership that has developed in Canada has worked effectively to disseminate new technologies to the ultimate users on the job site - but there is always room for improvement.

Key Issues - Investment in Research and Development and Technology Transfer

Significant issues relating to investment in research and development and technology transfer in the housing industry include the following:

- Government has a major role to play in the development of new technologies for the housing industry. There are several reasons why government action is necessary in this area:
 - the benefits which accrue to housing consumers from the development and adoption of new technologies in housing are considerable in terms of both the cost and quality of housing.

- since it is difficult to patent construction technologies, there is little incentive for private sector development - unlike the situation with new building products where new or improved products can be patented.
- the small size of typical firms in the industry also limits the ability of industry-generated research and development.
- past experience has shown that the industry is prepared to adopt new technologies once they have been demonstrated to be effective.

Therefore, there is a strong argument in favour of continued public investment in research and development and technology transfer to the housing industry.

- There are a number of actors involved in the process of development and diffusion of new building technologies in the public sector. The key government actors in this area include the Institute for Research in Construction (IRC), the Canadian Construction Materials Centre (CCMC) at the National Research Council (NRC), Canada Mortgage and Housing Corporation (CMHC), and Energy, Mines and Resources Canada (EMR) as well as provincial government bodies. Individually, each is undertaking useful work, however, there is a requirement to co-ordinate their activities to ensure that the industry receives the greatest benefit possible and that government resources are committed to this process in as cost-effective a manner as possible.

For over 30 years, the CHBA has provided an invaluable forum, called the Technical Research Committee (TRC). The TRC consists of all those in the public and private sectors who are involved in housing technology development. It permits those with resources to focus on the real problems and opportunities by reducing duplication and improving effectiveness. For the past few years, CMHC has convened the National Housing Research Committee in an effort to co-ordinate and give direction to public sector housing research, focusing mainly on research on socio-economic issues.

Examples of some past and current government/industry initiatives which have been instrumental in expediting the diffusion of new technology to the housing industry include:

- the NRC/CHBA Mark series of experimental houses, the Industrial Research Assistance Program (IRAP), the many industry sponsored idea/demonstration houses, CMHC's Healthy Housing Design Competition and EMR's Advanced Houses Program are some examples of government sponsored programs which, in partnership with the CHBA, have helped to expedite the diffusion of new building technology in Canada.
- the R-2000 Program is an excellent example of the type of public/private partnership which can be instrumental in the development and diffusion of new technologies in the Canadian housing industry. The high quality of housing produced under the program (and the interest of other countries in the technology) is also a demonstration that Canada is at

the leading edge of housing technology development. There is, however, a requirement for more public awareness of the positive environmental and energy-related features of R-2000 technology.

- the CHBA/CMHC technical seminars and workshops provide an extremely valuable means for disseminating building technology information to the industry.
- homebuilders' associations and a number of other federal and provincial government and quasi-government bodies such as NRC and provincial utilities and warranty programs are actively involved in the transfer of new building technology as well.

These initiatives are all being undertaken under the umbrella of the Technical Research Committee of the CHBA.

The diffusion of new technologies to the housing industry requires a four-step process: first, awareness of the technology; second, availability of appropriate products, etc.; third, training in the use of the technology; and, finally, responding to problems and questions arising out of the use of the technology. For housing, this process is hampered by the fragmented nature of the industry. Because the industry is comprised of so many small firms, located in all parts of the country (including large numbers in outlying areas), the process of transfer of new technology can be difficult. With fiscal restraint, there is a serious concern that cutbacks in the area of the development and diffusion of technology will slow the process of improvement in Canadian building quality - there is an urgent requirement for co-ordination of activities as well as a renewed political commitment to housing technology development and diffusion.

- In formulating programs to develop and disseminate new technologies to the housing sector, it is essential that program designers recognize the peculiarities and needs of different sectors of the industry. In particular, the renovation sector, an increasingly important part of the housing industry, requires special treatment. The special needs of the renovation sector are not yet adequately reflected in the programs which have been established in this area.
- The public/private partnership in technology development and diffusion is of critical importance to the continued improvement in the quality and cost of production of Canadian housing. The most successful government programs are those that work with industry, responding to the needs of the industry in a co-operative way. This type of approach, using meaningful consultation and supportive investment and co-operation has been shown to be much more productive than government regulation and market intervention. Past experience clearly shows that the best way to achieve progress is to harness the innovative and productive capacity of the industry through joint initiatives.

Actions Required - Investment in Research and Development and Technology Transfer

Over the post-war period, there have been substantial improvements in the quality and cost efficiency of housing as a result of the processes for research and development and technology transfer in Canada. There are, however, some areas where the CHBA believes improvements in these processes will be beneficial:

- **Renewed commitment to technology development and diffusion:**
 - there is a danger that the essential process of research, development and diffusion of building technology might suffer due to the current fiscal problems faced by all levels of government. Improvements in the quality and cost of building and renovating Canadian housing depend on continued public sector participation and there is a requirement for a renewed commitment by government in this area.
- **Co-ordination of the research and diffusion efforts of the various government departments and agencies is essential in this era of fiscal restraint:**
 - a multitude of federal and provincial departments and agencies (including, at the federal level: CMHC, various bodies within NRC, EMR, Industry, Science and Technology Canada (ISTC) and Environment Canada) are all involved with this issue. To avoid unnecessary duplication and to ensure that the housing industry benefits to the maximum extent possible, there must be improved co-ordination of the efforts of these public bodies. Under the auspices of CMHC, the National Housing Research Committee could provide a useful forum for achieving co-ordination among the various public and private organizations involved in housing research. The role of this Committee must be recognized and given much greater emphasis and must be fully utilized by all participants. As the federal government's principal actor in the housing area, CMHC, through the Committee, must strengthen its co-ordination of research activities; the CHBA is prepared to continue to play an active role on this Committee on behalf of the housing industry.

With respect to technical and technological research, development, demonstration and diffusion, the Technical Research Committee of the CHBA continues to provide a unique and effective instrument for pooling and co-ordinating the research activities of both private and public sector organizations, and deploying the capacity of the industry in support of these activities.

- **Promotion of R-2000 technology:**
 - EMR must become much more active, with significant input from Environment Canada, in the promotion of the positive environmental

and energy-related features of the R-2000 product. A national marketing plan for R-2000, developed in consultation with the industry, is required to ensure that Canadians benefit from this important technology to the maximum extent possible.

- the federal government should promote the application of R-2000 technology to the renovation sector. Also, the government should ensure that social housing benefits from R-2000 technology.
- Recognition of the special needs of the renovation sector:
 - the CHBA has called on the federal government to act on a comprehensive set of policies for the renovation sector so that the special needs of this sector with respect to technology development and diffusion, industry training and education, and consumer information can be addressed.

MANAGEMENT PROCESSES AND PRACTICES

Background

The housing industry is comprised of a large number of firms spread across the country - many in small communities. While there are some large companies involved in homebuilding, the industry consists mainly of small builders and contractors. In many cases, the management skills of these firms are not strong - they are run by hands-on operators who often do not possess the management and marketing skills required to run an efficient organization. To the extent that these firms are not being run efficiently, the productivity of the industry suffers.

Key Issues - Management Processes and Practices

The significant issues relating to management processes and practices in the housing industry include the following:

- Lack of management skills, especially among the smaller firms, has always been a problem for the housing industry. Government and industry working together have been addressing this issue:
 - new home warranty programs across Canada are increasingly aware of the need for professionalism among builders and many now require new members to complete a business and management training program.
 - the "master builder" programs operated by some provincial home builder associations encourage improved professionalism among builders by encouraging them to enhance their management, technical and customer

service abilities. "Master builders" receive public recognition which can be used in their marketing programs.

- home builder associations are increasingly including management-related courses in their workshops and conferences. Builder Forums organized by provincial home builder associations across Canada are an example of initiatives aimed specifically at upgrading builders' skills in management, marketing and technical matters.
 - EIC has assisted the housing industry in defining its management training needs.
 - CHBA/CMHC workshops, though mainly focused on technical issues, have also assisted in the upgrading of management skills.
 - the Market Analysis Centre at CMHC also provides valuable market information for housing firms to help them to cope with the volatile nature of housing markets.
- While the programs which have been instituted to upgrade management skills in the industry are clearly a positive sign, not all areas of the industry are as yet covered - the renovation sector is a particularly important example. Also, good management practices must not be viewed as a one-time issue, it is necessary to ensure that the principals of companies in the industry have access to the tools they need to keep up-to-date in their management practices and technical knowledge.
 - In recent years, there have been evolutionary changes in the housing industry which have seen more and more builders and renovators with professional qualifications in engineering and/or business management. Professionalism in the industry is increasing as a result of this, plus the on-going enhancement of management skills due to private/public initiatives.

Actions Required - Management Processes and Practices

There have been significant improvements in the area of management processes and practices in the housing industry which are reflected in greater efficiency and a more professional approach to the industry. However, this process must continue and strengthen. The CHBA believes there is a need for:

- Continuation and enhancement of on-going programs for improvement of management skills and technical knowledge:
 - industry and government working together must continue to facilitate the process of upgrading management skills and overall professionalism in the housing industry. CMHC, EIC, the national, provincial and local home builder associations and the warranty programs all have an important role to play in this area.
 - CMHC must continue to provide market information and to undertake research in important areas such as housing for seniors, the disabled and immigrants. CMHC must ensure that the information and the

results of the research are disseminated as widely as possible in the housing industry.

- Recognition of the special needs of the renovation sector:

management training programs specific to the needs of the renovation sector must be established as a priority area for CMHC.

- the development of renovation-specific market intelligence must also be a priority for CMHC.

INTERNAL TRADE

Background

While the housing industry is not severely affected by internal trade barriers, there are some difficulties with respect to certification of tradespeople wishing to move from one province to another (see section on Human Resources, Training and Labour Mobility). Also, provincial and local government procurement practices often favour local companies. However, in general, there are no barriers to the flow of building products or companies wishing to set up operations to build housing in another province - other than normal licensing and warranty program requirements.

Key Issues - Internal Trade

This is not as significant an issue for the housing industry as it is for many other industries in Canada. CHBA believes that there are two issues which must be addressed, however:

- Provincial licensing of trades which hinders the movement of workers in the housing industry from one province or municipality to another; and
- Procurement practices in some jurisdictions which restrict the ability of non-local firms to obtain contracts.

These practices detract from the efficiency of the industry and ultimately lead to higher costs for the economy and society.

Actions Required - Internal Trade

Governments must be made aware of the inefficiencies created by barriers to trade within Canada. In the housing industry, the CHBA believes that governments can improve competitiveness in the industry by:

- Abolition of protectionist licensing and procurement practices:
 - provincial and municipal governments should minimize the requirement for local professional practice licensing of trades and eliminate policies which favour local firms in competitive bids for building contracts.

INTERNATIONAL TRADE

Background

With the exception of manufactured housing, the housing industry is generally not involved directly in international trade. However, indirectly, in terms of its use and refinement of leading-edge building technologies and products, the industry has a significant influence on the competitiveness of Canadian building products and services in external markets. In this sense, the innovations that are taking place in Canada which are promoting more energy-efficient and environmentally-friendly practices and products can give Canadian companies an edge in marketing their proven products and services in export markets.

For manufactured housing, international trade (both exports and imports) is potentially very important, though there is currently little trade in this product involving Canada. There are currently concerns about this sector's competitiveness with U.S. producers.

The industry is concerned about reports of imports of U.S. building products which do not meet Canadian standards.

Key Issues - International Trade

The significant issues in the housing industry which relate to international trade include the following:

- Canada is at the leading edge of housing technology in terms of energy-efficient construction techniques and is also making strides in environmentally-friendly housing construction. There is a strong linkage between the development of new technologies to promote these goals and the development and adaptation of products suitable for the new technologies which may be attractive in foreign markets. Recent advances in this area provide an opportunity for Canadian companies to capitalize on their investment and expertise in meeting the challenges of new construction technologies in Canada by seeking export markets for their products and expertise in other countries.

Success in this area requires more than simply exhibiting products at trade shows. It requires the development of an export strategy which provides a linkage between the export of the new technologies to other countries and the products, experience and training capabilities which are necessary for the new technologies. The licensing agreement concluded between EMR and the Japan 2X4 Association for the delivery of R-2000 housing in Japan is evidence of the need for such a strategy. There remain opportunities in other countries, not only for R-2000 technology, but for wood-frame construction and energy conservation in general, as well as high-rise construction and building in the North.

- The research and emerging technologies being adopted in this country to minimize the environmental impact of housing also have enormous potential applications in other countries. Canadian building technology has a major role to play in terms of Canada's commitment to be a leader in promoting efforts to improve the global environment.
- Harmonization of standards between Canada and other countries would be a benefit to Canadian exporters seeking opportunities in foreign markets as it would ensure that their products meet local standards. Harmonization would also ensure that imports meet appropriate performance standards for use in this country.
- With free trade, the relatively high value of the Canadian dollar and low levels of construction activity in the U.S., Canada has become an attractive new market for many U.S. building product manufacturers. Competition among suppliers of building products is positive for the efficiency of the housing industry as it ensures that the products used in construction are competitively priced. The industry is concerned, however, that some imported building products may not meet Canadian standards. This has implications for both the performance of the buildings in which the products are installed and the fairness of requiring Canadian firms to meet higher standards than foreign suppliers.
- There appear to be potential opportunities for manufactured housing in overseas export markets. There may be opportunities for exports to developing countries and Europe for Canadian manufacturers, however, significant export sales have not yet materialized.

Actions Required - International Trade

There are clearly opportunities as well as problems in the area of international trade. Actions which the CHBA believes are required in this area include:

- Development of an export strategy for Canadian building products, technologies and expertise:

- the federal government, in consultation with industry, must develop a strategy whereby Canadian exports can benefit from the advances which have been made in building technology in Canada. Increased exports of building products, technologies and expertise can provide a stronger base for future research and development activities in this country.
 - the Building Products Export Council proposed to be established by ISTC and Canadian building product manufacturers could provide a promotional vehicle to help exports of building products. However, further initiatives are required to tap the potential for exports of products, technologies and expertise.
 - the potential for exports of Canadian manufactured housing is actively being pursued by the Canadian Manufactured Housing Institute (CMHI). In view of the potential from this sector both domestically and internationally, the federal government should support the activities of the CMHI in this area.
- Investigation of the problem of substandard imports:
 - the federal government must investigate and take appropriate action on the alleged problem of imports of building products into Canada which do not meet Canadian standards. This must be undertaken in co-ordination with provincial and local code-enforcement authorities.

GOVERNMENT REGULATIONS, CODES AND STANDARDS

Background

The housing industry works within a regulatory framework which seeks to ensure the production of good quality, safe housing in a pleasing living environment. While the industry accepts that such a regulatory framework is essential to protect society against unsafe, substandard buildings and communities, there is a delicate balance between the necessity for such protection and the inevitable inefficiencies produced by delays and increased costs which result from excessive regulation or unnecessary time-consuming regulatory procedures.

There are serious concerns that regulation is leading to significant inefficiencies in the housing industry and is also leading to a situation where the financial resources and expertise required to conform with the regulations are restricting the entry of firms into the industry.

Key Issues - Government Regulations, Codes and Standards

Government regulations, codes and standards cover a broad area which encompasses a variety of issues of concern to the housing industry:

- Building codes and standards - in general, in contrast to many other countries, Canada has a sensible system of building codes and standards which has served the country well. The model National Building Code is increasingly being adopted by the provinces with fewer exceptions than in the past. The national building code and common standards across the country provide Canadian manufacturers with the advantage of a large market with one set of approvals - there is no such uniform code in the United States. Also, the standardization of codes enhances the efficiency of the industry since building practices do not need to be altered from one jurisdiction to the next. However, some issues remain which are of concern to the industry:
 - while most jurisdictions have adopted the National Building Code, there remain exceptions. These inhibit the efficient operation of the industry and generally result in higher costs for consumers.
 - there will always be concerns that the largely prescriptive nature of building codes has a negative impact on innovation. This is a complex area: codes are evolving and becoming more flexible but performance codes do not yet appear to be a practical alternative. In some instances, prescriptive codes could be more appropriate than performance codes.
 - it must be recognized that codes are only one part of the process which affects innovation in building: the evaluation process for new products and the capability of local building officials in administering local building codes are also very important. The evaluation process has been identified as a key ingredient in the regulatory process facilitating or inhibiting innovations. Local building officials can inhibit the process of innovation if they are not up-to-date regarding new techniques or products. There is a requirement to ensure that these officials have access to adequate training.
- Environmental concerns - the numerous regulations and costs associated with the impact of land development on the environment are a major concern. Similarly, ensuring that the sites for housing are environmentally safe can have a significant effect on the financial viability of specific projects. While the industry is totally committed to ensuring that its product (housing) meets strict standards in terms of its effect on the environment, two significant issues must be addressed to ensure that these standards are properly formulated and applied:
 - the appropriate jurisdictional responsibilities of the various levels of government with respect to the environment and housing must be clarified.

- in the enormously complex area of assessing the environmental consequences of various development-related activities, it is essential that the criteria and measures by which the alternatives are judged be co-ordinated among governments as well as being clearly and realistically formulated, in full consultation with the industry. Measures to ensure that housing is safe are fully supported by the housing industry; however, the process by which these measures are defined must not be arbitrary and must take account of the realities of the housing market and the effect which vicarious requirements may have on the cost and availability of housing.
- Regulations on land development - the experience of recent years indicates that the process by which approvals for the development of land are obtained is seriously flawed in many parts of the country. The key concerns in this area include:
 - the process has become increasingly lengthy and complex over the past several years. More and more approvals are required from various local, regional, provincial and federal government departments. As a result, the costs associated with development have increased significantly - increased costs include financing costs for a longer period while the land is undergoing approval, costs for expert advice in dealing with specific aspects of the process and the costs associated with greater uncertainty regarding the final outcome of the process. These costs are, of course, passed on to the ultimate purchaser and/or user of the land.
 - the increased time to obtain approvals for land development also reduces the flexibility of the market to adjust to changes in the demand for land and housing. In times of increased demand, shortages can develop which result in escalating costs due to the inability of suppliers to bring more land to the market because of the lengthy approvals process.
 - the financing costs and uncertainty associated with navigating the increasingly complex approvals process discriminates mostly against smaller and medium-sized developers who are less likely to have the financial strength or expertise required to carry a project to completion than larger developers. Also, increased uncertainty favours success for larger developers who can spread the risk among several projects.
- Increased regulation - rising public concerns about a variety of issues associated with housing, including legitimate concerns such as the environment, consumer protection, affordability and health and safety, among others, have led to increased regulation of the industry. Other, less well-intentioned motives include anti-growth sentiments and the NIMBY (not in my backyard) syndrome. Whether well-intentioned or not, the overall result of increased regulation is generally an increase in the cost of development which, ultimately, is reflected in higher housing costs and prices.

- The rental market - there are serious problems in the rental housing market in Canada:
 - ever-tightening rent controls and other regulations in some jurisdictions are having a significant negative effect on both the volume of new rental housing built and investment in the required maintenance and energy retrofitting of the existing rental stock.
 - new rental construction is fully taxed by the GST - there is no rebate as is the case for new ownership housing. This significantly raises the cost of new rental housing which, ultimately, will be reflected in a reduction of rental investment, particularly in those provinces which have rent control or where there is uncertainty about government intentions in this regard.
 - government social housing programs receive a rebate of approximately half the GST. By providing accommodation for tenants who are able to afford market rents, these projects often compete directly with private rental housing.
 - despite considerable on-going expenditures on government social housing programs, large numbers of needy people cannot obtain access to the housing assistance they require. This unacceptable situation must be addressed through an examination of alternatives which would ensure that all needy people have access to housing assistance and to ensure that scarce public funds are used in as cost-effective a manner as possible.
 - the recent federal budget disallows the use of the \$100,000 personal capital gains tax exemption for rental investments. The government's decision discriminates against rental housing as an investment - it reduces the incentive for small investors to invest in rental housing compared to alternative investments. Rental housing has been an important investment vehicle for many small investors - a significant proportion of additions to the supply of rental housing in recent years have been due to small investors. The budget measure will result in tighter rental markets. It will reduce new supply from this source and cause existing rental investors to withdraw units from the current rental stock.
- The increasingly complex regulatory environment - this has been cited, along with increased tax burdens (see next section on government-imposed costs) and rising land prices as a significant barrier to the entry of new developers into the market in some areas. This could lead to increasing concentration in the industry. There is a need to balance the legitimate concerns of the public with regard to regulation of the industry with the need to maintain a competitive housing market and to keep the costs of development of new housing as low as possible.

ACT (Affordability and Choice Today) is an initiative which is jointly managed by CHBA, the Federation of Canadian Municipalities, the Canadian Housing and Renewal Association and CMHC, and is funded by

CMHC. ACT is promoting an examination of the measures required to streamline the approval processes, eliminate unnecessary duplication of regulations, rationalize standards and remove artificial barriers for the development of residential land. Its inherent strength is that it is promoting and enabling this review at the local and provincial level where most of the problems exist.

- Regulation of financial institutions - this is shared between the federal and provincial governments, resulting in regulatory overlap and duplication which ultimately is counter-productive and costly in terms of efficiency. The paper **Canadian Federalism and Economic Union - Partnership for Prosperity** prepared by the federal government recommends harmonization and updating of the policies, legislation, regulations and on-going supervision of financial institutions. With the large financing requirements of the housing industry, enhancements to efficiency and competition as a result of such an initiative would be beneficial to the industry.

Actions Required - Government Regulations, Codes and Standards

The CHBA believes that a number of actions (and continuation of current initiatives) are required in the area of government regulations, codes and standards:

- Continuing evolution of the National Building Code in a manner which provides the necessary protection for building quality while enhancing opportunities for innovation:
 - the Canadian Commission on Building and Fire Codes should pursue, as a long-term objective, the development of verifiable performance based provisions for the building code.
- Continuing pressure for adoption of the National Building Code in order to eliminate local variances in codes:
 - provinces which have not yet adopted province-wide building codes modelled on the National version should do so as soon as possible.
- Streamlining the evaluation system for new products:
 - the Canadian Construction Materials Centre operating out of the NRC must continue to play an important role in the evaluation of innovations in building products. Care must be taken to ensure that the evaluation of new products is undertaken in as expeditious a manner as possible.
- Training and education of building inspectors to ensure that they are up-to-date with current building techniques and do not unnecessarily inhibit the process of diffusion of new building technologies:

- the Building Officials Association with support from the Occupational Analysis Branch of EIC should undertake an occupational analysis to determine the skills and training guidelines for building inspectors.
 - a centralized code interpretation centre should be established at NRC.
 - alternatives for enhancing the efficiency of the municipal building inspection function (including possible privatization of this function) need to be explored.
 - professional standards for the private home inspection industry need to be established.
- Clarification of the jurisdictions, criteria and measures for assessing environmental requirements for housing to ensure that they do not hinder development unjustifiably:
 - the appropriate jurisdictional responsibilities of the various levels of government with respect to the environment must be clarified.
 - in co-operation with the provinces, Health and Welfare Canada and Environment Canada must establish clear and realistic criteria and measures by which the safety of new housing developments can be ensured.
- Rationalization of the regulatory environment surrounding the development of residential land so as to eliminate duplication of regulations and streamline the approval process:
 - governments at all levels must recognize the need to balance the legitimate concerns of the public with respect to regulation of the housing industry with the need to maintain a competitive housing market with an adequate supply of land.
 - the ACT initiative offers an important opportunity to reduce the complexity of the regulatory system while maintaining essential planning control over the development process. The initiative should be extended for at least two more years to permit more projects and more transfer of information on the positive results to date.
- Examination of the state of the rental housing sector:
 - federal and provincial governments must urgently examine the problems in the rental housing market with the purpose of taking action to restore the rental sector as a viable component of Canada's housing industry. The current regulatory, taxation and investment environments for rental housing must be reformed, if there is to be a renewal of private investment in rental construction. There is also an urgent requirement to examine alternatives for cost-effective provision of rental housing assistance to needy Canadians.

- Rationalization of the regulatory environment of the financial sector:
 - harmonization and updating of the policies, legislation, regulations and on-going supervision of financial institutions to eliminate regulatory overlap and duplication between the provincial and federal governments would enhance the competitiveness of the financial sector - and thereby benefit the housing industry.

GOVERNMENT-IMPOSED COSTS

Background

The costs of producing new housing have risen significantly in most parts of Canada over the past several years. As discussed in the previous section, the increased regulation of the industry has been responsible for some of this increase. Other factors have included increased costs of doing business such as higher fees, charges and financial security requirements from lenders, higher land prices, etc. However, one of the most significant factors in increasing the cost of production of new housing in Canada in recent years has been the increase in government-imposed costs and charges which add to the costs of development - and, of course, the ultimate cost of housing to the final consumer. This added cost has a negative influence on the competitiveness of the Canadian economy.

Key Issues - Government-Imposed Costs

Government-imposed costs on the housing industry have increased significantly in recent years. These are an issue of very serious concern to the industry:

- There are a number of areas where governments have been directly responsible for increased costs for housing:
 - increasing development charges - in some parts of Canada, development charges of over \$20,000 are currently planned for new housing lots. These ever-higher development charges are the continuation of the trend towards municipalities' requiring development to bear more and more of the financial responsibility for servicing new subdivisions. First, developers had to bear the cost of internal roads, watermains and sewers; then payments towards off-site hard services; then, in some areas, payments towards on- and off-site soft services and front-ending of major new facilities.
 - these increased charges are a result of fiscal restraints which have led to reductions in transfer payments from the federal government to the provinces and then on to municipalities. Lower transfers plus higher costs for education, hospitals and various other services have

pushed municipalities to seek alternative sources of financing - such as development charges.

- increasing municipal processing fees and requirements for dedications of land or cash-in-lieu to municipalities for parks, schools, pedestrian walkways etc. - these reduce the amount of land in a subdivision available for housing and, therefore, raise the costs of the building lots.
 - inordinately high standards for subdivision infrastructure - in many municipalities, standards for internal subdivision services (which are borne by the developer) are much higher than necessary for a healthy and adequate community environment. Municipal engineering departments continue to impose excessive standards despite evidence of the costs these impose on development (and ultimately the housing consumer) as well as evidence that more modest standards are acceptable. Because municipalities do not bear the higher costs associated with excessive standards, they have little incentive to change from the "safe" or "known" option to a more innovative standard.
 - rising incidence of land transfer taxes - these are a direct charge on transactions of land and housing which feed through to increased costs for housing.
 - the GST - the replacement of the Federal Sales Tax with the GST resulted in significantly higher costs for both renovations and new private rental buildings. Also, while there are no firm estimates of the impact on new ownership housing, it appears that the GST has resulted in an increase in new house prices, despite the new home rebate. In addition, there are serious concerns about the greater administrative burden imposed by the GST.
 - provincial sales taxes - harmonization of provincial sales taxes with the GST threatens to exacerbate the higher cost of housing resulting from the GST. Unless there are specific provisions to allow for reduced tax rates on renovations and private rental construction, as well as new ownership housing, there will be a further increase in housing costs in the event of harmonization of provincial taxes with the GST.
 - increased employment-related charges - higher costs for items such as workers' compensation and payroll taxes (such as the Employers' Health Tax in Ontario) result in direct increases in the costs of labour which, in turn, increase the cost of building housing.
- Government actions also affect costs indirectly:
 - the requirement for developers to capitalize soft costs and interest costs on new developments, rather than deduct them as an expense for income tax purposes as they are incurred, has resulted in increased costs for development. Developers must now increase the financing associated with development since the tax rebates for these legitimate business expenditures are delayed.
 - tax rulings can have a major impact on the cost of development and building. An outstanding current example is the definition of "repair" to be used in Canadian tax law relating to the deductibility of

renovation costs on a building as a current expense rather than a capital cost. In this case, Revenue Canada appears to be considering repairs as capital expenses - which, indirectly, increases the costs of renovation because the expense must be capitalized into the value of the building and depreciated over time rather than deducted from current income for tax purposes. This, despite Supreme Court jurisprudence which indicates that a much more flexible tax treatment is appropriate.

- increased requirements for cash guarantees or letters of credit from municipalities (for subdivision agreements, for example) result in higher financing costs for the housing industry - an increase in the cost of doing business which ultimately is reflected in housing costs.
 - legislation which upsets the balance in labour and management relations results in higher costs for builders and, ultimately, housing consumers. The industry is very concerned about the effect of planned changes to labour legislation (particularly in Ontario) which will increase the likelihood of labour stoppages and will create the potential for higher costs in the areas of higher wages and benefits, as well as restrictive labour practices. Such legislation is anathema to the goals of increased competitiveness and efficiency in the housing industry and a positive relationship between labour and management.
- In general, increased government-imposed costs increase the cost of housing but, to the extent that they affect all actors in the industry, they have less of an effect on the competitiveness of the housing industry. However, by adding to the cost and complexity of doing business, they have the effect of raising barriers to the entry of new firms and this ultimately will negatively affect competitiveness.

Actions Required - Government-Imposed Costs

Government-imposed costs have to bear part of the blame for the increase in housing costs and prices in Canada in recent years. Along with government regulations, these government-imposed costs must be examined as part of any program aimed at reducing housing costs - and improving the efficiency of the housing industry. Important initiatives in this regard recommended by the CHBA include:

- Recognition of the role of government-imposed costs in the escalation of the price of housing:
 - governments at all levels must review their taxation policies as they affect the housing industry. It is imperative that there be greater understanding and co-ordination among governments with respect to the way in which their taxation policies affect the cost base of housing. This should be the focus of formal study by government and industry in the immediate future.

- Examination of alternatives to ever-higher development charges as the principal means of financing needed infrastructure for new development:
 - with restraints on transfers from provincial governments, municipalities must examine new ways of financing needed new infrastructure. The current reliance on development charges is escalating the cost of housing in an unacceptable way. This is seriously undermining competitiveness in many Canadian municipalities.
- Examination of improvements in municipal servicing standards to achieve lower costs and superior quality:
 - municipal governments must recognize the effect that standards for servicing have on the cost of new housing. Despite a litany of evidence that current standards require improvement, municipalities have not addressed this issue. In promoting lower-cost housing, there is a role for provincial governments in encouraging and, if necessary, requiring municipalities to adjust standards to a reasonable level.
 - the ACT initiative (discussed in the previous section on government regulation) should be extended and promoted more.

ADEQUATE PLANNING FOR GROWTH AND INFRASTRUCTURE NEEDS

Background

Inadequate planning for growth has contributed to shortages of serviced land for development, particularly in markets with high demand. Lack of the infrastructure (roads, water and sewer, etc.) required to accommodate growth and inadequate systems for ensuring that there is sufficient land available for new development can result in land shortages which lead to escalations in land and housing prices. Adequate planning and investment in existing and new infrastructure is essential for the normal expansion and growth of communities.

Key Issues - Adequate Planning for Growth and Infrastructure Needs

The major issues relating to the need for adequate planning for growth and infrastructure needs include:

- Within urban regions, particularly large regions such as Toronto and Vancouver, which include a number of municipalities, there is not always a clear picture of future growth prospects and the resulting requirements for land and infrastructure either for the overall region or for individual

municipalities. This can lead to inadequate planning for growth which, in times of increases in demand, can result in shortages and higher prices.

- There are high costs associated with the provision of required infrastructure to accommodate new development. In general, most new development takes place on the urban fringe, frequently in smaller municipalities. These smaller municipalities often do not have the financial resources available to the larger municipalities in the urban core which enjoy significant tax revenues from non-residential development and existing communities. As a result, in many cases, these suburban municipalities cannot finance the infrastructure required to accommodate growth - resulting in increased incidence and levels of development charges (discussed in the earlier section on government-imposed costs) and/or inadequate provision of required new infrastructure. As a result, the cost or volume of new development (or both) suffers.

In the past, this problem was alleviated to a large extent by transfers of funds from the provincial government. These helped municipalities to finance needed suburban infrastructure to accommodate growth. With the tightened fiscal circumstances facing governments at all levels, these transfers have been reduced, leaving municipalities to deal with the problem on their own. The resulting problems are driving up development costs - a serious threat to Canada's competitiveness.

- **The Prosperity Initiative** recognizes the central role which infrastructure plays in creating a favourable investment climate by making sure "our public infrastructure is both strong and up-to-date, especially our transportation systems, which move goods and people to market".
- Different types of development result in differing levels of costs and revenues for municipalities. Non-residential development, for example, typically generates more revenues on an on-going basis than it costs municipalities in terms of the services required by these developments. As a result, municipalities tend to encourage such developments.

Housing, on the other hand, typically costs municipalities more in terms of the services required (e.g. schools, libraries, parks, law enforcement, garbage collection, etc.) than is typically generated in tax revenues from new residential development. It appears that lower-priced developments (e.g., small lot singles, semis, townhouses or apartments) with large numbers of children generate a greater deficit between tax revenues and costs for municipalities than large-lot, more expensive housing. Because of this, many municipalities encourage the development of larger homes on larger lots and place restrictions which limit the incidence of smaller, more affordable homes in new developments. This frustrates the housing industry in meeting the demand for new housing to as wide an income spectrum as possible and has grave implications for competitiveness.

- Disposal of surplus government land must take account of the demand and supply situation in the market for land in the communities in which the land is located. In times of land shortages, additional land from surplus government holdings can be extremely beneficial. However, in times of land surpluses, if disposals of government land are not handled sensitively, they can disrupt the land market - with serious adverse consequences for private companies involved in land development. Also, depending on the size of the land parcels and the arrangements for disposal, small and medium-sized firms may not be capable of participating in the process of disposal. Failure to follow such an approach could lead to further concentration in the industry and diminish competitiveness in the market.

Actions Required - Adequate Planning for Growth and Infrastructure Needs

Inadequate planning for growth and infrastructure has led to some of the problems associated with shortages of serviced land in times of high demand for housing in some centres. Actions which the CHBA believes are required in this area include:

- Recognition of the need to plan for growth:
 - if new growth is to be accommodated, municipalities must plan for it. This requires the preparation of realistic projections of growth and reflecting the implications of this growth in planning for new land development - including the demand for various types of housing as well as allowing for additional land designations to ensure a competitive market for land.
 - in large regions, it is essential that growth projections of individual municipalities recognize overall regional trends and that planned new development for all individual municipalities combined be sufficient to accommodate both the volume and character of expected future growth at both the local and regional levels.
 - regional and provincial governments have a responsibility to ensure that local municipalities do not discourage particular types of housing - to be efficient, markets need the flexibility to produce a range of housing catering to various market niches. This would also ensure that new development reflects the need to accommodate as wide a spectrum of incomes and housing types as possible.
- Recognition of the need to finance required new infrastructure:
 - in regions where most growth occurs in outlying municipalities which do not have access to the more substantial tax base of the central area, provision must be made for the financing of needed infrastructure. Among the options available are pooling of municipal tax revenues, cash transfers from provincial governments or borrowing to finance needed infrastructure.

- Sensitive disposal of surplus government land:

- in disposing of surplus land, governments must ensure that land is sold in an orderly manner at market prices. Also, the arrangements for disposal of government lands should ensure that small and medium-sized firms can participate competitively in the process.

STRATEGY FOR A COMPETITIVE INDUSTRY

This section presents a strategy to improve efficiency in the housing industry. As noted in earlier sections of this paper, the housing industry is already highly competitive. It employs world-class technology in producing high-quality housing at a price which reflects the high degree of competition in the industry. However, there are many areas where efficiency in the industry can be improved and the aim of this strategy is to enhance competitiveness in the industry so as to reduce costs and further improve the quality, affordability and choice of the housing produced - to the benefit of the Canadian economy and society as a whole.

The housing industry is a key element in the federal government's **Prosperity Initiative**. By improving the efficiency of the production of housing, the overall goal of lowering the cost of doing business in Canada is enhanced. This assists in promoting the competitiveness of the overall economy and improves the prospects for domestic industries in international markets. Also, the state-of-the-art technology being developed and used in the housing industry offers the potential for Canadian companies to use the domestic housing product as a platform on which to promote exports of building products, technology and expertise to other countries.

The previous section of this report identified the major competitiveness issues facing the housing industry as well as the actions required to address the issues. This section pulls together all the threads into a strategy of action for each of the main actors with an influence on the housing industry. The CHBA has indicated its eagerness to work with each of these actors in promoting efficiency by addressing the issues identified in this strategy for a competitive industry.

THE FEDERAL GOVERNMENT

There are a number of individual departments and agencies within the federal government which have an influence on the efficiency of the housing industry. Actions required from each of these bodies are addressed individually. However, there are several areas where general policies of the federal government need to reflect an increased concern for the industry:

- Recognition of the role of government-imposed costs in the escalation of housing costs and action to eliminate these costs to the extent possible and ensure that future increases in such costs are avoided.
- Examination, in co-operation with provincial and local governments, of federal, provincial and municipal regulatory processes for residential land approvals to ensure that unnecessary duplication is eliminated and that the process is streamlined.
- Clarification, in co-operation with other levels of government, of the appropriate jurisdictional responsibilities with respect to the environment.

- Action to restore the rental sector as a viable component of Canada's housing industry following an examination of the problems in the rental market. This requires action at the federal level from both the Department of Finance and CMHC.
- Development of an export strategy whereby the Canadian housing industry can benefit from the advances which have been made in building technology in Canada through promotion of Canadian building products, technology and expertise in other countries.
- Action on a comprehensive set of policies for the renovation sector so that the special needs of this sector in terms of technology development and diffusion, industry training and education, consumer information and required management skills can be recognized and addressed.
- Renewed commitment to technology development and diffusion in the housing industry.
- Co-ordination of efforts relating to research, development and diffusion of technology in the housing field among all federal agencies and provincial governments based on the principle of full consultation with the industry.
- Rationalization of the regulation of the financial sector to eliminate overlap and duplication of federal and provincial regulations.
- Examination of policies and programs of all departments to ensure that disincentives for migration of unemployed construction workers to areas of high activity are minimized. This affects EIC most directly, however, other departments, such as the Department of Finance (through disallowance of write-offs of travel costs and business equipment for tax purposes), also need to examine how their policies affect the housing industry.
- Ensuring that surplus government land is disposed of in an orderly manner and at market prices; also ensuring that small and medium-sized firms can participate competitively in the process of bidding on surplus land.

Canada Mortgage and Housing Corporation

CMHC is the main focus of federal government actions towards the housing industry. Important initiatives from CMHC relating to enhancing the competitiveness of the housing industry include:

- Continued support for appropriate co-ordination of efforts relating to research and development and diffusion of technology in the housing field with other federal agencies and provincial governments. The role of the National Housing Research Committee must be recognized and given much greater emphasis - it must be fully utilized by all participants. As the federal government's principal actor in the housing area, CMHC, through the Committee, must strengthen its co-ordination of research activities.
- Extend the ACT initiative for at least two more years to permit more projects and more transfer of information on the positive results to date.
- Continuation and enhancement of programs for improving the management skills and professionalism in the housing industry - including the special needs of the renovation sector.

- Examination of the role of government-imposed costs and regulations in the escalation of housing costs, including an examination of alternatives to development charges to finance required new infrastructure.
- Examination of the regulatory, taxation and investment environments for rental housing to promote a renewal of private investment in rental construction. Also, examine alternatives for cost-effective provision of rental housing assistance to needy Canadians.
- Continuation and enhancement of the provision of market information and research - including specific market intelligence for the renovation sector - and ensuring that the results of the research are disseminated as widely as possible in the housing industry.
- Taking a lead role in the development of an export strategy for the housing industry.
- Promotion of the use of R-2000 technology in social housing and in the renovation sector.
- Examination of alternatives for enhancing the efficiency of the municipal building inspection function and for establishing professional standards for the private home inspection industry.

Department of Finance Canada

Action by the Department of Finance can assist in enhancing competitiveness in the housing industry in the following areas:

- Examination of the effect of the GST on the cost of new ownership and rental housing as well as renovations to the existing housing stock.
- Examination of the effect of the disallowance of the use of the \$100,000 personal capital gains tax exemption on investment in rental housing and on the supply of rental housing.
- Examination of the effect of disallowance of write-offs of travel costs and business equipment for tax purposes on the efficiency of the housing industry.
- Reconsideration of the requirement from the first phase of tax reform to capitalize carrying costs on vacant land and construction period soft costs.
- Examination of the tax treatment of renovation work with respect to the capital versus current expenses of eligible work, to account for the most recent jurisprudence.

Employment and Immigration Canada

The activities of this department affect mainly the area of human resources, training and labour mobility. Important initiatives from EIC for the competitiveness of the housing industry include:

- Development of the housing construction component of the labour demand model to provide an assessment of demand and supply of labour.

- Recognition of the need for a higher point score for construction trades in assessing potential immigrants.
- Through the Canadian Labour Force Development Board, examination and urgent action on concerns about the adequacy of Canadian apprenticeship programs.
- In co-operation with the provinces and the Canadian Council of Directors of Apprenticeship, continuation and expansion of the "Red Seal" program to facilitate the interprovincial certification of skilled trades and upgrading the skills of trades.
- Continuation and enhancement of programs to upgrade the skills and specialization of trades through such instruments as the Industry Adjustment Service Agreement and the Training Trust Funds/Labour Market Adjustment Grants under the Canadian Job Strategy Program.
- A higher priority for training courses such as those to recycle redundant workers from other industries and to enhance skills among building trades.
- Examination of programs and policies (including the Unemployment Insurance Program) to ensure that they minimize the disincentive effect of these programs on the mobility of workers.
- In support of the Building Officials Association, undertake an occupational analysis on the skills and training guidelines for building inspectors.

Environment Canada

There are a number of areas where Environment Canada's mandate is relevant to the housing industry. Important areas where action from the department are required include:

- Establishment, in co-ordination with Health and Welfare Canada, of clear and realistic criteria and measures by which the safety of new housing developments can be ensured.
- Promotion, in co-ordination with CMHC and ISTC, of the export of environmentally-friendly Canadian building products, technology and expertise as part of Canada's commitment to improving the global environment.
- Co-ordination of environmental initiatives under the Green Plan as they relate to housing - Environment Canada must become much more active in housing initiatives aimed at addressing environmental concerns.
- Education of the public about environmental issues as they relate to housing - including the positive environmental features of the R-2000 program, waste management and the use of environmentally friendly products in housing.

Energy, Mines and Resources Canada

EMR has a major role to play in terms of the continuing development and promotion of the R-2000 program. Particular areas where EMR could assist in enhancing the competitiveness of the housing industry include:

- Promotion of R-2000 technology through adoption of a comprehensive national marketing plan.
- Promotion of the application of R-2000 technology to the renovation sector.
- Co-ordination of efforts relating to research and development and diffusion of technology in the housing field with other federal agencies and provincial governments.

Health and Welfare Canada

A critical concern which must be addressed by Health and Welfare Canada relates to the safety of new housing developments:

- In co-ordination with Environment Canada and the provinces, establishment of clear and realistic criteria and measures for the safety of new housing developments.

Industry, Science and Technology Canada

There are several areas where ISTC has a role in enhancing the competitiveness of the housing industry in Canada:

- Investigation of the problem of the alleged imports of substandard U.S. building products into Canada.
- Development of a strategy to promote exports of Canadian building products, technology and expertise. The proposed Building Products Export Council could provide a promotional vehicle to help exports of building products but further initiatives are required to promote exports of products, technology and expertise.
- Assistance in the promotion and marketing of Canadian manufactured housing in other countries.

National Research Council

The NRC is instrumental to the development of housing technology in Canada. Areas where NRC can act to improve the efficiency of Canada's housing industry include:

- Continuation of the evolution of the National Building Code and promotion, as a long-term objective, of the development of a verifiable performance based code.

- Development of a national model renovation code, to improve efficiency and performance in relation to the maintenance and upgrading of Canada's housing stock.
- Streamlining, to the extent possible, the evaluation system for new building products.
- Co-ordination of efforts relating to research and development and diffusion of technology in the housing field with other federal agencies and provincial governments.
- Establishment of a centralized building code interpretation centre.

PROVINCIAL GOVERNMENTS

Action by provincial governments can enhance the efficiency of Canada's housing industry in a number of areas:

- Recognition of the role of government-imposed costs in the escalation of housing costs and action to eliminate these costs to the extent possible and ensure that future increases in such costs are avoided. This includes land transfer taxes, development charges, sales taxes, processing fees, inordinately high standards for infrastructure, etc., as well as areas such as labour legislation, workers compensation, and payroll taxes.
- Examination of alternatives to ever-higher development charges as the principal means of financing needed infrastructure for new development.
- Examination, in co-operation with federal and local governments, of federal, provincial and municipal regulatory processes for residential land approvals to ensure that unnecessary duplication is eliminated and that the process is streamlined.
- Clarification, in co-operation with the federal government, of the appropriate jurisdictional responsibilities with respect to the environment.
- Requirements that regional and local municipalities plan for growth and ensure that sufficient land and infrastructure is available in municipalities to accommodate expected growth. Sufficient land must be available to provide for a competitive market with a range of development options to accommodate as wide a spectrum of incomes and housing types as possible.
- Encourage and, if necessary, require that municipalities examine municipal servicing standards and, if found to be excessive, adjust the standards to achieve lower costs and superior quality.
- Action to restore the rental sector as a viable component of Canada's housing industry following an examination of the problems in the rental market. Also, examine alternatives for cost-effective provision of rental housing assistance to needy Canadians.
- Renewed commitment to technology development and diffusion to the housing industry.
- Co-ordination of efforts relating to research and development and diffusion of technology in the housing field with federal departments and agencies and other provincial governments.

- Abolition of protectionist licensing and procurement practices which favour local firms and detract from efficiency in the industry.
- Adoption of the National Building Code with a minimum of local variances.
- Examination of programs and policies which act as a disincentive to unemployed construction workers to migrate to areas of high housing activity.
- Recognition of the need to plan new courses to promote training of trades skills among current and potential construction workers.
- In co-operation with EIC and the Canadian Council of Directors of Apprenticeship, continuation and expansion of the "Red Seal" program to facilitate the interprovincial certification of skilled trades.
- Ensuring that surplus government land is disposed of in an orderly manner and at market prices; also ensuring that small and medium-sized firms can participate competitively in the process of bidding on surplus land.

LOCAL AND REGIONAL GOVERNMENTS

The actions of local and regional governments have an important impact on the efficiency of the housing industry. Specific areas where action is required include:

- Recognition of the need to plan for growth and to require that sufficient land and infrastructure be available in municipalities to accommodate expected growth. Sufficient land must be available to provide for a competitive market with a range of development options to accommodate as wide a spectrum of incomes and housing types as possible.
- Recognition of the role of government-imposed costs in the escalation of housing costs and action to eliminate these costs to the extent possible and ensure that future increases in such costs are avoided.
- Examination of alternatives to ever-higher development charges as the principal means of financing needed infrastructure for new development.
- Examination, in co-operation with the federal and provincial governments, of the federal, provincial and municipal regulatory processes for residential land approvals to ensure that unnecessary duplication is eliminated and that the process is streamlined.
- Examination and adjustment of municipal servicing standards to reduce the cost while maintaining the quality of new development.
- Application of the National Building Code in a consistent and uniform way.
- Examination of the training needs of building inspectors to ensure they are up-to-date with current building techniques and do not unnecessarily inhibit the process of diffusion of new technologies.
- Abolition of protectionist licensing and procurement practices which favour local firms and detract from efficiency in the industry.

ROYAL ARCHITECTURAL INSTITUTE OF CANADA

**A RESPONSE TO THE FEDERAL GOVERNMENT'S
*PROSPERITY INITIATIVE***

a submission by

THE ROYAL ARCHITECTURAL INSTITUTE OF CANADA

February 28, 1992

INTRODUCTION

The Royal Architectural Institute of Canada (RAIC) is a voluntary national organization whose 3,500 members are individual architects representing all regions of the country. The Institute's primary objective is "*To Develop the Quality of Architecture*". In fulfillment of this objective, it is active in the areas of architectural research, education, technology transfer, publications and the promotion of architecture.

Its advocacy program has tended, in the past decade, to focus on government policies and programs in these specific areas. It has not developed a tradition of submitting economic briefs, budget submissions or industry analysis papers. However, its programs and experience do enable it to provide the following information in response to the issues raised in the *Prosperity Initiative*.

LEARNING

There are four basic issues of concern to the architectural profession in the area of learning.

Design in School Curriculum: The absence of any treatment of "design" in the elementary and secondary school curriculum in Canada has often been identified as one of the single most detrimental factors to the advancement of the practice and development of architecture in Canada. The absence of design awareness within society as a whole, and therefore in most client sectors, creates significant barriers in portraying the value of design in the built environment and its important contribution throughout the lifecycle of a building.

The economic value to Canadian society of high quality architecture should not be underestimated. Tourism, for example, is a multi-billion dollar business. A large amount of the appeal that Canada has as a tourist destination is the high quality of our major cities. Architects design these cities.

Architecture is the most obvious expression of a society's understanding of and commitment to excellent design. Canada's high

standard of living can only be maintained in our increasingly competitive world if all our manufactured products, whether high or low cost, are perceived to be of excellent quality. To a purchaser, excellent design signals excellent quality. With increased public awareness and support architects could do a great deal to raise Canada's design expectations and output.

There have been isolated initiatives in different regions of the country to respond to this lack of awareness. However, these have always been exclusively driven by practicing professionals. The profession has not been able to engage the interest of educators in any significant way.

Accreditation: Until recently, the profession and the ten University Schools of Architecture in Canada did not have the benefit of a national accreditation program. As a result, the dialogue between practice and education was less than either sector would hope for in an optimum situation. It is encouraging to note that over the past several years significant efforts have been made by both the provincial architectural associations and the University Schools of Architecture to establish such an accreditation program. This program is now adopted and will be instituted in the fall of 1992. This is a major cornerstone in strengthening the development of architecture and the architectural profession across the country.

Internship: Another issue which has proven problematic is the lack of national standards for the internship program. After graduation from an acceptable academic program in architecture, 2-3 years of experience is required before the candidate is allowed to write the registration examination. Although nine out of ten provinces use the same document to record the experience the lack of a national standard and limited resources have led to a variable standard across the country.

In British Columbia there is a significantly developed program where firms have to be certified to provide this experience and the role of

mentors is very clearly spelled out. In other provinces the quality of this experience is subject to the commitment of the individual practitioner and the employment opportunities available to the candidate. There is emerging, however, a more common standard in terms of the duration of the internship and the experience that is required during that time.

Continuing Education: Bearing in mind that many architects have completed two university degrees prior to internship, the fourth issue related to learning is the absence of any significant continuing education programs for practicing architects. It is noted in some circles that a very minor percentage of practicing architects return to post-secondary institutions for formal education following graduation. In addition, the profession has not generated adequate resources to sustain a significant program of continuing education in most regions of the country.

With the development of mandatory liability insurance in some jurisdictions, consideration is being given to mandatory continuing education that would be linked to these programs. There is also an emerging interest amongst architects for accreditation of their specialized expertise. The future of continuing education initiatives in the profession has emerged as a major focus for the RAIC, the provincial associations and the University Schools of Architecture. It is clear that given the challenges in this field, collaborative initiatives will be in order.

INNOVATION

The architectural profession, primarily involved in the buildings sector of the construction industry, is affected by its highly conservative nature. With the magnitude of financial resources at risk in every project, clients do not promote innovation in any serious fashion. In addition, given the unending professional liability for the architect which extends even to his/her estate, the incentive to experiment with new approaches, materials or systems, is seriously constrained.

Unlike the professions of Law and Medicine where large public infrastructure (courts and hospitals) enable practitioners to advance their discipline, the architectural profession suffers from the absence of a well-articulated tradition of research and development. Given its breadth as a discipline, it fails to attract comprehensive consideration by any of the national research funding agencies. When considered in a partial manner (either as a visual art by Canada Council, a social science by Social Sciences & Humanities Research Council, or as engineering by the National Science and Engineering Research Council, or NRC) it does not demonstrate the strength of those disciplines whose breadth can be fully incorporated in such divisions. As a result, the awareness of the research nature of much of the work of practicing architects is very limited and there is minimal financial support available to those who understand their work in these terms.

The ability of the architectural practitioner to self-fund research and development is increasingly limited by various causes. The profession is the least lucrative of all professions, subject to sharp economic cycles and burdened by ever increasing building code compliance requirements for which there is no remuneration (as they don't increase the cost of construction.)

The recent experience of the RAIC with NRC's Industrial Research Assistance Program (IRAP), has been a pleasant exception. The management of NRC have been willing to consider architecture on its own terms as part of its specific commitment to the construction industry. Through this program we have explored the relationship of research, development, innovation, technology transfer within the construction industry and the architectural profession in particular. The management of the IRAP program have endeavored to understand this industry and its unique requirements. However, this is at times challenging and difficult based on their comparable experience in the manufacturing industry. At this time, it would appear that IRAP's interest in the construction industry needs significant support if it is to be maintained.

TAXATION

Architectural practices have suffered two particular taxation burdens that have been extremely detrimental in recent years.

The architecture profession is one of the few who are required to remit tax on work in progress. Given the nature of the industry, it is frequently the case that the fees reported in these estimates of work in progress are either not received in full or are not received for some time. This, of course, can be offset by a declaration of bad debts in the subsequent year. However, the firm, which seldom has a large capital base, carries the burden of this pre-payment of taxation throughout the year.

The profession has also been hit with an undue hardship in the implementation of the Goods and Services Tax. The federal government, through Public Works Canada and its procurement policies, has insisted that the construction cost as a basis for calculating the architect's percentage fee must exclude the GST. The construction estimates used as a base for this calculation prior to GST included the federal taxes. The net result is that the percentage used in calculating the architects' fee remains the same while the allowable construction cost has been significantly reduced, thereby reducing the actual fees for the architect for the same work to be undertaken.

All other client groups include the GST in the construction cost as the basis for professional fees. Representation had been made to Public Works Canada on this issue without satisfaction to date.

DOMESTIC MARKETS

Traditionally, the architectural profession has been entirely dependent on a single highly cyclical industry: the construction industry. The negative dynamics of the cycles of this industry will no doubt be documented in detail by the Canadian Construction Association.

Numerous architectural firms have in recent years begun to identify additional services which they can offer to existing and new clients that build upon their expertise in the construction industry and the

areas of design. Many firms are broadening their base in an attempt to partially insulate themselves from these cycles. However, the profession as a whole will continue to rely in large part on this primary industry base.

Efforts by levels of government to modify the amplitude of the cycles of this industry would serve to create a far more productive and stable environment for the profession.

INTERNATIONAL MARKETS

As a profession of primarily small firms, architects have been slow to become active in the export market with the exception of a few of large firms. Over the past decade, the RAIC in collaboration with External Affairs has undertaken an extensive program of increasing the practitioners' awareness of export opportunities, documenting export preparedness and undertaking focussed market research, particularly in the United States.

The achievements of the architectural profession under the Canada/US Free Trade Agreement play a small but significant roll in facilitating access to the most immediate large market beyond our borders. The Institute is exploring with the Department of External Affairs innovations to the standard export support programs that have not served the profession well in the past. The RAIC's Export Advisory Committee is bringing forward recommendations for different strategies that would be useful to them based on their experience in the international market. Hopefully the Department will have sufficient flexibility to entertain different programmatic initiatives for this sector.

GOVERNMENT BARRIERS

The profession of architecture has not in the past enjoyed ease of movement from one province to another. However, after many years of diligent work the provincial architectural associations recently signed a reciprocity agreement. This will enable the registration of architects in another province without difficulty.

This is a first step in a longer process that will facilitate the practice of firms across the country. There are still significant regulations regarding firms which will make it difficult for them to be readily accepted in another provincial jurisdiction. However, there is a significant commitment to creating national standards in this area and it is hoped that it will become increasingly easier for firms to respond to business opportunities in different regions of the country.

The federal government's procurement policies for architectural services have been particularly detrimental. The RAIC and Provincial Architectural Associations have made several representations to Public Works Canada and the Treasury Board calling for the adoption of a quality based selection procedure (documentation attached). Despite these efforts, the government insists on a selection procedure in which the selection can be based primarily on fees.

The irony of this situation is underscored by the manner in which such government projects are managed. They involve many more persons on the client's side than is required by the private sector. This results in far more time (not less) required by the architect to manage the project and obtain all the necessary approvals.

The architectural profession maintains that a quality based selection process is in the best interest of the federal government as a client, and that the government has a responsibility to play a lead role in Canadian society reflecting a higher set of values with respect to the development of architecture in the built environment of Canada.

ATTACHMENTS TO SUBMISSION BY RAIC

THE QUALITY BASED SELECTION PROCESS FOR ARCHITECTS

Why Do Public Owners Use QBS

The QBS process recognizes that design professionals play a critical role in the public building process and that procurement of architectural services is a very specialized type of procurement. The quality of the design services provided by the architect or engineer is the single most important factor in determining the overall construction costs and life-cycle costs of a building. Since design services represent only a small percentage of the initial construction budget, it is in the best interest of the taxpayer to ensure that the most qualified firms are selected for public projects.

Competitive bidding for architectural and engineering services is not in the best interest of the public owner. At the beginning of the selection procedure, the client often is not aware of which professional services are required; the client and the selected architect define the scope of those services as part of their negotiation to ensure that the services provided fully meet the owner's needs.

In addition, studies have shown that the use of QBS for public buildings is more efficient and less costly than the use of a selection system that uses price as a primary criteria.¹

How Does QBS Work?

QBS is a fair and rational procedure that facilitates the selection of a design professional for government projects based on qualifications and competence in relation to the scope and needs of the particular project. The QBS process evolves from multiple variables that must be tailored to fit each specific project.

In most instances, the QBS process will include all or part of the following steps.

1. The owner identifies the general outline of the project.
2. The selection time frame is established.
3. A list of architectural firms is compiled.
4. Letters of qualifications are requested.

In 1985 the AIA completed a comparative study of the architect and engineer selection systems in the states of Maryland and Florida. The study concluded that the Maryland system, which used price as a major factor in selection, resulted in costly time delays and was significantly more expensive to administer than the traditional qualifications-based process used in Florida. In recognition of the cost and inefficiency, the State of Maryland changed its selection system to QBS procedures in April of 1985.

5. Letters of qualifications are evaluated.
6. A short list of firms to be interviewed is determined.
7. A tour of the site and/or facility may be arranged for short-listed firms.
8. Interviews are conducted and the firms ranked for selection.
9. A contract is negotiated with the selected firm. If an agreement cannot be reached with the top-ranked firm, those negotiations are ended and negotiations begin with the second-ranked firm, and so on down the line until agreement is reached.
10. All firms involved receive post-selection communications.

This process, and variations, are detailed in the following sections.

Developing the General Outline of Work

To begin the selection process, the public owner must briefly identify the general nature and the particular needs of the project. Just as the owner needs information about the qualifications and competence of the architectural firms, the firms need to know what the project parameters are. When the work is properly described and communicated, it saves time, money, and effort for the owner and the architects alike. A well-defined outline of work allows the architectural firms to tailor their statements of qualifications directly to the project requirements, and provides the owner with a more uniform basis for evaluating the responses.

The following are the basic elements that normally will be included in a outline of the work for a public project:

- Owner's name.
- Description of function and short history of the owner organization or agency, including the goals or events that prompt the project.
- Project name or identification.
- Project location.
- Contact person. (This person should be identified clearly as the only person to contact for information on the project.)
- Identification and explanation of involvement of selection panel or client groups, e.g., boards, foundations, committees, citizen groups.
- Descriptions of other construction in process or planned for the same site but not part of the scope of work.
- Descriptions of completed studies, surveys, and/or preliminary feasibility work that are relevant to the project and available to the firms that will be short-listed and interviewed.

- Requirements for further feasibility planning prior to design and construction.
- Project outline, including intended size, function, and occupancy, and other general anticipated requirements, e.g., renovation; demolition; additions; new construction; and energy, land use and site selection considerations.
- Anticipated time frame, including completion of design work, beginning of construction, and planned project completion date.
- Description of architect selection process, including involvement of groups mentioned above.
- Additional or unique requirements/considerations such as referenda, anticipated funding delays, and budgeting.

Additional items may be added to this list as appropriate to provide guidance to the competing firms and meet the needs of the owner. All services the owner wishes the architect to provide - including feasibility studies, design, construction coordination, and budget development - should be specifically identified.

Establishing a Selection Time Frame

To keep the process of selecting an architect proceeding smoothly, owners should establish a time frame for completion of the selection process. Establishing the time frame prevents misunderstandings and last-minute 'surprises', that might delay or sidetrack the process.

The time frame for each public project will differ, depending upon the nature of the project, the concerns of the owner, and other factors. In some instances, a tour of existing facilities may be provided to short-listed firms.

Compiling a List of Architectural Firms

How does the public owner identify architectural firms from which to request a statement of qualifications? Some of the factors that should be considered in compiling the list of architectural firms are:

- The number of firms the owner wishes to involve, and
- The geographic location and distribution of the firms.

Advertisements. Placing public notices of projects in newspapers and trade or professional publications will reach a significant sector of the architectural community and will result in a large number of responses through the mail and over the telephone. If this approach is used, the owner should be prepared to spend time evaluating these initial expressions of interest to narrow the list down to a workable number of firms, which will then be asked to submit letters of qualifications.

Data Bank. Select qualified firms from data bank created from advertised updated applications.

Requesting Letters of Qualifications

When the list of firms to be considered is compiled, the owner should prepare the following materials to send to the firms:

1. A memo to all firms who are being invited to submit their statements of qualifications, listing all firms in alphabetical order. (It is customary for owners to let firms know the names of other competing firms.)
2. A list of requested information to be included with the firms' statements and letters of qualifications.
3. A schedule of planned activities.
4. An outline of work.

It is most important that all firms receive the same materials so that all of the firms' responses will be based on the same set of project specifications and constraints and, therefore, can fairly be compared with one another.

Evaluating the Letters of Qualification

The selection committee of individuals assigned the task of developing a short list of firms should evaluate the letters of qualifications received from the firms. It is recommended that the owner establish the policy up front that statements of qualifications received after the deadline not be considered.

The number of firms to be included on the short list - and then interviewed - may vary depending on the size and scope of the project. Three to five firms are generally sufficient.

Establishing a Short List of Firms to be Interviewed

Based upon the evaluation of the letters of qualifications and reference checks discussed in the preceding section, the public owner can establish a short list of three to five firms to be interviewed for the project. Because all the firms who submitted their letters of qualifications have made a commitment of time and expense in pursuing the project, the owner should contact the firms not selected for the short list as well as those to be interviewed. The memo sent to the firms who did not make the short list can express thanks and identify the firms who will be invited in to interview.

The firms selected for interviews should immediately be sent information regarding the interview requirements. What should be included in the memo to these firms? The following elements should be considered:

1. A date should be established for a tour or tours of the site/facilities if this is appropriate. The tour provides the firms with an important first-hand look at the concerns that gave rise to the project. The tour also provides a further opportunity for an exchange of information about the project between the owner and the firms. If the project site is vacant, the owner may simply provide maps and directions to the site for the firms to visit themselves; if there are existing facilities, however, the firms will probably want the opportunity to tour them with the owner.

2. A list of interview criteria and questions and an explanation of the scoring and selection process should be sent to the firms on the short list. Predetermining the selection scoring criteria and specific areas of owner concern and providing that information to the short-listed firms will provide the interviewing committee with the best possible basis for making an "apple to apples" comparison of the firms.
3. If the owner has feasibility studies, a project program, or other background information on the project, these materials should be submitted to the firms or made available to them for purposes of review.
4. Other specifics regarding the interviews themselves, including the date, place, time, and the names of the members of the group that will be conducting the interviews, should also be included.

Tours of Site and/or Facility

In some instances, tours of a facility or project site will be an integral part of the selection process. Such tours provide interested architectural firms with the opportunity to obtain first-hand information pertaining to the proposed project.

Tours can be handled individually, i.e., the owner's representative meeting individually with representatives of competing firms, or in a group, i.e., all interested firms meeting at a given date, time, and place for a group review of the site and/or facility. Vacant, particularly rural, sites are often left to the architects to visit by themselves.

Interviewing the Short-Listed Firms

Purpose. The interviews of the short-listed firms give the owner an opportunity to compare the firms' different approaches to the design process, as well as their interpretations and understanding of the specific project requirements. The owner should not expect design solutions for the project at this time. The design requirements for even "simple" projects can be quite complex, and the architect will not be sufficiently aware of the owner's needs and requirements at this stage to be able to produce a meaningful design solution.

The interviews are designed to allow for the evaluation of the personal styles of each firm's management and key personnel and how they match up with the pre-identified criteria for the owner's project. It is imperative that the architectural personnel to be assigned to the project, as well as key representatives from the firm's consultants, be present at the interview. It is also essential for the project users to be involved in the interview process. Direct interaction between the owner/user and the architect is essential for the development of a design that truly meets the owner's needs.

Some Interviewing Guidelines. The following are suggested guidelines for setting up and conducting the interviews:

- Interview only the firms communicated with during the selection process to ensure that all interviewed firms have had an equal opportunity to prepare their presentations.
- Schedule 45 minutes for each presentation and 15 minutes between interviews. This should allow ample time for the presentation and question-and-answer period, and for the committee members to discuss the presentation among themselves before beginning the next interview.
- Schedule all of the interviews on the same day. This permits the committee to compare all of the interviewed firms while information is fresh in their minds and ensures consistent interview scoring.
- The evaluation criteria for the interview scoring system should be communicated to all firms in advance.
- While it is appropriate to question firms about how they would approach the design of a project, owners should not ask for an actual design solution during the interview. Appropriate and responsive designs require considerably more interaction between owner and architect than is possible during the selection phase.
- Owners may want to ask how the firms plan to develop an appropriate level of compensation for their professional services, but specific compensation amounts are best resolved through detailed discussions with the firm finally selected, and only after there is a comprehensive and mutual understanding of the actual scope of services.
- Let all firms know when the selection decision will be made.

Ranking the Firms in Contention for Selection

An evaluation form that includes a weight and a score for each criteria/question is a useful instrument for evaluating, ranking, and, finally, selecting the most qualified firm. Each firm should be evaluated separately by each interviewer during the firms' presentations and interviews. The head of the interviewing committee should compile the individual score sheets when all the interviews have been concluded. This system provides a documented record of the selection process as support for the selection committee's actions. It is recommended that the selection committee members take the time to achieve the ranking and selection by consensus rather than just by majority vote.

After interviews and ranking are completed, a memo should be prepared and mailed to all firms that participated in the interview process. The memo should list all interviewed firms in alphabetical order and state by name in what order the committee ranked them. (It is customary for owners to provide this information as a courtesy to the firms.)

Negotiating an Agreement with the Selected Firm

As soon as possible after selection, the owner should begin negotiations with the firm deemed most qualified. If an agreement on the scope of services and compensation cannot be reached, negotiations with the first-ranked firm should be terminated, and the owner should open negotiations with the second-ranked firm. Normally it is not difficult to reach an agreement on fee, since the QBS process facilitates an early understanding of the project scope and requirements through the progression of steps involved in the selection.

SUMMARY

This submission presents an approach for the competitive selection of architectural services.

It recognizes that price must be a factor in the professional procurement process; but concludes that it should enter this process only in negotiation so as not to deter from the importance of architectural competence and the quality of service.

BACKGROUND

The Client-Architect relationship is regarded with high esteem. The selection of the architect has traditionally been based upon qualifications, experience and design quality. In this situation the fee for the architect's services is negotiated between client and architect, using national indices based on percentage of construction costs or other appropriate bases of compensation.

Occasionally competitive bids for architectural services are requested as part of a proposal. When this happens, it can become expedient to use this bid as the only determining criteria for consultant selection.

COMPETITIVE BIDDING HAS POTENTIAL DANGERS

Because:

At the time of consultant selection a full delineation of work requirements often can not be made.

The quantity of an architect's work necessary on certain tasks will vary, depending on the architect's judgement, experience and understanding of the client's needs.

To maintain a price competitive edge the architect may unintentionally reduce the quantity of service to a level that could significantly increase the overall project cost.

Price competition may thwart innovation, ingenuity, imagination and creativity on potential cost effective aspects of the project.

Research on cost saving systems, materials and construction methods may be curtailed.

The number of alternatives analyzed and the depth of investigation undertaken may be abbreviated and the most economical designs overlooked.

Cost analyses may be cut short, resulting in overlooking cost saving features or over-running budget, increasing construction costs and future operational costs.

Standardized and over-conservative designs may be substituted for new architectural solutions.

Evaluations may be postponed from the study stage to design, or from design to construction when an earlier analysis would have resulted in a cost-saving method.

Consider that:

The purchaser of an architect's services receives value when enough time of sufficiently qualified professionals is applied creatively to his specific needs.

While a set of construction plans specifically defines the work to be accomplished; an architect's proposal can describe the project's purpose, but can not precisely state the full scope of work and level of effort required.

When a price is requested in a competitive proposal, the price tends to become the dominant consideration over professional competence and quality of services.

Some firms will be enticed by competitive pricing to assume the least amount of time on such undefined, but required tasks.

The experienced firms will actually be jeopardized in competitive pricing, because they know from experience the full depth of services that will probably be required and will propose to accomplish them.

Essentially these firms are pricing different scopes of work which will likely result in different quality end products.

In summary, by selecting an architect on the basis of price competition, the potential reduction in quantity of service may reduce the initial architect's fee, but may markedly increase the project cost.

The owner and the public lose!

RESULTS

The Quality Based Selection process emphasizes professional qualifications first, then price negotiation, as opposed to competitive bidding. It uses a positive incentive to the architect to provide quality design at a reasonable cost to the owner.

It places primary emphasis on the following results:

Quality Architecture

Economical overall project

Public confidence

QUALITY BASED SELECTION FOR PUBLIC WORKS CANADA

Architects represented by the RAIC and their provincial organizations as well as consulting engineers represented through ACEC, fully support competitive selection based on quality and performance. Quality Based Selection procedures achieve this by separating competitive selection and retention of the professional consultant.

Treasury Board requirements for competitive selection can be satisfied by Quality Based Selection procedures.

Architects support a selection system that rewards quality and performance. Obviously a selection procedure that acknowledges this is also in the client's best interest. While architects agree there should be an equal opportunity for firms to obtain work, successful completion of a commission should create an opportunity for a firm to pursue further work for which they are qualified.

Architects also support competitively awarded standing order contracts with clients, where a series of small related projects can be carried out in sequence by the same experienced team under an overall contract authorization, as client needs and budget determine the extent of work.

The RAIC and provincial architectural associations are willing to co-operate with PWC and ACEC in the preparation and pretesting of questionnaires and evaluation criteria, as well as in presenting the new Quality Based Selection procedures to architects throughout the country through bulletins and member forums.

The RAIC and provincial architectural associations are willing to work with PWC and ACEC in ongoing review of the selection process, including responding to member enquiries and concerns. This built in ability to review and modify the selection process independent of actual participants in the selection, will assist early start up of the selection procedure.

QUALITY BASED SELECTION

The following dialogue has been devised to respond to questions that are raised about Quality Based Selection (QBS) and point out the invalidity of assumptions of fee-bidding advocates.

- Q. Why do A-Es advocate noncompetitive selection practices?
- A. They do no such thing. They advocate QBS, an approach which causes design professionals to compete on the basis of quality and service. QBS encourages design professionals to continually upgrade what they offer. Alternatives to QBS in many cases have the opposite effect, because low fee is such an important concern.
- Q. Nonetheless, A-Es do believe it is acceptable to retain a firm without considering its fee.
- A. A-Es do not feel that way. They believe that identifying the most qualified firm and retaining it should be two discrete functions. When QBS is applied, selection is based on quality; the retention decision is based almost exclusively on fee.
- Q. What's wrong with considering quality and fee at the same time?
- A. Considering quality and fee at the same time is far easier said than done.

First, because of the complexity of submissions, fee - the lowest common denominator - is all too often given disproportionate weight. Even assuming such bias could be eliminated, however, quality is such an important factor it merits separate evaluation. On a typical project, the cost of design comprises one percent or less of construction and life-cycle operating and maintenance costs, but the quality of design determines what these other costs will be. The premium paid for high-quality design can pay for itself hundreds of times over.

Second, fee can be considered only when design professionals develop a workscope on which to base it. Almost invariably, this means elimination of mutual workscope development, one of the most important aspects of any professional design service.

Q. What is mutual workscope development?

A. When QBS is employed, mutual workscope development occurs after the client has determined which firm, in his opinion, is most qualified to do the work. The client then meets with representatives of that firm to discuss the project in detail. After gaining insight into exactly what the client has in mind, the design professional explains the different approaches which his firm and staff can employ, and the pros and cons of each. The client then decides which options he wants according to his own preferences. Among other obvious benefits, this approach helps eliminate any unwarranted assumptions and misunderstandings which all too frequently lead to additional cost or disputes.

In fact, mutual workscope development is the hallmark of all good client-professional relationship. In a physician-patient context, for example, it is known as gaining informed consent. The physician is expected to apply his training and experience to inform the patient of the different courses of treatment available, the potential consequences of each, and which - in his opinion - is best. Most owners and other clients rely on their design professionals to render precisely this type of service, through a QBS approach. Once the workscope is established, the design professional is in a position to establish his fee.

Q. What if the fee is too high?

A. In that case, the client, with the advice of his design professional, determines which elements of the workscope can be modified. Then he selects reduction options based on his willingness or ability to absorb the additional risks each imposes.

Q. Suppose they can't come to an agreement?

A. Then discussions with the firm deemed best qualified are closed, and the firm considered next-best qualified is brought in. However, in almost all cases of which we are aware, the firm considered most qualified is retained.

Q. What if the next-best-qualified firm would have charged less?

A. The next-best-qualified firm would not be working with the same workscope, so fee-based comparisons are not valid. Besides, the first firm can charge less, too, depending on what the client decides.

Q. Doesn't issuing a fixed workscope and asking each firm to submit its bid for implementing it get around this situation?

A. Actually, it creates a great many complex problems. First, it presupposes that whoever develops the workscope is at least as experienced and knowledgeable as the experts being sought; they seldom are. As a consequence, such workscope often contain errors, and almost always are incomplete or vague.

Second, because such workscope are incomplete or vague, those asked to submit fee estimates are forced to make assumptions. If they assume they will be expected to perform work not listed, they must increase their fees. Accordingly, for purposes of securing the engagement, most will assume that the client has another means of obtaining that work, sowing the seeds of misunderstandings and disputes.

Third, fixed workscope usually are based on those prepared for similar projects and/or "standards" which define what is minimally acceptable. As a result, they tend to stifle innovation and creativity, tethering the design professional to what has been done in the past.

Fourth, issuing a fixed workscope assumes there is one best way of getting the work done. In fact, any given firm can approach any given project in innumerable ways. The best qualified firm may be able to suggest an approach which results in considerable construction and/or life-cycle operating and maintenance cost savings, providing it has a chance to explain its approach through the mutual workscope development process.

Fifth, many highly qualified firms refuse to respond to such solicitations.

Q. Why do they refuse to respond?

A. There are many reasons. One is based on simple economics. A quality product is more expensive to produce than a cheap product. Accordingly, a quality-oriented firm has very little chance of winning an engagement that will be awarded to a low bidder. Besides that, bid-based solicitations are far more expensive to pursue. In almost all cases those interested have to develop a workscope, and in all cases they have to develop a fee proposal. When QBS is employed, these costly steps are taken only after a firm has been notified that it's considered most qualified.

- Q. What if firms are first prequalified or "short-listed", so the competition is open only to qualified firms?
- A. Whenever fee-based solicitations are employed, each interested firm will do its utmost to offer as low a fee as possible. This is done by following or creating a skimpy workscope which usually omits important quality management operations; assigning lesser-qualified personnel; employing rules of thumb and conservative design, and eliminating time allowances that ordinarily would be proposed for studying alternatives and handling contingencies. All told, these and similar procedures result in cheap design, and cheap design often leads to professional liability problems. For many firms, it's simply not worth the risk to pursue such projects.
- Q. Are you saying that QBS prevents cheap design?
- A. No, QBS is the owner's best defense against cheap design, but it is hardly a fail-safe preventive. Cheap design most usually is the product of inadequate fee. Inadequate fees are most likely to result when fee-bidding is employed.
- Q. Can't it be said that some firms will propose an inadequate fee when QBS is used, just to get their foot in the door?
- A. Yes, this sometimes occurs. In most instances, however, the firms involved will still turn out good work, because they know that the quality of their performance will determine whether or not they get the next job.
- Q. Despite all the problems with fee-bidding, some firms with excellent reputations still seek it.
- A. This is true, but no firm we know proposes its best quality when it knows that the cost involved will make its fee proposal noncompetitive.
- Q. Of course, some firms can turn out high-quality work for less money than others.
- A. A firm which knows that its chances of obtaining an assignment are inversely proportional to the size of its fee is not going to propose doing its best work, no matter what its costs may be. It almost always will propose doing the work in the cheapest acceptable manner.
- Q. This presupposes that the award will be going to the low bidder. It doesn't have to be that way.

- A. When both fee and quality are going to be considered, a design professional may propose more than a barebones approach, but he would be foolish to recommend all the options that should be considered. In essence, he has to guess what the client is looking for, and even the best guess is likely to result in a workscope far less satisfactory than the one that would have been developed mutually through QBS.

It should also be recognized that the client's assessment of a firm's technical proposal will often be based on written words rather than face-to-face discussions. For this reason many firms employ individuals whose only job is writing technical proposals. In some cases what they imply and what they actually propose may be far different, particularly when the client's reviewers are not as technically astute as the submitting firm's proposal writers.

- Q. What if a client goes to the trouble of preparing a biddable workscope that is precise in every detail, and includes all the necessary quality management functions.

- A. Such a meticulously detailed workscope would have to be prepared by a design professional, but assumedly not the one ultimately selected to implement it. As a result, an approach not of the selected design professional's making would be imposed upon him.

We also must ask, "Where would the workscope come from?" If the client has sufficient expertise on staff to develop one, why does he need an outside A-E? And if he does not have that expertise on staff, how will it be selected and retained?

- Q. How about an approach where technical and price proposals are used principally as indicators, so the client uses submissions to rank the firms, and then opens discussions with the one he deems most qualified based on a combination of fee and proposal?

- A. This takes us to the game room. If a firm is smart, it will quickly learn how to devise submissions which elevate its ranking, knowing full well that what it submits will probably bear precious little resemblance to the workscope and fee which ultimately emerge.

- Q. That doesn't sound professional.

- A. "Professional" means several things. A learned professional, such as an architect, engineer, physician, attorney, etc., is supposed to implement his services in a certain way, and has a great deal of responsibility in doing so. Because what he does often is so highly technical in nature, it is not subject to client oversight. The client has no alternative but to trust that the professional's work is being performed properly. For this reason members of the learned professions are licensed by the provinces, to help assure that they have the necessary knowledge and experience to perform properly, and that they maintain a certain standard in practice.

Learned professionals also are expected to operate within a given concept that has become known as "professionalism". Because what they do often is technically complex, they should explain options to the client or patient in a candid, objective, understandable manner, without seeking unjust enrichment. In truth, however, many people from many walks of life operate in a professional manner, principally by giving good unbiased advice to those who rely on them.

When mutual workscope development is eliminated, professionalism in its generic sense is eliminated, because there is no opportunity to provide it. An architect or engineer in private practice is both a businessperson and a professional. Naturally, he will always adhere to professional standards in implementing a professional act. However, if professionalism is eliminated from one of his functions, i.e., helping to establish the workscope, all that's left is a business concern, and the design professional will respond in kind. Thus, while taking a purely business approach eliminates professionalism, it is the client who is forcing this development, not the professional. If a client wants a professional relationship, be it with a learned professional or anyone else offering a service, he has to initiate that relationship in a professional context.

- Q. Then what can be done about keeping A-E costs under control?

- A. There is no indication from any source that A-E fees have increased at a rate which exceeds inflation. To concentrate on A-E fees is to obscure the real issue, the productivity and overall construction cost of projects.

When conservative design is employed, or when plans and specifications have not been subject to quality control, or when field monitoring is reduced or eliminated altogether, problems leading to unnecessary expense result. In fact, design professionals are in a position to contribute mightily to improved productivity on any given construction project, but this contribution will not likely be made when anything other than a QBS approach is employed. It is somewhat ironic to note that, at the same time that some owners are resorting to fee-bidding to select their A-Es, many others are forgoing bidding in selecting contractors.

Q. Why is bidding for contractors losing popularity?

A. Because it is a meaningless procedure. All too many contractors are encouraged to submit low-ball bids knowing full well that they will have opportunity to submit change orders later on, to assure a reasonable overall profit. As a result, the bid price seldom is the actual price paid. In addition, owners are finding that nonbidding approach to selection and retention promotes a professional relationship, whether or not the person performing the service is a "learned professional." When a contractor is retained by a negotiated method, he can be brought into the design process and offer suggestions about plans and specifications while they are being developed. He can also be involved in plan and specification review, to help assure that most errors, omissions, inconsistencies and so on are corrected before plans and specifications are implemented. He has no incentive to do any of this when bidding is used. In fact, bidding encourages the opposite behavior.

In short, anyone who wants to enjoy a more professional relationship with someone offering a service should not use bidding to obtain that service.

Q. It cannot be denied, of course, that bidding does reduce A-E fees.

A. It results in lower fees being offered, but many design professionals have already learned from contractors how to obtain fees that are larger than those they bid through change orders. The client is in a difficult position; he can do little to change the situation, and he faces a terrible predicament if he has to replace a design professional midway through a project. And if he agrees to a change order with the intent of recovering his costs later, through a lawsuit, he has to recognize that he has a good chance of losing. In fact, by establishing his own workscope, he has performed perhaps the most important architectural or engineering service on his own, and thus

should be prepared to suffer the consequences. Furthermore, dispute resolution can take years, and most of the money which changes hands ultimately finds its way into the pockets of those who earn their living from resolving others' disputes.

In addition, one must consider that it is far more expensive to participate in fee-bidding than QBS. When fee-bidding is employed, all interested firms almost always have to develop their own workscopes, and must always develop technical and/or fee proposals. The costs involved contribute mightily to the overhead of firms which pursue fee-bid assignments. In addition, the cheap design service which so often results from fee-bidding may create professional liability problems which, in aggregate, continually increase the cost of professional liability insurance for all insured design professionals. As such, fee-bidding over time will tend to increase the cost of design. By contrast, when QBS is employed, only the one firm deemed most qualified has to develop a workscope and fee proposal, and the technical proposal. Also, because the fee which results usually is adequate to support high-quality design, fewer professional liability problems occur.

Above all, however, it is being penny-wise and pound-foolish to concentrate so much attention on design professional fees. Rather, one should do whatever is possible to reduce the overall cost of construction, if not construction and life-cycle operations and maintenance. Only QBS can do this.

Q. Aren't change orders imposed when QBS is used?

A. Rarely, because contingencies for the unanticipated can be discussed and created "up front". In addition, many A-Es are reluctant to charge for minor changes, because they realize that satisfying a client who employs QBS is a key to obtaining that client's next project. As such, QBS promotes high-quality design and client satisfaction, whereas bid-based solicitations promote mediocrity. The A-E is discouraged from proposing high-quality work, and he has no incentive to perform "above and beyond" because he knows he will get the next project only if he bids low enough. This gets us into something known as "win-win". In essence, the client says, "I know that you are highly qualified to do this work. I am willing to pay you a reasonable, profitable fee for your services, without 'nickle-and-dimeing', and I'll provide ample allowances for contingencies. In short, if you do this project right, you should win. However, in return, I expect you to help me be a winner, too. I want

the type of service which will help me eliminate unnecessary expense in construction and over the project's life-cycle, thus making the premium paid for your service a true investment." The provider of service shares much the same attitude. Both win.

When bidding is used, a "win-lose" situation occurs. The client says, in essence, "You have agreed to provide me certain services. I am going to get those services, no matter how much it costs you. Thus, if you miscalculate, you lose, but I win, because I'm getting more than what I paid for." Unfortunately, the provider of service has the same kind of attitude: "I have agreed to provide certain services that you have requested. If these services are not sufficient to meet your needs, or if you have made errors in telling me what to do, I'll give you change orders that will enhance my profitability. I'll be the winner and you'll be the loser."

In short, when "win-win" is at work, the client and his provider of service share a common goal. Both benefit by helping one another reach this goal. When win-lose is in effect, either party stands to gain when the other party makes an error.

Q. Of course, using QBS presupposes that the owner or client really understands what he should be paying for design. If the client is not that astute, what can he do except ask for bids in order to determine what a reasonable fee is?

A. When a client asks for competitive bids, the bids may range widely. Which fee is reasonable? Chances are they all were, for the type of work each comprised. If the client does not know what is or is not a reasonable price to pay, he will have difficulty retaining a design professional by QBS or any other technique. An uninformed client should speak with knowledgeable peers about rates they pay or consult recommended fee schedules published by Provincial Architectural Associations, and even retain a firm to help him select others. Public clients can also use this approach, augmented by selection panels consisting of agency representatives and A-Es. These could be A-Es in private practice whose firms would be precluded from consideration while they serve, and possibly for one or two years after, or they could be retired A-Es. Many other approaches also are available.

Q. But if bidding is not employed, what inducement is there for an A-E firm to use the kind of tight management practices that trim the fat from overhead?

A. Not one shred of evidence suggests that firms which seek work by bids are well managed while those which do not are poorly managed. All firms must offer reasonable rates, and all must strive to trim fat if they are to prosper and grow. There is a major difference between fat and muscle, however, and bidding causes the poor manager to lose distinction between the two. Continuing education, participation in professional and technical activities, advanced equipment and tools, surroundings which encourage productivity ... these all are essential to high-quality design, yet any or all may be sacrificed if it is essential to have the lowest possible fee. Low fees and high quality are not compatible. This does not mean that a client should condone practices which are not cost-effective. Thus, when he asks firms to submit statements of qualification, the client should ask each to discuss steps they have taken to help promote cost-effectiveness.

Q. What about asking a firm to submit a schedule of unit prices and information about overhead and so on as part of his qualification statement materials?

A. This can be misleading because it can lead a client to making unwarranted assumptions. For example, a given firm may have overhead rates which may appear disproportionate to others firms. Some clients thus may be inclined to overlook this firm when, in reality, its higher overhead is due to reliance on, say, computer-aided drafting and design which results in net fee savings or parity, and which enhances the quality management function. Likewise, a high hourly rate may be misleading as it does not recognize the individual productivity.

Q. But what kind of guarantee can there be that the A-E will employ cost-effective measures even if he has them available?

A. First, especially with QBS, the client has ample opportunity to perform background checks on different firms if he has not already established satisfactory relationships.

Second, when QBS is employed, the client and his design professional have extensive interaction during the mutual workscope development process, as well as during any prior interviews that may have been held. This gives the client ample opportunity to form "gut reactions" about the design professional. Note that this is not the case with fee-bidding. In fact, in some cases, a client will deal with a design professional solely because he submitted a low bid.

In the case of a \$100,000 design project, for example, construction cost is likely to be \$1 million; life-cycle operating and maintenance costs \$10 million. The client will thus be entrusting 11 -plus million dollars of his money to someone, and he will trust most that person who charges the least? This is absurd, but nonetheless it happens.

Third, look at things from a design professional's point of view. A client who employs QBS is likely to keep using it. If the design professional performs well on the first job, he is looking at the beginning of a profitable, secure long-term relationship. He thus has every incentive to perform in a trustworthy, cost-effective manner. With bidding, there is no reasonable hope for a long-term relationship.

Fourth, when QBS is employed, the client makes it clear that the quality of the design professional's work and its impact on construction are his major concerns. Both he and the design professional have a full understanding of what is expected, and a reasonable fee is established to help assure that what is expected is delivered, with appropriate allowances for inevitable contingencies. As such, once the firm is retained, it shares a common goal with the client: Getting the work performed well, within budget, and on time. Compare that situation with what occurs when fee-bidding is employed. The client makes it clear that how much the design professional charges is at least as important as the quality of the work he produces. The client assumes that what he expects is what will be delivered, despite the fact that no mutual workscope development occurred, so the design professional may have something different in mind. The design professional, while he may want to do a good job, has to watch finances. If he spends more than anticipated, he will lose money. Thus, any change which the client requests must be resisted or charged for, and chances are the client will not think it a change at all. In other words, fee-bidding in any form tends to create a context for adversarial relationships, something which can destroy the bond of trust which should exist between any professional and his client.

- Q. How do you provide safeguards against corruption or use of influence in the negotiation?
- A. In QBS, the process is clearly established, open, and in values setting criteria, evaluation by several methods which are recorded, or summarized through careful minutes. The same applies to meetings at which workscope and fees are negotiated. In addition, architects would agree to incorporating severe penalties for anyone attempting to subvert the system.

Bidding is hardly a defense against corruption, witness the extraordinary number of bid-rigging scandals that has surfaced in the General Services Administration (GSA) before QBS was adopted in the past. Since then, not one allegation of impropriety or corruption has been levelled against GSA's A-E selection operations. GSA retains more A-Es than just about any other entity in the world, and uses the QBS approach to the exclusion of all others.

Q. If QBS is so good, then why are bid-based methods being used?

A. Because, without really understanding its full effect, it appears to work well, and there are firms that are hungry enough to participate in the process. The justifications for bid-based engagements do not hold up to close review, however, because they are based on assumptions that are not valid, for example, that certain types of jobs are routine. That kind of attitude forces us to build the past into our future, and accept mediocrity as the best that can be done. Above all, we must remember that the selection and retention of an A-E are the most important aspects of a long-term process whose cost is 100 times greater than the cost of A-E fees. You are trusting the A-E to do as good a job as he possibly can, but that result cannot possibly be forthcoming by relying on an engagement method which inhibits the A-E's ability to perform well, in a fully professional manner.

Q. Can't it be said that QBS works in the best interests of design professionals, and that arguments supporting it are motivated by self-interest?

A. Design professionals naturally have a vested interest in maintaining professionalism. In that QBS helps maintain professionalism, by encouraging and rewarding it, it is true that A-Es espouse a QBS approach from self-interest. However, many owners, contractors and others also support QBS for reasons of self-interest including the Federal Government and 37 States in the U.S.A. The only persons who stand to lose as a result of QBS are those private-and public-sector procurement officials who find that other techniques are simpler for them to use, and individuals and firms who are far more adept at gaining assignments by offering cheap design, or gaining profit through legal but otherwise unprofessional business practices.

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