

1.00

**YOUR FUTURE AS AN
ARCHITECT**

**COLES
CANADIAN
CAREERS**

YOUR FUTURE AS AN ARCHITECT



**COLES
CANADIAN
CAREERS**

©Copyright 1964, and Published by

COLES PUBLISHING COMPANY LIMITED

17 APEX ROAD, TORONTO 19, ONT.

C O N T E N T S

The Range of Architecture	5
In the Days of the Master Builder	7
The Modern Office	9
A Working Day	14
The Qualifications You Need	17
Educational Requirements	20
Preparations for a Career	23
University and On	25
Architects Across Canada	29
After You Qualify	30
Income and Opportunities	35
Related Fields	37
Advantages — and Disadvantages	39
How You Can Get Started	43
The Professional Associations	46
Further Reading	47

THE RANGE OF ARCHITECTURE

The architect of today is a professional man who is concerned with the art and technique of building. He is responsible for the satisfaction of one of man's basic needs — the provision of shelter.

In "Architecture as a Vocation", published by The Royal Architectural Institute of Canada, Professor W. G. Raymore points out that while many people contribute in one way or another to the creation of a building, "Nevertheless the essential form and spirit, which make a building as distinct in personality as a human being, is the product of the architect's imaginative creation of space, embodying both beauty of form and its arrangements to best serve the building's purpose."

Almost every settled society in the course of history has called upon architects. Their work is generally distinguished by the following characteristics: —

- a. It is suitable for use by human beings in general and is adaptable to particular human activities.
- b. It is stable and permanent in construction.
- c. It communicates experience and ideas through the form of the building.

Not so many years ago the architect was active personally in all phases of erecting a building, from the project to the various

details of construction. This may still happen on smaller projects. But, there is a growing tendency towards specialization as a result of the vast increase in the size and complexity of buildings. As a result, the architect's designs are executed by various agencies — engineers, contractors, manufacturers — and his success depends more and more on the co-ordination of these various elements.

But it must be emphasized that the architect is the captain of the team, and he is the person finally responsible for every detail and for the success of the entire project.

Legal responsibility varies from province to province. As an example, in Quebec, the architect is jointly responsible with the contractor should the structure fail within 5 years of its completion. The architect may find himself working with many specialists, but these specialists work under his general direction to assist him in carrying out the work, for which he is responsible.

In fact, as an architect today you will find yourself involved in many other fields. These will include law, economics, accounting, taxes, merchandising — all in addition to the more usual ones of design, planning and engineering skills in the art of building.

Building techniques and ideas, like everything else in this modern, fast-changing world are continually changing too. Architecture keeps pace with them, often taking new materials and evolving from them new and exciting design concepts.

Here again, the architect is responsible; he must be sure that the new materials will perform as expected.

It has been said that an architect must be a creative artist, a practical scientist and a businessman.

The widening scope of architecture has led to the raising of educational requirements. The university course of five years is recognized as a desirable minimum by architectural associations in Canada, the United States and many other countries.

After graduation comes the day-to-day work in the office or on the site that is called experience. As time goes on you may become known across Canada and the United States for the buildings you have created. But however far you go, and whatever niche you find, architecture will be both a challenging and a rewarding profession.

IN THE DAYS OF THE MASTER BUILDER

Ever since man learned to build shelter for himself, the trade, and later the profession, of the architect has shown the way. From the necessity of the cave the architect could see the design for a house, from the house to a castle.

In the earliest days the architect was called the "master builder" and as we know from the pyramids of Egypt and the temples of Greece and Rome, he was certainly a man deserving of the

title. It was the Roman architect for the Emperor Augustus, Marcus Vitruvius Pollio, who described architecture as "convenience, strength and beauty."

The principal Egyptian monuments that remain today are the temples and the tombs, built so well and with such tremendous attention to design, that they have weathered the ravages of thousands of years. These monuments represent a high level of achievement by their architects.

In Greece, it is recognized, the outstanding architectural marvel is the temple with the theatre perhaps second in the interest of its design. The Greek temple is a type which, in its great simplicity, its abundant wall surfaces and its absence of constructional difficulties, lends itself admirably to perfection both in pure form and in surface decoration.

On the other hand Roman architecture, which is a magnificent contribution towards the expression of grandeur, lacks the rare and delicate flavour of the expressions of some of the more spiritual ages of history.

Following the fall of the Roman Empire there arose from the ruins Byzantine art which, to the student of architecture, is chiefly associated with a type of domed and vaulted building surmounted by cupolas which produce the dominating external effect. During this period, and into the Middle Ages in Europe, architecture was mainly the work of the monastic orders. One of the great medieval movements produced Gothic architecture which is to be seen in the imposing cathedrals built during that time.

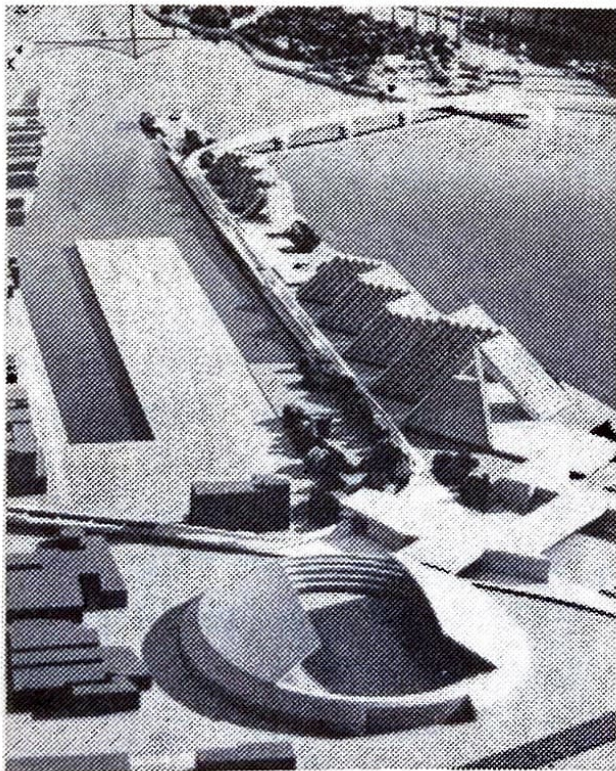
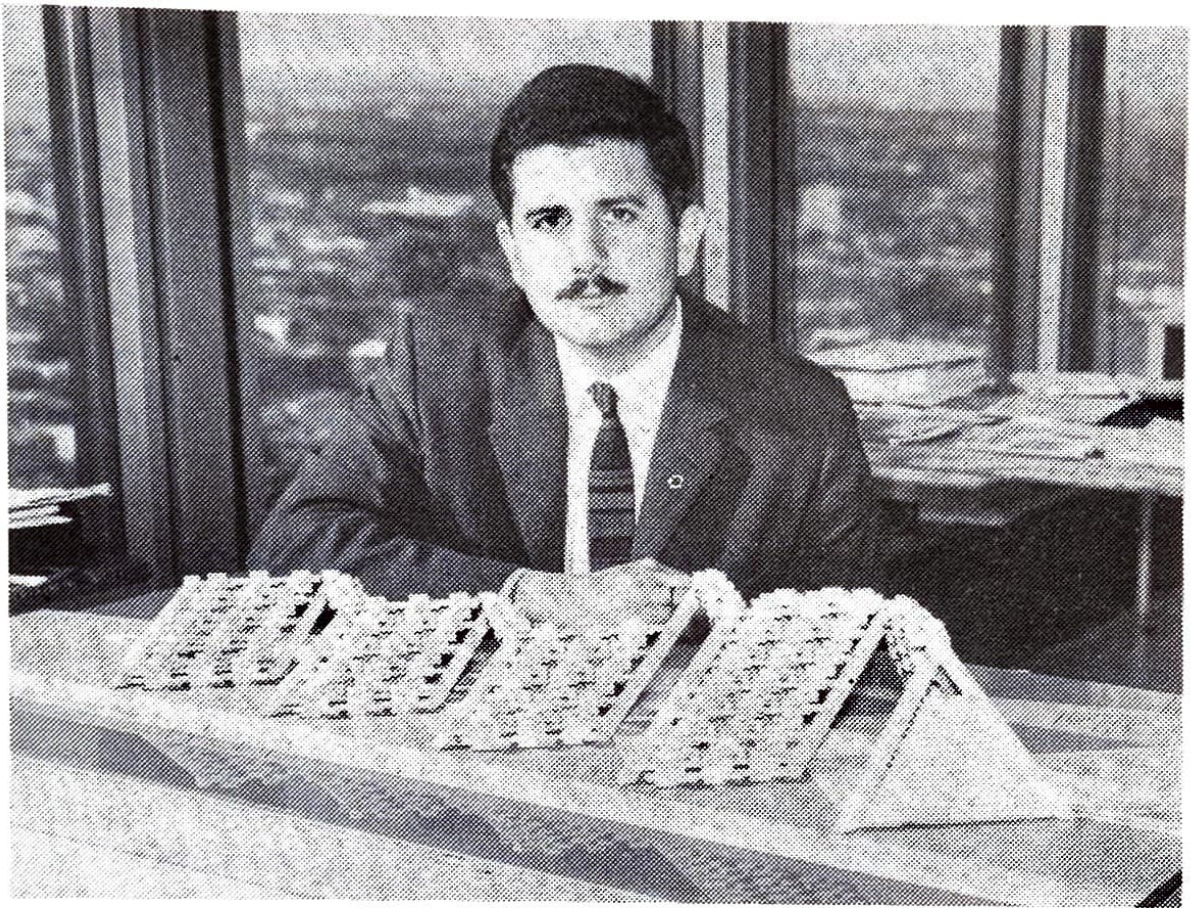
Then came the Renaissance from which, in general, modern architecture has evolved. The characteristics of Renaissance architecture were ordered spaciousness and broad stateliness of composition. The two countries in which it can be seen at its best are Italy and France and it is from this period that come the well-remembered names of Leonardo da Vinci, Michelangelo and Wren.

With the Industrial Revolution, the mechanics of building began to change as new methods of construction, new materials and new needs all appeared about the same time. In the twentieth century changes have continued to appear at an ever-growing pace making architecture one of the most exciting and spectacular of the professions. As Margaret Mead has written: "Architects are supposed to be the principal custodians of the past, the prophetic designers of the future and the key note for what is 'now'."

THE MODERN OFFICE

Today an architect may set up in practice on his own account or in partnership with other architects or he may work for an architectural firm, government department, business concern or public utility.

In 1962 there were 2,522 architects registered in Canada of whom a large number were in business for themselves, either individually or in partnerships.



The creator of HABITAT 67, one of the architectural wonders of Canada's 1967 World Exhibition, is Moshe Safdie, who graduated from the Architecture course at McGill University in 1961.

Photo: Canadian Corporation for the 1967 World Exhibition

If you decide to become an architect there are two ways in which you can achieve the letters MRAIC (Member, Royal Architectural Institute of Canada) after your name.

The usual way is to go to a University School of Architecture, on completion of a five or six year course to gain membership in the provincial association of architects, then to join an architectural firm.

The second way is to join an office after matriculation and some training in architectural drawing. In addition to your office work you will take courses at night prescribed by the provincial association of architects, and sit for exams set by the association. While working, it is not possible to compete more than one or two courses a year, and it may take many years to complete the requirements and receive your license. Even with hard work and persistence it may take up to 12 years.

If at all possible, you would be wise to complete a university course in architecture. Working by day and studying by night can be exhausting, and it may prove impossible to meet the stiff requirements. However, if this is the only way open to you to achieve your ambition to be an architect, you can proceed with the warning that it is a long and difficult road.

Depending on which course you take, you will be assigned to a certain level of job when you first join an architect's office. The steps you may take can be put into seven classes: —

1. File clerk at the plan desk, messenger and general office boy.
2. Tracer or copy boy.
3. Junior draftsman.
4. Senior draftsman, in charge of a group. (Group Captain)
5. Architect in charge of a job. (Job Captain)
6. An associate in the firm.
7. A partner in the firm, or on your own.

The situation today is quite different to what it was at the turn of the century when the guild system was used in an architect's office. Then the building architect would begin as an office boy, doing little more than sweeping up and running messages. During that time he was supposed to watch and learn. One day he might be asked to do some minor work on a plan and from then on he would be taken more and more into the confidence of the draftsmen and even the architect himself.

Some of the great architects of this century started out in this way. One of the first steps up the ladder was when, instead of just observing, you were allowed to scrub — erase the pencil work — on drawings being prepared by the senior men.

The conditions of work in an architect's office today are invariably pleasant and stimulating. You will work a regular five-day week in a well-lighted office.

If you are attempting to become an architect in your spare-time your knowledge and experience will be limited and you will start as either a file clerk or tracer. As your experience increases,

say in two or three years, you will become a junior draftsman. From here on advancement will depend on your own initiative and abilities.

The university graduate will move directly to the drawing board, although for the first few months he needs to get to know the office and put some of his theories into practice.

But being an architect or architectural assistant does not only mean working at a large drawing board. Buildings are not designed and developed in a vacuum and practical experience in the field is just as necessary to the growth of the architect as theoretical teaching and reading.

As a student he will probably have gained field experience working on construction sites. As a newly-fledged or developing architect he will be relating his office work to the project in which he is involved. In the initial stages this will mean talking with clients, later to material building salesmen and contractors. Then, as the work progresses, there are visits of inspection to the site, for it is the architect's responsibility to see that the finished building conforms to all the technical and design standards he has specified.

If you are running your own business in a medium-sized town or an area of quite low population density you may be the only qualified architect and employ draftsmen and general assistants. Some of your time will be taken up at the drawing board.

But the partners of big architectural firms in the major cities across Canada will rarely work at a drawing board, although

there may be many consultations with architects delegated to handle a particular project. A major firm may employ as many as 20-25 architects with a proportionate number of draftsmen.

A WORKING DAY

Architects, as in all other professions, work at varying levels and what should be described as a typical day for some would be most unusual for others. An architect just beginning as an independent professional in an urban community will have an entirely different set of problems to one who is making a career in a big firm.

However, in any working day, the architect will be called upon to make a variety of decisions. Obviously, before the architect can begin any job, he has to have a client, whether it is a man and his wife who want a \$20,000 house or a real estate developer with ideas for a major apartment complex.

The young architect just starting out in an urban area may have a call from a prospective client who has been referred by a friend or whom he has met at some local social activity. The client with a multi-million dollar project will have chosen one of the major firms because of its record and proven reputation — both of which he can see in similar buildings they have designed already standing around the city.

With any client, the architect has to find out what he has in mind and explain what can and cannot be done within the limits

laid down. The house owner probably needs more care and attention than the property developer, although often the big schemes have to be changed when they move from the realm of ideas to practical plans on paper.

In the opening discussions the architect has to analyse the problem, probably help choose the site and then prepare sketches of the layout and the exterior to give the client a broad idea of how the problem might be settled. It is at this point that the architect has turned his client's dreams into a workable and practical scheme.

With approval given after, probably, many periods of discussion, the architect prepares working drawings which show exactly the nature and extent of the work involved and detail the materials and methods of construction. At the same time the architect must be businessman enough to administer not only the construction but the financial details and prevent his client from exceeding his budget.

This is done through the use of written instructions called specifications in which the details of materials, construction methods and workmanship are given. With these, and the working drawings, the architect is able to put the job out to tender and receive a number of competitive estimates from building contractors.

After reviewing the estimates the architect will advise the owner on the selection of the contractor. A contract is then signed by the owner and work commences.

Throughout the whole of the time the building is going up the architect is constantly checking. He makes sure the work is being carried out according to specifications, he prepares further drawings to supplement the original ones and checks shop-drawings received from the various sub-contractors.

As certificates come in from the contractor the architect will verify them for payment. When the building shell has progressed sufficiently he will become involved with many types of contractors ranging from plumbing, lighting and heating companies to others responsible for air-conditioning and decorating.

In offices where there are two or more people this load can be spread around. But in the office where you are the only qualified architect you will be doing a wide range of tasks during the course of any one day.

There are usually many contracts running at any one time, but in various stages of development. As you can see, the work of an architect involves contact with his client, the drawing up of plans for the building, the writing of specifications, control of the budget and overseeing of the construction work. It may be necessary to deal with four or five different projects in any one day — and still consider the need for social and professional contacts that will bring in more work in the future.

In big offices the work may be more routine than if you set up your own practice. On the other hand, some architects have made a good living by travelling around the world and developing an international reputation.

As in other professions, under similar circumstances, the world is a vast market and you must learn what you have to sell and how you can best sell it.

THE QUALIFICATIONS YOU NEED

Frank Lloyd Wright, one of the great architects of this century, wrote and spoke zealously about his own aims and his profession. Among many others, here are two quotations from his works:

“Architecture is essentially the art of organization, and her sons should be prophetic generals in this period of crystallizing social forces.”

“The architect should help the people to feel that architecture is a destroyer of vulgarity, sham and pretence, a benefactor of tired nerves and jaded souls, an educator in the higher ideals and better purposes of yesterday, today and tomorrow.”

To be an architect, the captain of a team, demands vision, creative ability and a talent in drawing. The ability to draw is the first physical talent needed for the practice of architecture and without it you should not choose architecture as your career.

So, first ask yourself the question: how well can I draw? How is your work in art class at high school? Would you have liked to spend more time at it? Your greatest need as an architect will be for mechanical drawing and architectural drafting. The

facility to draw pictures and sketch is not so important although the two, obviously, go together.

Architecture demands a creative and original turn of mind, so you need imagination and the power of visualization. Can you picture things you have seen and both draw and describe them in some detail — a church, an apartment block you saw on holiday, even your own home ?

Do you enjoy doing practical, creative things ? All of us have some natural aptitudes and if yours result in the construction of useful and beautiful objects then you probably have one of the attributes of an architect. Perhaps you designed and built a special type of cage for your white mice when you were a youngster; or you have fun designing patterns with stones to make a side-walk at the family country cottage. Remember, an architect has to face the practical considerations of what materials to use — and how to use them — early in his design for a new project.

Mathematics is part of an architect's life and you will be called upon to solve structural and mechanical engineering problems involving higher mathematics. It is met, in varying degrees of difficulty, in all problems of building design from the simple carport (what materials can you use to give you the load-bearing strength for the snow-fall in that area ?) to the huge exhibition hall which has to be spanned without supporting pillars.

Taste is something you may possess, or can develop. It can, of course, be argued that taste is changing all the time and what we consider as some of the architectural monstrosities of the 19th

century were, in their day, thought to be in good taste. However, you should have some feeling for the arts and have some standards on which you make up your mind about books, movies, plays, paintings. Can you appreciate why certain Greek and Roman architecture is considered great, without accepting it as a fact ?

An architect has to be — or train himself to be — orderly and persevering. He has to handle a tremendous amount of detail and this requires a methodical approach, both mentally and physically in his office. You know that the organization of a study course can bring better results than just skipping from book to book. In an architect's office, time is money and any way you can save time helps you to concentrate on more important problems. Perseverance will be needed in helping to solve the many day-to-day questions that come up. A lot of digging, research and concentrated thought may have to go into what, on the surface, appears to be a very simple problem.

You will also have to work under pressure. Clients always seem to take weeks to make up their minds and then want your preliminary sketches within a few hours. And it often seems that a group of completely unrelated clients make a simultaneous decision to engage your services. At these times the architect will see little of his family and his social life will be virtually non-existent. But as well as looking after clients and various projects, you will also have to keep up with your reading, watching for new methods and materials, interview salesmen, learn new laws and proposed legislation affecting your profession and give some time to civic and charitable organizations.

This last demand on your time can be one of the most worthwhile because, as in the case of some other professions, the architect has to depend on his personality and his ability to inspire confidence in himself and his work in order to obtain new commissions. When you set out as a young architect you obviously have to look to your friends and contacts made through other interests for the continuing growth of your practice. It certainly helps if you are a pleasant, sociable and outgoing type of person.

At the same time, when you are talking to clients you have to make sure that they completely understand the facts and your point of view. So you have to be prepared to stand up for your ideas — but put them tactfully.

Building, painting, decorating, engineering and sculpturing are all in close relationship with architecture and the good architect could probably become proficient in any one of these fields.

But after you have studied all the qualities needed for an architect there still remains the first basic question: can you draw? The answer, of course, must be yes.

EDUCATIONAL REQUIREMENTS

To practice as a legally qualified architect in Canada you have to be registered by one of following provincial associations: Alberta, British Columbia, Manitoba, Newfoundland, Nova

Scotia, New Brunswick, Ontario, Quebec and Saskatchewan. These provincial associations are formed into a federation — The Royal Architectural Institute of Canada (RAIC).

Each provincial association has established rules and regulations setting out the requirements for an architect and for a code of professional conduct.

While it is possible to become an architect by working in an office and studying at the same time, by far the best course is to enroll in one of the seven schools of architecture in Canada, leading to the degree of Bachelor of Architecture after five to six years of study.

University entrance requirements vary slightly across the country but the standard required is generally that of graduation from a five-year high school, collegiate institute or technical school course.

Like all professional careers, it is essential to plan ahead and, if possible, you should find out from one of the schools of architecture the minimum entrance requirements by the time you enter junior year in high school. Four of the schools require honour matriculation, another junior matriculation and the remaining two the equivalent of a liberal arts degree.

High school should include mathematics up to and including trigonometry and solid geometry, a sound background in English, physics, chemistry, a modern language — preferably French both because of the importance of the language in Canada, and

because many of the better and older architectural books are written in that language — as wide a range of history as possible and courses in the humanities.

Behind all these is the driving force: the enjoyment of mechanical drawing and art and the desire to become an architect.

The Ontario Association of Architects points out that “the widening scope of the architect’s work has inevitably led to the raising of his preliminary educational requirements. The university course in architecture of five years’ duration is now recognized as the desirable minimum by architectural associations in Canada, the British Commonwealth, the United States and Europe”.

By far the greater proportion of architects registered in recent years come from university schools of architecture. The architect does not only have to be technically competent, he also has to have a wide knowledge of the foundations of human aspiration and social welfare.

The RAIC booklet adds: “Consequently the university schools of architecture are increasing the time devoted to the study of the humanities, including the fields of literature, philosophy, social and economic history and urban sociology. It is also evident that the architect cannot limit his interest to the creation of the individual building but must be prepared to give leadership in the planning and rehabilitation of our centres of population. Hence community and regional planning is now an important subject.”

It is not strictly necessary, in the legal sense, to obtain a university degree in order to become a qualified architect. The minimum requirements you will need to enter an architect's office as a junior will be senior matriculation and some training in architectural drafting. This can be obtained in a variety of ways: from a technical institute where you can also take a two or three year course specially designed for junior draftsmen, from a technical school at secondary school level or from evening school courses.

With private study and hard work it is possible for the architectural assistant to obtain enough proficiency in design and construction to sit for his provincial examination. It is estimated that the time needed to reach this point is between 10 and 12 years after completion of a secondary school course.

If this is the path you choose to become an architect a minimum syllabus study has been prepared by the RAIC and adopted by all provinces with the exception of Ontario and Quebec. A copy of this syllabus can be obtained through the secretary of the architectural association in your province.

But generally it is felt that if you can go to university, even at considerable financial sacrifice, it is by far the best course.

PREPARATIONS FOR A CAREER

The good architect probably learns as much outside of university and office as he does inside. There is no reason why, having

decided at high school to become an architect, you should not get some practical knowledge as soon as possible.

Since architecture is based on building, you should take a summer job in this field where you can come in contact with architects and architecture, builders and buildings. You can work on the plan desk, in the time office, as a labourer — at almost any job because you are young and it is all experience.

At the same time there is a tremendous amount of background knowledge that can be absorbed before you take up any formal training in architecture at all. Go to the local library and check through the rows of books that have been written about all aspects of architecture, ancient and modern. Then look at an equally wide range of books on the fine arts and work out a reading course for yourself.

The architect is essentially a creative man and an appreciation of the fine arts, stimulated by visits to museums and art exhibitions, will help to develop your sense of creativity. Practical work at home, on all kinds of hobbies, helps you to develop the feel of materials.

In more leisurely times it was usual for the budding architect to take a trip to Europe and study the architectural wonders of the the great cities. Do this, by all means, even with very limited resources, but after you have been through architectural college or have a solid background of work in an office. You will gain a lot more from such a tour when you know how to evaluate the work of previous generations.

Concentrate your classroom work on general science, mathematics and all kinds of drawing. In architecture you will often be asked to discuss your ideas with various groups of both architects and laymen. Go into the school debating society and learn to express yourself before other people.

As you progress through university, or your planned career in an office, you will continue to work in the construction field and, in fact, should take every opportunity to help in as many trades as possible — plumbing, carpentry, electrical fitting — and even in the supply trades such as lumber merchants, ready-mix concrete suppliers and steel fabricators.

UNIVERSITY AND ON

In the seven schools of architecture in Canada during the 1962-63 academic year there were 805 registrations, with a total of 109 graduating.

The schools which offer a course of study leading to the degree of Bachelor of Architecture are: —

The University of British Columbia, Vancouver — six year course, comprising three years of liberal arts including honour matriculation, followed by three years of architectural study.

The University of Manitoba, Winnipeg — five year course, beyond honour matriculation.



The professor of architectural design at a Canadian School of Architecture studies models designed by students.

Photograph by The National Film Board.

The University of Toronto, Toronto — five year course beyond honour matriculation.

McGill University, Montreal — six years, including honour matriculation.

Ecole d'Architecture de Montréal — five year course with entrance requirements equivalent to a liberal arts degree.

Ecole d'Architecture de Québec—five year course with entrance requirements equivalent to a liberal arts degree.

Nova Scotia Technical College, Halifax — four year professional course following two years of university pre-engineering or equivalent preparation, a total of six years beyond junior matriculation.

In addition to the course itself the student has to have practical experience of between six months and a year and this is usually obtained during the summer vacation. After a degree has been obtained the graduate has to spend from one to three years working under the direction of an architect before he can be granted registration by his provincial association. Only after that can he set up in business on his own.

The Ontario Association of Architects has issued a comprehensive set of notes on the educational requirements for those wishing to become registered architects in that province.

After graduation the Association requires at least three years of architectural experience under an architect, submission of a

satisfactory record of that experience and the completion of courses of study and examinations set by the Registration Board.

The Board says that it believes the "period of architectural experience after graduation from a school of architecture and before registration is of the utmost importance in preparation for professional practice." It sets 6 subjects for the registration course, grouped in pairs: architectural practice and management 1; specifications and supervision, building services; management 2, development, finance and appraisal.

The Ontario Association also has a qualifying course "designed to supplement the educational attainments of candidates who do not hold a degree or diploma from a school of architecture or university grade satisfactory to the Registration Board."

As an indication of the broad nature of an architect's training, here are the qualifying subjects from which the Board may make a selection: —

Liberal arts studies: English literature, modern history, philosophy of science, aesthetics, history of art, Canadian history.

Architectural studies: architectural design, modern architecture and its evolution, community planning and housing, structural design — timber, steel, structural design — reinforced concrete, materials and methods of construction, building services, acoustics and illumination.

Provinces accept graduates from any of the recognized Canadian schools of architecture but before registration you must complete

the two or three years practical experience within that province. Depending on the province, you may or may not have to sit for a registration examination.

The cost of a university course will run to a maximum of \$700 a year, plus board and room if you are not living at home.

ARCHITECTS ACROSS CANADA

As you would expect the greatest number of architects is to be found in the province — Ontario — where there is the greatest volume of building activity. At least, this was the case in 1962 when the number of architects in Canada, registered with Provincial Associations, was 2,522 distributed among the provinces as follows: —

British Columbia	257	Quebec	735
Alberta	168	New Brunswick	25
Saskatchewan	63	Nova Scotia	56
Manitoba	166	Newfoundland	15
Ontario	1037		

Although the number of architects in relation to the population has been increasing, the field is by no means overstaffed. In 1951 the number of registered architects per 100,000 urban population was 13.9, in 1956 it was 16.7 and in 1961, 18.8.

The building expansion has continued because of the population explosion, continued economic growth and the constant change in building needs, materials, tools and techniques. The numbers who graduate each year, and finally register, only account for those who retire and the continuing increase in population.

Of the total number of architects registered only about 25, or one percent, were women. Undoubtedly the main reason for this is that although women are quite capable of taking the university course, the period of practical apprenticeship is particularly difficult for a woman. Work on construction sites demands qualities few women like to call on. However, once she has qualified, there is no limit to the success a woman architect can achieve.

AFTER YOU QUALIFY

After you have graduated and have completed your apprenticeship, you still require further experience before you can reasonably attempt to set up on your own as a registered architect. You may continue to work for the firm with which you apprenticed, or you may join another architectural firm as an architect, and proceed to take an increasingly important role in their work as, with time, you acquire more experience. Good work can lead you to become an associate or a partner in the firm.

Theoretically, an architect can only work on salary for a firm of architects. In fact, many young architects do go to work for

the architectural department of the City Hall, or of a provincial or federal government department, or with a major industrial firm that has its own architectural division. In such posts the architect should not be employed as just another salaried employee; he should be employed as a professional, in accordance with the code of ethics and practice of the provincial association of architects.

If your ambition is to be on your own, you would be wise to have at least five years of experience as a registered architect before setting up your own firm.

To start out on your own you obviously need at least one reasonable commission. This will begin in a small way while you are working for someone else. A friend or acquaintance has a small job of alteration to be done on his house and offers it to you. By working in the evenings, or at weekends, it is something that can be handled quite easily although if you add up all the hours you put in against the fee, you realise you could probably have made more money in almost any other way! However, it was your own commission — and there is the alteration to the building to prove it.

Other small jobs like this one will come in until you find you have two or three at the same time and you cannot handle them competently and still work for the company paying your salary. At this point you have to make the decision about going into practice for yourself.

Even in starting out, when jobs are hard to get, it is important to stick to the fees set forth by the provincial association of

architects. This is important, because to do otherwise is unethical, and it can give you a bad reputation as a price-cutter. Also, sub-standard fees often result in sub-standard work, and that is no way to build your reputation as an architect.

As in the majority of professions, when you start out on your own, it can be fairly tough going. For some years you will probably be doing fairly small structures but gradually the real-estate developers will hear your name and you will move from the small store job to the shopping centre plaza and the high-rise apartment block.

The type of work, and the conditions under which you work, will also depend on your geographical location. The registration list of architects across Canada shows the greatest concentration in the industrial provinces of Ontario and Quebec with comparatively few in the less developed, rural areas of New Brunswick and Newfoundland.

A breakdown of architects in any province would show the majority of them in and around the major cities of Toronto, Montreal or Halifax. However, there are architects needed in country areas and you have to make the decision before you settle down anywhere.

Each location—rural, suburban or city—has its own advantages and disadvantages. When you receive commissions from a wide area, particularly in rural and suburban communities, you find that laws and good building practices vary to an astonishing degree. The intelligent co-operation you received from the building inspector in one area is by no means duplicated in

another. At the same time you are judged as a member of the community and people are getting to know you as much through your own personality as your work in the architectural field.

Sometimes, in a small town community, the newly-fledged architect sets up office and then has the major job of educating his neighbours and prospective clients on what he can really do for them.

You can also work in a major town or city where you will either become an associate or a partner in the firm you join — depending on your own ability and application — or start out with other architects in a partnership of your own.

At the beginning of this century partnerships were comparatively simple affairs because the problems they faced were simple ones. There were no zoning or building laws, no air conditioning or complex electrical or plumbing problems and no real need for commercial planning. Then the architect spent his time primarily at the drafting board and occasionally went to inspect a job in progress.

A partnership of architects today has to handle so many complex problems that the tasks are split into sections between the partners, associates and key men. There will be a partner to look after the business end of the practice, another for construction and specifications, others in charge of the designing and planning operations in the drafting room and possibly another to look after codes and laws. In the overall organization of the firm there must be communication between all these sections so

that the work flow on commissions coming through can proceed steadily.

Architectural firms today are also forming associations with efficiency experts, lawyers and economists in order to meet specialized needs. Within the firm you, too, will probably become a specialist. But whatever you do after you qualify will depend largely on yourself and your own proven abilities.

After a number of years of practice you may find you have become a specialist, although no specialization is taught in architecture. Obviously you cannot become an expert in designing all types of buildings and, in any case, you will recognize that you have limitations in certain areas.

Engineering is broken down into various branches such as civil, structural, electrical and mechanical and doctors and dentists can study to become specialists in certain fields. An architect becomes known for his hotel or apartment building designs and similar work begins to come his way.

There are instances in North America of one architect famous for his conceptions of synagogues and another, Harvey Wiley Corbett, who was noted for skyscrapers. When an architectural firm specializes in a particular area they will often turn down commissions which are far outside the area, explaining the reasons to the client and recommending him to a firm that does work on similar buildings.

INCOME AND OPPORTUNITIES

For the services he provides the architect receives a fee based on the cost of the building or complex. The services cover preliminary sketches, plans, specifications, details and supervision of the work until the job is finished.

For this work the architect's fee ranges from five to 10 percent of the building's cost, the percentages depending on the type of building. There are exceptions, of course, and the architect is at liberty to enter into other methods of computing payment with his client. But whatever they are the fees should be the subject of written agreement with the client, and in accordance with the standards of minimum fees established by the architectural association.

Out of the fees he receives the architect has to pay his draftsmen, office staff, office overheads and for the services of any consulting engineer he employs. The RAIC suggest that in normal times, after paying expenses, the architect practising in his own name is left with a net income of between \$5,000 and \$10,000.

This range of income probably represents the first ten years of practice on your own account after registration. During that time you will be building up the practice, re-investing money and generally doing everything you can to improve your status and acceptability within the community. With bigger commissions, good staff and a sound grasp of business principles there is no reason why this net income figure should not be between

\$12,000 and \$15,000. However, it is important to remember that building — and therefore your income — is greater during times of prosperity and decreases when there is a depression, or just a slow down in economic growth over a long period.

There are a small number of architects who make considerably more than the average but architecture alone never made anyone a millionaire. You will certainly have sufficient income to live decently but if your main aim is to become rich, then it would be better to find another way of doing it.

When you graduate from university it will probably take six months before you are of any real value to the architect who employs you. But you can expect to receive a salary of \$75 to \$90 a week and this will increase with experience. The top salary you will get as an employee will be between \$150 and \$200 a week. After that you either start your own practice or join a partnership.

After you have been with an architectural firm for several months your ability — or even lack of it — will be recognized. Because architects, and budding architects, are valuable and not too easily come by your salary will go up at a reasonable pace. It is realized that industrious, intelligent, competent and satisfied young men make for a good and efficient office.

If you join an architect's office from secondary school the starting salary will be \$30 to \$40 a week. The graduate of a technical institute will begin at \$60 to \$80 a week. Increases will come with experience. An architectural draftsman will

eventually receive \$90 to \$125 a week. These figures are approximate only. Actual salaries paid vary from year to year, and according to the size, location and policy of the firm.

RELATED FIELDS

Not all architects set up in practice for themselves, although a large number start out with the idea of doing so. In fact, even though you complete your studies, obtain a degree and become registered you may still decide to turn to some related field. A sound architectural background offers probably more outlets than any other professional training because the basic study is so wide in scope.

In the field of architecture itself there are many openings available in both government and private enterprise. Almost every department of government, federal, provincial and municipal, needs the service of architects. They are recruited for such departments as housing, building research in the National Research Council, planning commissions, public works and boards of education.

There are also utilities such as the hydro-electric systems, the railways and the telephone companies. Many of the big industrial and commercial concerns are continually expanding and keep their architectural departments busy. In these kind of positions there may be a ceiling on earning capacity but there is security, almost certainly a good retirement plan, and a fairly steady

work-load that does not include some of the more hectic periods you get in private practice.

The list of jobs a qualified architect can do is almost endless. They are jobs like those of contractor and general engineer, sculptor, painter, decorator, builder, teacher and town planner. Some of these jobs may make it necessary for you to leave the field of architecture. For example, if you become a contractor, you cannot be a registered architect at the same time.

Interior designers often come from the field of architecture and in related fields such as kitchen-layout design, lighting and acoustical work, shop window and interior store design you can find architectural people. They also go into even more artistic fields such as stage-set designing and some have become famous as etchers, water colourists and lithographers.

The ability to write can lead to editorial work on architectural magazines or the ability to draw may mean that you spend your professional life putting onto paper the buildings to be presented to your clients. Several well-known architects in North America, partners in firms, have combined their artistic ability and their desire to practice architecture in this way.

Industrial design, because of its demands for creative ability, but with restrictions on size and space, presents the kind of exciting challenge that a number of architects have taken up.

When you consider the basic requirements for an architect's training it is not surprising that he can branch out in so many directions. In the course of study and work you acquire order-

liness of thinking, knowledge and practice of the arts, facility for research, soundness of judgment and the desire to reach as near perfection as you can. Such qualities are valuable, inside or outside the profession.

ADVANTAGES — AND DISADVANTAGES

Throughout his career the architect is faced with a series of problems. The solution of these problems make architecture one of the most satisfying of the professions. Because every phase of a particular building, from its conception to finished state, offers a series of new and different challenges, the architect can never complain of monotony.

The building depends on the creativity of the architect. When it is finished it stands there for generations to see. In addition to being structurally beautiful, it is also utilitarian because the architect has designed it to get the maximum for his client's money. At the same time it satisfies the needs of a number of fellow human beings. These needs can range from the excitement and comfort of a well-designed apartment house, to the enjoyment of hundreds of thousands who will use a new shopping plaza.

The satisfaction is deep because it stems from the moment the architect first put pencil to paper. From this point on, as in all the arts, the opportunity for self-expression is practically unlimited. But in addition to single buildings and projects the

architect holds the key to the pressing problems of community planning. He is responsible for the way millions of people will be living in the future.

Through the very nature of his profession the architect comes into contact with a wide range of people. He is, by training, a leader and he will be respected as such in both his professional and social life.

The architect is continually communicating his ideas to someone — a client, group leaders in the community, a builder, city officials and many more. As time goes on and he becomes more widely known as an architect he also becomes respected for his business knowledge. His opinion is of value when it comes to building investments, the suitability of a site for a particular project or the economics of a proposed operation.

Because he works in so many fields, the architect is absorbing and changing with a wider range of ideas than in many other professions. Perhaps his greatest satisfaction comes from not only solving his own problems but solving his client's problems as well.

On the disadvantages side of the ledger are an important number of items you should consider carefully before deciding to take up the profession.

The training needed to become an architect is long and arduous. You have to begin with some basic skills including the ability to draw and handle mathematics competently. These are two skills

that do not always go together. There are many talented artists and writers who cannot go far beyond adding up their bank accounts.

Once you decide to become an architect you have to spend years acquiring the necessary knowledge and you have to invest a considerable amount of time and give up any thought of earning quick financial rewards.

In this comparatively slow process of becoming an architect your course is similar to that of a doctor, lawyer or engineer. And, as with those professions, you will find that the 18 hour day is not long enough. There are many pressures in an architect's life and he learns to accept these and work with them while he is still at college.

There you must train yourself to be calm under all circumstances. If you don't, then under pressure you may make snap judgments which could cause errors, lose you clients and some of your hard-won reputation.

In practice, first as a draftsman, later as your own boss, you will often seem to be meeting an impossible series of deadlines. Your client needs weeks to make up his mind between a simple yes and no but you are expected to resolve a series of complicated problems and a mass of detail within hours.

The client is generally motivated by one major consideration — money. The range goes from the budget on a school building which is firm and does not allow for any delays or major changes in specifications to the speculative builder who has to have the

job finished in record time to prevent further troubles with the already long-suffering bank manager or finance house. These situations involve considerable manual effort and long hours, both on your part and that of your employees, and mental strain because you are trying to produce the best in spite of all the difficulties.

On the other hand the ebb and flow of work is stimulating in itself and as an architect you will never be tied down to a desk from nine to five. The physical strain can be met once you learn to enjoy the absence of routine and make full use of your leisure time when it comes along.

Architecture is affected by the general level of business activity throughout the country. As business flourishes, so buildings appear in the cities, in urban communities and in the country. Some years, in a big city, it would appear as if all the land developers and investment groups had decided to build at the same time.

In these times the services of an architect are in great demand and many of the younger men are given opportunities to prove themselves and, possibly, establish themselves professionally much sooner than they might otherwise have done.

But when a recession comes along, activity drops sharply and there is a chain reaction from the banks onwards which affects everyone in the building industry, architects, draftsmen and other members of their staffs.

However, as a professional man you will learn to weather these storms and meet the problems of the future with even greater confidence.

HOW YOU CAN GET STARTED

Before you decide on how you are going to become an architect you have to decide on whether you want to become one — and if you have the necessary abilities.

If you can make some kind of tentative decision at high school, so much the better. First, obtain all the background material you can about the profession. Go through the shelves of your local library and find out from the writings of architects themselves what they feel about their profession and what they have set out to achieve.

From a practical point of view you have to determine exactly what you are required to do before you are finally registered as an architect. Each provincial association of architects in Canada has complete control over the examination and registration of members and as the requirements for admission to the profession differ to some extent in each province you should obtain the exact details from the secretary of your provincial association.

Although you may attend any one of the seven schools of architecture across Canada you will obviously move into the province in which you wish to practice for pre-registration work

with an architectural firm. Experience in another country or province (if you want to move across Canada later on) is taken into consideration.

Full use should be made in high school or college of the services of job counsellors. In addition to knowing all the avenues of information they will direct your enquiries to local architects who can answer your questions directly and give you practical examples from their own experience. At the same time you should ask for an interview with the Director of the nearest university school of architecture, preparing a series of questions before you go to make sure all your important points are answered.

While still at high school, write and ask a number local architects if you can help in an office during the summer months. The letter should state that you are interested in architecture and would like to know more about the profession. Set out what you have been doing in high school with particular reference to architecture (art, design, mechanical drawing). Make it clear that you are prepared to help in an office-boy-messenger capacity so that you can learn something about the day-to-day work in an office.

When you send out these letters write each one individually or type an original in each case. Each architect will be giving it his personal attention and you should do the same for him.

If you get to college before making a decision about architecture as a profession then you can follow the same procedure but explain where you are and what courses you are taking in college.

Should you decide to go from high school to the drafting department and work yourself through night school, again write to architects and enlist the help of your provincial association.

In order to help you get started the following self-evaluation test should tell you something about your capabilities. It is written by Pietro Belluschi, F.A.I.A., dean of the School of Architecture at the Massachusetts Institute of Technology (M.I.T.).

1. Can you draw? An architect does not have to be a Rembrandt, but he must be able to sketch neatly and accurately.
2. Can you visualize? You should be able to describe, in words and sketches, buildings you've seen. Your school, for example, or a friend's house.
3. Do you have a grasp of dimension? An architect must have a good eye for the size and shape of things.
4. Do you have a feeling for what is appropriate? An architect should not design a railroad depot to look like a gas tank.
5. Are you good at mathematics and technical subjects? An architect must know his engineering. A mistake can cause a building to collapse.
6. Can you synthesize? An architect must be able to cope with a wide variety of information and come up with the correct solution.
7. Are you persevering? It takes a colossal amount of detail work to develop the plans for a building.

8. Can you work under pressure? An architect's work comes in spurts and he frequently must labour 16 to 18 hours a day to meet deadlines.
9. Are you a diplomat? You must be able to "sell" yourself to people. An architect must have a client before he can build anything.

THE PROFESSIONAL ASSOCIATIONS

Information of a general nature on the practice of architecture can be obtained from the Royal Architectural Institute of Canada, 88 Metcalfe Street, Ottawa. The RAIC is a federation of provincial associations. The provincial requirements for registration can be obtained by writing to the secretaries of the following associations: —

The Alberta Association of Architects,
318 Revillon Building, Edmonton, Alberta.

The Architectural Institute of British Columbia,
106-1425 West Pender Street, Vancouver, B.C.

The Manitoba Association of Architects,
909 Electric Railway Chambers,
213 Notre Dame Avenue, Winnipeg 2, Manitoba.

Architect's Association of New Brunswick,
13 Germain Street, Saint John, N.B.

The Newfoundland Association of Architects,
Box 365, St. John's, Newfoundland.

Nova Scotia Association of Architects,
5230 Tobin Street, Halifax, N.S.

The Ontario Association of Architects,
50 Park Road, Toronto, Ontario.

The Province of Quebec Association of Architects,
1825 Dorchester Blvd., West, Montreal, Que.

The Saskatchewan Association of Architects,
2426 Hanover Avenue, Saskatoon, Saskatchewan.

FURTHER READING

BOOKS:

Architecture as a Vocation: Royal Architectural Institute of
Canada, 88 Metcalfe Street, Ottawa.

Architect — Creating Man's Environment: Robert W. Mc-
Laughlin. The Macmillan Co., 1962.

Your Future in Architecture: Richard Roth, A.I.A., Richards
Rosen Press, 1960.

JOURNALS:

Journal Royal Architectural Institute of Canada — official organ of the Royal Architectural Institute of Canada.

The Canada Architect — Southam Business Publications Ltd., 1450 Don Mills Road, Don Mills, Ont.

Specification Associate — official organ of the Specification Writers Association of Canada, 57 Bloor Street West., Toronto 5.

Architecture-Batiment-Construction (published in French) — Southam Business Publications Ltd., 1601 St. Alexander Street, Montreal.

ANNUALS:

Architectural Directory Annual — the Royal Architectural Institute of Canada.

Canadian Architect Year Book — Southam Business Publications Ltd., Toronto.