RESOURCE TOWNS IN BRITISH COLUMBIA:
A STUDY OF THE PHYSICAL ENVIRONMENT OF
GOLD RIVER AND GOLDEN

by

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ABSTRACT

The Problem

Over the last few decades British Columbia has experienced an unprecedented wave of economic growth which has resulted in the creation of new towns such as Gold River, Houston, Hudson's Hope, Mackenzie, in the planned expansion of Port Hardy and Port McNeil, and in the rearrangement of other communities.

The forest industry, by use of a sustained yield management system, has set examples of a stable town-building activity. It is the intention of this thesis to investigate the physical environment of two British Columbia forest-based towns, and in particular the visual, three-dimensional design resulting from resource development. The subject matter appears to be of interest, at this moment in time, because of an acquired consciousness, by many, that the building of a new town is more than a practical method for providing a labour pool to the parent industry, indeed a technique for channelling and directing urban growth in a regional context.

Method of Approach

The study attempts to examine the resources of forest-based towns. The method adopted consists of drawing parallels between Gold River and Golden, selected as sample communities. These are considered representative of the provincial trend: creation of new towns, and reorganization
of old towns.

The study is based on information gathered through direct contact with the inhabitants. A questionnaire worked out by the U.B.C. Department of Community and Regional Planning for a student project during the year 1968 was used, and the factual information was gathered as background material for a discussion on the town-forms as observed.

Four areas articulate the study: a) historical, b) factual, c) structural, and d) visual analysis. Town forms are discussed in relation to four primary elements which derive from a combination of a personal bias and of Kevin Lynch's way of looking at cities. These elements are: Nodes, Routes, Districts and Prime Volumes. They are first separately compiled and then brought together in comparison. An appraisal involving R. Arnheim's category of order, Homogeneity, Coordination, Hierarchy and Accident, summarizes the observations.

The method used relies on subjective perception and description of what can be called a "collective image" of resource towns.

The Findings

The historical analysis shows that both government and private enterprise have determined the present state of resource development and the physical form of the towns. The resource community shows clear signs of evolution, especially significant in the development of a planning attitude. The stages of this evolution are to be seen in the gradual changes
of the resource town from tent-camp to the present planned instant-town.

The analysis shows that the basic needs of community life, work, housing, and social facilities have not only been catered for, but are yet evolving. The main body of the thesis, consisting of the structural and visual analysis of the town, looks at the three-dimensional reality of the environments, and from this it is shown that the evolved towns possess many virtues which if understood could provide guidance in the building of new towns.

The findings suggest that future implementations should consider the following as necessary premises to a more fulfilling town life:

1. The success of a new town must be closely associated with the harmonious interrelation between the natural and the man-made forms, between the land and the buildings.

2. Since growth of towns can only be predicted over relatively short time spans, the practice of clearing land should be restricted to phases of development.

3. The removal of natural features such as trees and land forms should be controlled by the citizens.

4. Zoning regulations should be released with the objective of creating greater mixtures of uses, as incentive to social needs.

5. The "gridiron," as an open geometric pattern, can provide for qualitative growth. The orthogonal scheme should be more closely investigated before being discarded as old and
obsolete town design.

Older towns, which mirror the needs and are an aesthetic expression of the community, provide an opportunity for developing from "within" a concept for new towns. The plea coming from many sources and urging experimentation and development of a Canadian model must focus its validity on the need for identity. Guidelines which take into consideration local heritage can be instrumental in the creation of a Canadian new town concept.
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I  Incorporated Single-Enterprise Communities Based on Forestry
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I am sincerely grateful to the people of Gold River and Golden for their warm welcome and helpful attitude which has contributed to my appreciation of the Canadian town.

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A. Area of Investigation

Economic expansion in British Columbia has had, during the 1960's, unprecedented growth. It appears predictable, according to estimates by the Provincial Bureau of Economics and Statistics, that although there has been a marked increase in new manufacturing facilities in other industries, the forest industries will remain in the forefront for many years on the strength of recently completed and planned expansion programmes. The pulp and paper sector is growing at the fastest rate, but plywood, lumber and other forest-products industries are also experiencing rapid growth.1

The whole forest industry is therefore geared to produce the phenomenon of 'urbanization', which brings about changes in a pre-existing environment because of an increase in population, a desire for order, and a need for a space and forms to express architecturally the culture of a place at a certain point in time.

The increase in urban population has had the effect of developing, in particular, the smaller communities in the Province. As stated by Ira M. Robinson, "... despite its rapid population growth, B.C. remains essentially a province of small communities."2 This statement, combined with the above statement concerning industrial development, indicates that a great proportion of those who experience life in the smaller resource-
oriented centers decide to settle there and cope with problems of isolation, lack of diversity and population turn-over that traditionally have affected single enterprise communities in British Columbia.

When one considers the vast gamut of developing small communities within the provincial spectrum, the "instant" and the "evolved" are at opposite ends of the scale. The terminology illustrates clearly the different processes of change involved. In the instant community there is an accelerated building process to provide accommodation for a working pool, usually in the wilderness; in the evolved community there is a gradual accumulation of community structures which service a greater area than the town itself.

"Instant Towns" are created explicitly for the purpose of providing the best possible condition for a balanced family life. The instant community is remarkable in many ways, the technological achievements being paramountly evident. The display of forces, capable of bringing about radical change in the pre-existing, natural environment of setting up houses and facilities, of arranging necessary communication links, roads, telephone system, television network, is quite impressive, especially where implementation is accomplished within one or two years time. On the other hand, there seems to be the impression that planned communities fail to satisfy basic social needs. At a certain point in time, the citizens of these communities recover from the initial shock of being placed in a strange, totally new world. From the start, the peer group's philosophy is expressed
by a sort of challenging slogan: "We have got to make our town something special." As a direct result of providing the latest in modern accommodation and facilities (new houses, underground engineering, schools among the finest in the Province, large commercial centers, wide paved roads) considered in relationship to the smallness of the towns, economic over-extension appears to be a major issue.

The relative homogeneity of the man-made environment, deriving from factors such as age, grouping of similar structures, repetition of standard construction, will eventually lead some to attempt "subjectivisation" of their surroundings. In many cases these efforts are a direct infringement of the municipal by-laws established prior to the influx of people by an interim town- clerk, on planner's specifications, to protect the town from less than standard construction. Because of the position of the community in a wilderness, the nature and expectations of the people, and the social stratum, the high-class image appears false and artificially set.

The ideal community could be defined, on sociological grounds, as "... an association of individuals and families that, out of inclination, habit, custom, and mutual interest, act in concert as a unit in meeting their common needs." The "Evolved Town" expresses this conception of association in a closer way, or so it would appear from a review of community history in British Columbia. For the 19th century pioneers, the settlement in the new region meant the chance for a fresh start with the promise of a better future, especially for his children. The
settlements of this era are impressive in their spirit of collaboration and the hopefulness and creativeness of their people.

Political and economic influences have stimulated growth where the demand by the people has been met by the possibilities of the territory. The large number of "ghost communities" and "shadow communities" testify, on the other hand, an improper management of human resources and the constant insecurity of the developing centers. Aesthetic considerations are rarely, if ever, a part of the process in that they were not explicitly stated as an objective of implementation. Physically, the evolved town embodies structures expressing the various stages of development in a continuum of historical accumulation, exercising seldom a conscious deterministic scheme.

Because of the procedural differences in the planning process, the two entities are referred to as "Planned Community" and "Unplanned Community," the tendency being to identify planned environment with the design effort of a few, skilled individuals, operating within specified objectives and methods; and unplanned, as that taking place through the composite action of the whole of the inhabitants over a long period of time.

The instant and evolved towns thus exist as the product of two different and opposed "planning processes." The first expresses planning as:

... a method of rational decision-making where the means and ends are analysed and evaluated in order to achieve the best results possible by the minimum cost and the maximum efficiency.

while the latter, although not excluding official planning,
includes decisions and action by individuals and private groups. As Robert Walker puts it:

Planning ... has a much broader connotation if thought in terms of human needs. Thus it will be clear that planning is not restricted to governmental action. Practically everyone "plans."  

Applied to physical development, planning has been explained as "... a way of making better decisions about the structure of the city. It can be defined as guidance of the amount, rate, nature and quality of urban change." Two implications emerge from the above definitions:

- Town planning involves "educated choices" regarding the use and development of land, considered the medium of all human activity.

- Town form is the result of the cumulative effect of the work of many individual designers.

As architects are responsible for the formal qualities of the environment, they must take interest in the product of those town-form activities which are presently shaping the Canadian environment, evolution of the old, creation of new towns.

B. Scope of the Study

Scope of the study is to examine first the overall conditions from which resource towns originate, and then to focus attention on the physical environment of sample British communities.

The area of investigation calls for extensive study.
The range of the problem of physical development in conjunction with a harmonious balance of technical, socio-economic, and physical factors in resource areas, would demand survey and assessment of conditions by way of a large and representative sample. This study is an appraisal of the physical form of two communities, each typical of existing instant and evolved conditions in the province of British Columbia.

C. Purpose of the Study

The intention behind the study is to gain knowledge and understanding of the physical phenomenon called "resource town." Because of the limitation of sample communities, generalized conclusions are not possible, for indeed the number and the variety in typology is great. To the extent that the communities chosen as samples may be considered typical, an attempt can be made to extract basic objectives in the building of future new towns.

But above all, this presentation is a "case study" on two forms and a source of information for further investigation in the subject area of resource towns.

D. Methodology and Outline of the Study

The study is based on reference material available and on personal observation. It is not intended as "scientific research," and doesn't claim definite evaluations between instant and evolved procedures; it is to be considered as a "phenomenological" approach to the search for the visual
significance of these communities.

There are four phases structuring the study:

a) **historical analysis**, as a background to present state conditions, motivations and means,

b) **factual analysis**, a quantitative account of "locality" as determined by climate, topography, people and physical structures,

c) **structural analysis**, the sorting of the structures into the determinates of form, whereby the variety of physical elements surveyed establishes primary pattern relationships,

d) **visual analysis**, a synthesis of the three-dimensional design, involving the aesthetic character of the towns.

Restated in further detail are the above criteria.

a) The study has historical character since it proposes the investigation of what has been done, rather than what could be done. It focuses on processes which are by no means peculiar to our age, as indeed all through time cities have been built by compelling need or as need develops.

The historic account deals first with resource towns in general, then with conditions in British Columbia, and in the end with a brief note on the development of the two sample communities.

b) Town environment is our field of investigation, the structures supporting communal living being central to our interest.
Towns are places where people come together, the degree of this togetherness depending on a number of influences. However, by bringing people together, the potential of a single individual compounds itself, and facilities such as libraries, schools, playfields become possible, being dependent, for a large part, on sheer number. It isn't only the size of population which affects the number of community facilities: one must also consider locality, resources, climate, people and opportunities for people.

c) All architecture depends on the external spaces it generates. These spaces acquire different dimensions according to one's particular and personal conception, so that it would appear impossible to speak of objective visual quality. Nevertheless, one may assume a "collective image" resulting from the same basic perceptual and kinesthetic functioning, so that essential parts of one's individual conception overlap and integrate that of others.

The collective image results in the tendency to structure town environment toward group goals and objectives, so that ultimately there is a general, recognizable pattern of image factors.

In the case of a Canadian resource settlement, the structure may be that reported by ACRE Research:

... in most cases they are dispersed, two dimensional arrangements of unpaved roads and unserviced lots, with single-family houses, and a main street consisting of a few stores and public buildings. Because of the limited life of the resources to which they are related, many towns exhibit a sense of great
impermanence in their physical layout, quality of construction and the attitudes of the population. Many resource settlements have little socio-economic relationship to their region. Most towns are smaller than 10,000 population, and cannot support an extensive program of services and facilities. To overcome a number of these problems, some corporations now provide subsidized housing and company-sponsored facilities.10

The study shall attempt to establish what are the elements that form the "collective image" of resource towns in British Columbia.

The information gathered through the survey of the two sample communities may be synthesized, by considering similar uses, into primary structural components. These can be thought of as the skeletal elements whose particular relationship determine the manner in which the towns are constructed, and generate a system by which aesthetic refinements can be read. These elements are a physical fact which can be said to exist independently of any given observer at any given time.

d) If one investigates the results of communal living from the point of view of visual impact, it becomes evident that by bringing buildings together "visual pleasure" is released, pleasure no one building alone could provide. When buildings are gathered in one locality an immediate relationship arises between the buildings, their size, colour and form, and the spaces generated has a quality which has particular human significance. Ultimately, excitement and drama may arise where this significance goes beyond the satisfaction of primary needs such as shelter, privacy, and identification.
The factual analysis is structured so to consider the physical elements by categories of site, road pattern, housing, commercial, recreational, institutional, industrial and others. The intention is to extract similarities and to derive, by comparison, differences between organisms. The structural arrangement is recorded by techniques of mapping, photography, and verbal description drawn upon surveying of the towns.11

The survey stage precedes the active involvement which consists in interpreting the forms of towns by accounting for the significance of the individual elements and by considering these elements as determining wholes of greater visual breadth.

The frame of mind generating the investigation could be called "sensuous," the intention being to look at towns as pieces of three-dimensional design.

In the words of Kevin Lynch, "The creation of the environmental image is a two-way process between observer and observed."12 The image of a given reality may therefore vary significantly between observers, each being conditioned by his interpretation and organisation of the outer reality.

Ideally, the observer should enter the field of study without preconceptions, should see things anew, reconsider their meaning and then reformulate matter: reviving structures would thus be possible, since the context would be continuously renewed. However this would imply being, between one formulation and the next, passive receptors of outside stimulations. The link between behaviour and form appears as a two-way process where behaviour is inherently embodied in the form of things as
desires, motivations and other feelings, on one hand; on the other, form, once built, affects the way of life and, consequent­ly, perception. In this light, preconceptions are mere expect­ations built inside man through outside constant stimulation and through."... inborn disposition to expect recurrent patterns, or to be more exact, he (man) is always asking the environment questions." Therefore, every study of community form has im­plications of a comparative nature, comparative to all other forms of community one has previously experienced.

E. The Bias

A planned and instant community is assumed to be a better structured community. Having a small decision-making group in charge of planning and implementation is thought to assure the community of high quality results. The skills of specialized professionals who are given adequate time to plan, plus the use of the latest technologies available would hope­fully determine a viable plan and a successful physical environ­ment, much in the same way as designing a building.

On the other hand, the natural process appears to be the right way for the harmonious growth of a structure. The old city presented, to the medieval dweller, the "structural" char­acteristics of a work of art, and in this sense it is possible to state that the old city was beautiful. It was first of all the result of the collaboration, at various levels of conscious­ness, of all the people that governed, worked, designed, lived, and criticized the city, during a long period of time, often
centuries. The basis for understanding and communicating the ideas of the city were the components of "firmitas, utilitas and venustas," technique, function and form, one point on which architectural theorists have some sort of consensus.

The correlation between culture and city was full and complete, because the idea of the organism was present and instinctive in all, so that every transformation and every addition would be spontaneously controlled by every citizen. In fact the most humble operation had a traditional way of being carried out, born out of time, so slowly as to be fully understood and "spontaneously" repeated.

Furthermore, the old city had architectural structure, a tangible relationship between physical elements. The buildings did not pretend, by themselves, to be a complete entity, but each depended upon the other, and they could not be what they were without their relationship with the others.

When we consider older cities we invariably find certain relationships and elements that constitute the essence of their design:

- the frame to the whole, a precise limit to the design. This frame can be implicit in the selection of a site having strong topographical features, or made explicit by the precise man-made contrast between town and country, ultimately by the presence of the medieval town walls; and within this frame

- the focal elements, nodes and landmarks of the whole, which are together the institutions revealed and the social
structure made visible. Churches, castles and palaces represent the "positive volumes" emerging from

- the texture, a rather homogeneous layer of activities integrating commercial and industrial enterprises of family size within the continuum of residential built-up, and in respect to which

- the spatial voids of streets, squares and courtyards are the "negative volumes" acting as counterpart and comment to the emergent volumes.

Between these elements existed a hierarchy of values, the compositional strength of the entity, based on the contrast among dimensions, position, and quality.

Towns are the result of two motifs, the sociological and the aesthetic. As stated by Zucher,

... to one who believes in the primacy of ideas, there seems to be no doubt that the growing concept of man in relation to his environment and the awareness of the human scale gave stronger impetus to the shaping of space within the town than the merely socio-functional need.14

It is an assumption of the present thesis that one can discover the same impetus shaping the form of resource towns in general, and of evolved towns in particular.


10 ACRE Research and Planning Ltd., Mid Canada Development Corridor ... a Concept, Lakehead Univ., 1969, p. 16.

11 Survey Questionnaire adopted: see M. Beatty, op. cit.


CHAPTER II
SELECTION OF SAMPLE COMMUNITIES

A. Basis for Choice

The small community is a logical entity for observa-
tion: it presents itself as an integral structure, visually
comprehensible. As R. Redfield puts it: "The small community
is another of those prevailing and conspicuous forms in which
humanity obviously comes to our notice." One turns to the
observation of the smaller organisms for a number of reasons:

1) - because they may be investigated within
reasonable limits of time and energy,
2) - because, even though structurally different
from bigger centers, town structure has equal
need for both social and visual qualification.

The small community has therefore become a recognized
unit of subject matter. In the Canadian context, resource com-
munities are a most relevant topic, constituting the link be-
tween the metropolitan areas and the vast hinterland. These
communities generally have common problems stemming from such
factors as size, isolation, single resource, laissez-faire
planning attitude and lack of reference to their region. Where
one considers "locality" factors (climate and topography), im-
pinging on the communities, these would tend to differentiate
the physical outcome, while the factors in common such as re-
source and size, would hypothetically bring out relative simil-
arities.
In view of the above, the criteria for selecting, among the many forest-based communities in British Columbia, two representative towns, one instant, one evolved, is based on considerations of (1) **size**, (2) **distance from major centers**, (3) **economic environment**, (4) **decision-making structure**, and (5) **regional significance**.

(1) **Size.** A socio-cultural difference is inherent in the sheer number of people contributing to community. While the characteristics of community, namely those qualities which lead people to act in common for common ends, are not limited to groups of certain size - the family, the city, the nation could be termed "communities" - there are groups within a range of size in which efforts and interests find fullest and best adaptation to human capacity for intimate co-operation. Such communities range from a few dozen to a few hundred, or at most a few thousand persons.³

Pertaining to quantity, size sets the limit of the development, as proportional implementation of public facilities, while on quality size has less bearing, as the mores may derive from a larger cultural context. This study will deal with two centers of British Columbia, within the population range of two to three thousand inhabitants.

(2) **Distance from other centers.** Since our study deals with self-sufficient groups, considerations of relative isolation, meaning actual time needed for contacts with other centers, is essential, as the possibility to reach and be reached by others would have considerable influence on the
quantity and quality of communal life. While television, radio and other means of communication may serve to lessen the feeling of isolation, there is no substitute for personal interaction.

The factor of isolation, a generally relative term, is pointed out as an intensifier of citizen's critical attitudes. Much of this feeling may stem from the inaccessibility of the town or from the impossibility of a temporary "escape from it all." Therefore, the study shall deal with communities of comparable isolation.

(3) Economic environment. The quantity and type of economic activities, serve to stimulate local expressiveness. The two communities shall be dependent on big investment and major single employer, which is the characteristic provincial pattern within the forest industry.

(4) Decision-making structure. By taking into consideration only those communities with an official body of representation, we shall be limiting our investigation to those that have equal opportunity for implementation of facilities through borrowing power, planning commissions, and council action. The two communities will therefore be incorporated groups.

(5) Regional significance. The two communities will be chosen with regard to future regional expansion, meaning that their roles have boundaries going beyond those specific to the industry.
Incorporated Single-Enterprise Communities based on Forestry
Source: 1966 Census

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Status</th>
<th>Activity</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashcroft</td>
<td>village</td>
<td>sawmill-log.</td>
<td>1,154</td>
</tr>
<tr>
<td>Castelgar</td>
<td>town</td>
<td>pulpmill</td>
<td>3,464*</td>
</tr>
<tr>
<td>Creston</td>
<td>&quot;</td>
<td>sawmill</td>
<td>2,961*</td>
</tr>
<tr>
<td>Golden</td>
<td>&quot;</td>
<td>sawmill-log.</td>
<td>2,590</td>
</tr>
<tr>
<td>Gold River</td>
<td>district</td>
<td>pulpmill</td>
<td>2,100</td>
</tr>
<tr>
<td>Houston</td>
<td>village</td>
<td>&quot;</td>
<td>699</td>
</tr>
<tr>
<td>Lillooet</td>
<td>&quot;</td>
<td>sawmill</td>
<td>1,389*</td>
</tr>
<tr>
<td>Lumby</td>
<td>&quot;</td>
<td>&quot;</td>
<td>879</td>
</tr>
<tr>
<td>Mackenzie</td>
<td>district</td>
<td>pulpmill</td>
<td>111</td>
</tr>
<tr>
<td>Port Alberni</td>
<td>city</td>
<td>&quot;</td>
<td>18,538*</td>
</tr>
<tr>
<td>Port Alice</td>
<td>district</td>
<td>&quot;</td>
<td>1,383</td>
</tr>
<tr>
<td>Port McNeil</td>
<td>village</td>
<td>logging</td>
<td>437</td>
</tr>
<tr>
<td>Powell River</td>
<td>district</td>
<td>pulpmill</td>
<td>12,578</td>
</tr>
<tr>
<td>Prince Rupert</td>
<td>city</td>
<td>&quot;</td>
<td>14,677</td>
</tr>
<tr>
<td>Quesnel</td>
<td>town</td>
<td>&quot;</td>
<td>5,725**</td>
</tr>
</tbody>
</table>

* New incorporation or boundary changes since 1966 Census.

** Change in boundaries since June 1, 1961.
B. **Choice of Communities**

The two environments to investigate shall then be:
- small (with population between 2 - 3,000),
- isolated (relatively distant from major centers),
- forest-based, single-enterprise,
- incorporated,
- regionally significant.

A review of provincial centers (Table I, Map I) reveals that the towns of Gold River and Golden are closest to the set specifications. In fact: Gold River has at present (1970) a population estimated around 2,100. This instant community is forecast to have a population of 5,000 by 1980.

The town, located on Vancouver Island, is fifty-four miles west of Campbell River and ninety-six miles north of Nanaimo. Within a smaller radius, it functions as a service center for the company-towns of Tahsis and Zeballos, northward (Map II).

The community provides living accommodation for the employees of the single industry, the Tahsis Company Ltd. Pulp Mill, which provides the basic occupation and brings the essential revenue to the municipality. Other potential activities are seen in the tourist and fishing industry, presently in an embryonic stage.

Gold River was incorporated in 1965 as a district municipality under Section 10A of the Municipal Act of B.C., what is generally called "Instant Town Legislation." The local government consists of an elected council, a mayor and six
aldermen; it has therefore the structure of a self governing administrative body, deriving its revenue from taxation on property.

The community functions as a stopping place for those who travel north on the west coast of the island. The opening of the Kelsey Bay - Port Hardy Highway, proposed several times in the past, and now in study, would strengthen the position of Gold River as a service center for the central region of Vancouver Island.

Golden, in the East-Kootenay Region (Map III), has a population (1966 Census) of 2,590, a forty-five percent increase above the 1961 figures. The surge results equally from the change in boundaries and from the more effective industrialization of the resource.

The nearest centers are Revelstoke, ninety-two miles west, Banff, eighty-six miles east, and Kimberly, one hundred and forty-eight miles southward; its position on the Trans-Canada Highway contributes, however, greatly in lessening its isolation from other centers.

The town has evolved gradually, from a stopping and trading post, to the present role of service center for the East Kootenay Region. Basic employment is found in the saw-mill and logging activities, which, under the recent management of the Kicking Horse Forest Products Ltd., are expanding through amalgamations and full utilization.

Golden has paralleled its growth by a regular increase in official representation. From an unincorporated community,
it has moved steadily to village municipality in 1957 and to town status in 1969. The municipality has council representation through a mayor and five aldermen.

Golden is strategically located on a transcontinental and on a regional route to the south; it is therefore an important stopping point on road and railroad transportation. Furthermore, its service role is backed up by the tourist flow going to the nearby Glacier National and Yoho National Parks, particularly noticeable during the summer season.
FOOTNOTES


2 ACRE Research and Planning Ltd., *Mid Canada Development Corridor ... a Concept*, Lakehead University, 1969, p. 16.


Resource towns are an essential form of urban settlement in Canada, since their functioning is vital to the national economy and their presence permeates the Canadian landscape.

Because Canada is one of the world's leading developers of natural resources, temporary and permanent resource towns have been established, throughout history, on or near the sites of resource development. Originally most of these were located along the southern margin of Canada, so that existing resource towns are within a two hundred mile strip from the international border. More recently, the survey and exploration techniques have developed concurrently with advances in transportation and industrial technology. This has lead to the establishment of resource towns in the wilderness, in the remoter areas of Canada.

The function of resource towns, old and new, is to produce, and often process, resources such as ores or metals, logs or timber products, fish or fish products, water or electric power for the Canadian and the world market. In fact most of these towns are dependent on one of these activities for their existence, as well as their sustenance. Robinson identifies three classes of resource towns, which essentially represent three stages in their development in Canada.¹

The first to appear were tent-camps, which mostly were comprised of a cook-house, bunk-houses and tents, and were abandoned when the resource was exhausted.
The second type was the "company town" in which the parent company owned and controlled everything, including the land, stores, houses, services and jobs. Even in the case of long term development, little planning-time and effort was devoted to the creation of these organisms, which were intended as mere accommodation and had most of the social characteristic of the "tent-town" type.

Planned new towns were the third class of resource towns to appear in Canada, and, as suggested by Robinson, a number of reasons dictated their implementation. One of the most important was the tremendous financial investment required to develop the specific resource. In fact, with the introduction of more advanced technology in the harvesting and processing of the raw material, the complexity and costs involved increased greatly, and consequently developers saw the need to establish more orderly procedures. Furthermore, the advances in technology demanded skilled labour, which was to become a permanent asset in order to have a reliable working pool. Therefore, not only was it necessary to attract, but to hold, precious man-power in great demand in northern resource areas. Consequently, planners and developers felt that if work force and production was to achieve and maintain a high standard, both in quantity and quality, it was necessary to provide the resource towns with the facilities and services that are conducive to modern living. If men are to remain, it is essential that wives and children accompany them and be happy with the environment provided. Furthermore, these towns have become more widely
accepted by corporations because of their showpiece value; therefore the legislation implementing their construction has met little resistance.

A. History of Resource Towns

Even a summary excursion of the history of the Canadian resource towns reveals the diversity of conditions under which these were developed.

Resource oriented communities began to appear as early as the 16th century, when English, French, and Portugese fishermen established temporary and seasonal centers on the coast of Newfoundland. Tadoussac, in Quebec, was the first permanent settlement founded in 1599 as a French trading post and guard house. By the 1800's trading posts were spread throughout the entire present day Canada, each post being established under pioneer conditions in the often harsh wilderness.

Physical and climatic conditions, under which resource towns were developed, vary considerably due to the variety of the location throughout the continent. It seems evident that the form and internal pattern of the resource towns is determined by social factors to a greater degree, concurrently with physical and climatic restraints.

The recognition of the need for wise and orderly urban development, has widened the scope of town planning. Although all towns are in some way planned - since in a general sense the standard procedures of subdividing the site in lots and streets is a planning activity in a very simple form - the degree of
planning varies considerably. With reference to the amount of
town planning involved, resource towns may be classified with
"additive planning," "holistic planning" and "comprehensive
planning."

B. Resource Towns with Additive Planning

Nearly all urban settlements have some prearrangement
of design for streets and lots, in most cases a model to which
settlers refer.

Prior to 1919, the streets laid out by engineers and
surveyors generally formed a grid or rectangular pattern conform­
ing to the suggestions of the Manual of Instructions to Dominion
Land Surveyors. The widespread use of these patterns can be
explained by historical reasons and by the facility with which
land could be surveyed. In many cases the grid was laid over
unsuitable land and the subdivision into similar lots did not
provide for different land uses. Later additions to the original
site were brought about by simple extension of the grid pattern,
so that these towns have followed the similar process of most
city growth, by "agglutination," as expressed by Geddes Smith:

Agglutination sometimes has unfortunate
results. It produces, for instance, such
words as the Mohawk term for stove-polish:
Deyeknonhsedehrihadasterasterahetakwa.
That may be natural, but it looks absurd.
Agglutination works much the same way in
the growth of cities. One subdivision is
added to another, usually at right angles,
and you have a suburb. One straight line
is added to another, usually at right
angles, and you have a street system.5

Thus the term "additive planning" defines this class
of underplanned resource towns.

Some exceptions to this type of implementation were carried out prior to 1919, as is evident in communities in the coastal areas of British Columbia, such as Ocean Falls and Powell River, and Grand Falls in Newfoundland. As stated by Taylor, this latter community was "... a welcome change from the 'checker-board' adopted in almost every North American town, the roads curve around the hill in response to the contours." Along the same lines, the Institute of Local Government commented on the British Columbia communities by stating that "... these towns are outstanding in the emphasis placed on the provisions of open green spaces, as parks and playgrounds, large-size residential lots, and extensive landscaping." A distinctive feature was the design of the town and the plant as related units, contiguous but separated by waterways or by small green areas. All of these towns were entirely planned and developed without government involvement, solely under the incentive of private industrial corporations.

C. Resource Towns with Holistic Planning

The development of a holistic approach to town design was a direct outcome of the co-operation of Thomas Adams, a disciple of Howard's Garden City school of thought, with the Commission of Conservation, in 1913. This man, having served as Secretary of the First Garden City Company, having been an Inspector of the Local Government Board which administered the Housing and Town Act, and having also been in private practice
as a planning consultant, was highly qualified to make suggestions on town forms.

Particularly important were the repercussions of a book by Adams, *Rural Planning and Development*, in which new design concepts were introduced to the Canadian developers. The grid pattern was contended on grounds that it was necessary to introduce curves in the linear system, to add a pleasurable feature to the town: "Some regard has to be paid to beauty, to the preservation of trees and to architectural effect and, ..., relief to traffic is not inconsistent with relief to the eye." Believing also that the concept of total planned town involved public ownership of the land, Adams was convinced that since private firms were successful in having this control, it should also be possible for the government to have successful control.

The first resource town to apply Adam's theories was Temiskaming, a pulp and paper community, developed in 1919 by Riordon Pulp and Paper Company, which decided "... that the completed town should be a model industrial community which would attract and hold the best class of men." Consultants to the developer were the Commission of Conservation and Adams. The plan took into consideration many factors such as convenience of access to the various parts, economical and hygienical elements, thus achieving a certain degree of holistic planning.

Kapuskasing, another pulp and paper community built in 1921 by the Spruce Falls Company Ltd. under a joint agreement with the Ontario Government, shows the complete embodiment of holistic theories. The adopted plan:
zoned the town into a temporary business area, a permanent business section, an industrial area, a residential area, and a municipal and urban zone limit of unsubdivided land surrounding the town-site proper which would make it difficult for houses of undesirable type to be erected in the immediate vicinity of the town.\textsuperscript{14}

The distinctive properties of this phase of designing towns were: the provisions of zoning of land use, the attention given to areas of future expansion, and the implementation of a green-belt to act as a buffer to absorb expansion while trying to prevent fringe development.

D. Resource Towns with Comprehensive Planning

After World War II, resource activities had a major boom period, and many towns were developed on old and new principles. Robinson has listed 50 resource towns which were built between 1945 and 1958,\textsuperscript{15} among these the most important were Kitimat and Kemano, in British Columbia, Grayton Valley in Alberta, Uranium City in Saskatchewan, Langley in Manitoba, Elliot Lake and Manitouwadge in Ontario, Schefferville and Chivougama in Quebec. The planning and development of Kitimat represented the most notable venture not only for its size, but also for the care and extent of economic and social planning embodied in the physical design.

All these new towns were implemented on the basis of greater responsibility assumed by the Provincial Governments, which set out special legislation to deal with the initial staging. Amendments were made to the Quebec, Ontario and Manitoba
Municipal Acts, while Alberta passed a comprehensive New Town Act; British Columbia also enacted special legislation in order to incorporate Kitimat as the Corporation of the District of Kitimat.

It appears that all these towns have a similar form, that of suburban development. While the theories underlying their development and design were originated in other countries, and therefore were pertinent to different conditions, a Canadian model failed to evolve. These towns have been criticized for not having a higher density to meet the severity of the climate and the topography characteristic of most northern resource areas. Critics have argued that elements more appropriate to the Canadian north are needed, and that the greatest loss in the construction of resource towns has been the forfeited chance to experiment.

E. Government Policies

If one considers the extent of government commitment with respect to resource forest-based communities, one would likely conclude that it has influenced their development through forest tenurial policies. Obvious reasons for this involvement are:

- investment, in the name of the people, by the provincial government,
- changes taking place in the industry are in part a direct result of government policy-making,
- the forest industry is the most important economic
activity in the province,

- the forest industry, unlike other extracting industries, provides a base for permanent communities.

Before 1871, all land was considered to belong to the Crown, and a Colonial Administration supervised the distribution of all land rights. After Confederation, this became a government function, and, as this authority grew aware of the potentials of forest management for determining settlement patterns, a step-by-step process of decision-making took place in order to assure forestry a more stable economic role. "Permanent Alienations" gave way to "Temporary Alienations," and "Leases" and "Licenses" were dropped in favour of "Timber Sales," which provided greater income to the government.

Momentous in creating a stable community life was the establishment of "Tree Farm Licenses," operated on a sustained yield base of balanced annual growth and annual cut. In order to provide incentive to operate on a sustained yield base, the government increased the holdings of the private licensee with sufficient adjacent Crown Land to compensate for the necessary reduction in cut and the higher cost of operation for reforestation, silviculture, and fire control.

In 1965, the government, by amendments to the Municipal Act, fostered development of larger areas by establishing "Regional Districts," with the purpose of providing services to areas larger than the single municipalities. "Regional Districts," "Regional Hospital Districts," "School Districts" and "General Improvement Districts" are the foundations of government
action and commitment.

The most purposeful and direct tool of town implementa-
tion has been the "Instant Town Legislation," specifically en-
acted to provide local government and community representation
from the beginning of the development, resulting in the break-up
in the pattern of the stagnant "company town."

F. Natural Distribution of the Resources

The province has an area of approximately 234 million
acres, of which sixty per cent is classified as forest land,
broadly designated as the Coastal Area and the Interior Area.

The Coastal Area, which runs north-west to south-east
and intercepts most of the humid winds from the Pacific, is com-
prised of Vancouver Island and the coastal zone up to the summit
of the Coast Mountains. This area has the most valuable timber
stand.

The Interior Area is the central and eastward part of
British Columbia, where the climate is more continental and pre-
cipitations are greatly reduced; thus one finds here a thinner
forest of smaller trees.

On the coast, the principal species are Douglas Fir
and Western Larch, while in the interior Engleman, Spruce,
Yellow Pine and Western Larch are more common. The trend has
been in both areas towards centralized operations, although in
different proportions. To summarize the phenomena:

- The small operator, a traditional figure in the
  Interior Region was the one to suffer most during the depression
so that in the majority of cases he was forced to sell to the bigger, more successful competitors,

- The more irregular terrain and the larger timber on the coast required heavier equipment than that used in the interior. This meant an initial capital investment beyond the possibilities of single entrepreneurs,

- The technological improvement involving multiple use and full utilization of lumber has meant that smaller operations have become increasingly uneconomical.

As a result of these factors, in 1961, seven large firms accounted for over ninety-five per cent of the total annual cut in the coastal region, while in the interior the same amount was cut by twenty-five hundred sawmills of small independent operators.

Paralleling the exploitation of the resource, development patterns have been distinctly different in the two regions. The coast region has called for major investments in housing, communication and services, due to the single specialized economic base. The interior, although on a less conspicuous scale, and in spite of its less abundant resource, has had a progressive accumulation of community structures. Traditionally, this has meant instant communities of one-industry type being built on the coastal district by private interest groups, and the establishment of group settlements in the interior region, with a variety of economic potential, ranging from outpost to minor industrial centers.
G. **Historical Background of Gold River**

The region, known as the Nootka Sound Region, is the birthplace of British Columbia's history. First the Spaniards, and later the English, established trading relations with the Nootka tribes. The commercial goods sought were otter hides, which at one time became so important as to induce Spain to claim its rights to the coast, leading to the Nootka Convention in 1795.

As a direct outcome of the 1938 gold rush, an unprecedented influx of people established the first center of some importance and stability at Zeballos. Here logging activity began around the turn of the century, but it was 1938 before it became stabilized around a sawmill which gave the area a steady operational base, later expanded by the construction of a modern mill at Tahsis, in 1952.

The merging, in equal partnership, of the East Asiatic Company Ltd., of which the Tahsis Company Ltd. is a subsidiary, with the Canadian International Paper Company, opened a new era; it was decided to expand operations by building a pulp-mill on the mouth of the Gold River. Work on the plant began immediately and it therefore became urgent to provide adequate accommodation for the Logging Division operators and the pulp-mill operators, shortly to follow.

The best possible site was found at the junction of the Herber and the Gold River, formerly the campground of an inland tribe traditionally in conflict with the Yuquot Indians of the coast, competing for the rich fishing grounds at the
mouth of the river. By the second half of the 19th century the
two groups united at Friendly Cove, where they settled in the
late 1890's.\textsuperscript{19}

The Tahsis Company, recognizing that "... no modern
large scale business can be successful without a loyal, compet-
ent and happy work force ..."\textsuperscript{20} rejected from the start the
solution of a closed community, mainly because past experiences
had demonstrated that the term "company town" had acquired un-
derirable connotations. In order for Gold River to establish
the image of an independent municipality, the developer and the
government agreed that no profit would be derived from the sale
of land, and that no property was to be owned by them within the
municipality. Under the terms of this agreement, the Tahsis
Company was to be:

... responsible for surveying and clearing
of the land, planning and subdividing streets
and lots, construction and paving of streets,
including curbs, construction of a complete
storm sewer system, installation of street
lighting and underground cables for electric-
ity, telephone and television, and the dedi-
cation of all parklands designed by the town's
designers.\textsuperscript{21}

The area marked as section "A" on Map IV was cleared
in February of 1965, and the first houses to be completed and
occupied were the 45 detached single-family units on Dogwood
Crescent. Construction continued on section "B" and thereafter
in section "C," section "D," and so on, following a schedule
dicted by the need to accommodate people of different skills
as the demand for their function arose (Table II).

The logging personnel and their families were the
first to arrive in Gold River, since they were being relocated from the pulp-mill site. They occupied therefore the only houses available, those in section "A": to date this area is yet identified with the loggers, as many of them still live there. The second labour force to be called into Gold River were the technicians and the management personnel, who occupied the second stage of housing available, in section "B" and "C." Last to arrive were the operational personnel and the service people.

Paralleling the construction of homes, the town centre and other community buildings followed a similar time sequence development, determined by pressing necessity. The two schools and the shopping centre were the ones first to take shape, then came the hotel and the public safety building, the church and last the ice arena.

The phenomenon of distribution of inhabitants by occupation has lost, thanks to the high initial turnover, much of its quality of social classification.

It has been six years since the clearing of the site; since then the major task has been to achieve effective independence of the municipality from the Tahsis Company. In spite of its independent status, the town has leaned on the company for medical and recreational facilities. In turn, an interim council, appointed by the company, for several years after incorporation, cast many doubts on the self-determining capabilities of the newly created town. Since December 1968 the council has passed from the stage of appointed body to that of
a democratically elected representation. However, the presence of a single major employer continues to cast a "company town" shadow on this community.

H. Historical Background of Golden

Before the arrival of settlers and traders, the area at the junction of the Columbia and Kicking Horse Rivers was the hunting and fishing ground of two small tribes, the Shuswaps and the Stoneys. This land was so attractive to the Indians that they called it "Yoho," meaning, "it is wonderful." The abundance of game made these lands particularly sought after by various other Indian groups, so that eventually the two smaller tribes united against the powerful Kootenay Tribe. The alliance gave way to a period of undisturbed peace, up till the white man's penetration, at which time the Indians moved to the east, in Alberta, and settled at Morley.

Since the beginning of the nineteenth century the "Kicking Horse Plats," as the land was initially called, saw the passing of explorers and missionaries who were the first to contribute to the general knowledge and opening of the region. John Palliser had the exceptional task of exploring the large belt of land along the Columbia River in order to locate suitable passages for a rail-line across the Rocky Mountains.

Other pioneers of the district were missionaries such as Father Coccola and Rev. Thayer. With the coming of Confederation, settlement of the land was aided by the surveying of the country in quadrilateral townships of six square miles each,
called "sections," further subdivided into "quarter sections" of 160 acres each. The scheme succeeded in its objective of securing accurate measurement and rapid pre-emption of land for rapid settlement.  

As the rail-line advanced, settlers would penetrate the territory lying ahead, occupy their sections and wait for the crews to push through the difficult terrain.

The matrix of this pioneering society was formed by the challenging conditions imposed by the natural environment. Specifically, as observed by F.J. Turner, while all people who identify themselves with a linear concept of progress have expanded at the expenses of other developing populations, the North American has been at the expense of the natural, spontaneous environment. The frontier, quite typically, has set a condition of fluidity of social life, a process of "perennial rebirth" of society. This was almost a pathological case along the "Railway Belt," a strip of land, twenty miles on each side of the C.P.R. track, where towns followed a cycle of birth and decline as the railway, their reason for existence, moved further west.

Two such communities were Donald and Pallisar, both born out of railroad construction. They continued as small lumber centers, but within a generation faded away. Because of its position on the junction of two rivers, one of which is navigable, the abundance of natural resources, and the fertile alluvial plain, Golden has slowly but surely grown from a village to a town.
The first building, erected in the Kicking Horse Flats was a building used as headquarters for explorations of the region. The house, which gave the area the name "The Cache," was still standing years later when rail construction crews established a camp at the junction, on the north shore of the Kicking Horse. A date for the establishment of the town could be set around 1884, at which time a number of structures, more or less temporary, were gathered around the surveyed transportation line, in anticipation of the railroad. Among those of more permanent nature - all other structures being tent-type accommodations - were two stores, a saloon and two hotels.

By the following year construction crews had arrived, the land had been surveyed and the townsite subdivided into ten blocks, following rules generally applied throughout the Railway Belt:

The streets and avenues of a townsite usually cross each other at right angles. The direction of the streets and avenues is made to conform to the natural features of the ground, the avenues following what is expected to be the direction of the main traffic. No street or avenue is less than 66 feet. (Main streets or avenues may be 99 feet.)

Lots are usually made 66 ft. x 99 ft. or 50 ft. x 150 ft. When lots are laid out less than 66 feet a lane not less than 20 feet wide must be made at the rear of the lots.24

The layout (Map V) was in rigid obedience to the norms. Two factors, however, had to be acknowledged by the surveyor, thus causing variation in the usual square configuration. First, the land-use was established prior to the parcelling of the site,
TOWN of GOLDEN
BRITISH COLUMBIA
1885
Scale: 200 Feet = 1 Inch

P.H. Belanger, D.L.S.
L'Islet, 6th February 1886

The space between the red lines is applied for by the Canadian Pacific Railway as station grounds.

Dominion Land Office
Ottawa
16th March 1887
Plan of Golden 1885: Map V
Approved and confirmed
and second, the physical boundaries such as the river, had to be considered.

The town was given this abstract scheme into which buildings could be fitted without predetermination, as interchangeable as the pieces on a chessboard. In effect, form developed from influences inside and outside the community. Initiation, and subsequent development, of railroad communities was dependent on C.P.R. decisions. An example of such a community is the nearby Donald, which

... was built with all the brusqueness and extravagance which characterized the growth of the railroad. The town, it was decided, would be the divisional headquarters of the Canadian Pacific Railway; but soon it became a lively business and governmental centre as well, for it was one of the few population centres in British Columbia's spacious hinterland. Soon the town grew till it contained, probably, a thousand souls.

Alas, another of the depressions which had been seizing the country from time to time impelled the Canadian Pacific management to tighten its belt in the early 1890's. The divisional headquarters of the railroad was transferred to Field, B.C. and most of Donald vanished as quickly as it had appeared. Household belongings, homes, stores, and even the Oddfellows' Hall were loaded on flatcars and carried off. Some people journeyed to Field, many, to Revelstoke, and a number to Vancouver. And a few moved several miles south to a sprawling, brawling community called Golden.25

Directives to a pattern of development was given by the local entrepreneurs, especially by those who had interest in the function of the town as a business center:

Golden's wily hotel keepers soon created a measure of order and neatness out of
obvious disorder and slovenliness. There were four hotels: the Kootenay, the Queen's, the Columbia, and, on the opposite side of the Kicking Horse, the Russel. The managers of these brightly painted establishments prudently faced them toward the railroad tracks, and the backs, replete with saloons, toward the residents of Golden. In this way the hotelmen were able to lure the respectable clientele from the trains while in no way discouraging the patronage of the local boys from main street.26

Indeed, hotels were the largest structures in the new born community, and had various functions. The Columbia Hotel, for example, along with its fifty rooms, had a public hall which provided space for community events such as church meetings and seasonal dances. Performances by travelling groups would also be given here: hotels were therefore social focal points within the community, a sort of community center.

The functional use of this land was reinforced shortly after by smaller commercial buildings such as a tailor shop, a barber shop, a printing shop, and a Fire Hall, to cite those which established residence on the site for many years. The hotels, by being visual focal points in the landscape, contributed greatly in establishing the town as the commercial and recreational core of the area.

In November 1885, the first passenger train saw the construction crews leave Golden and move to the west, consigning the town's future to its citizens: the days of Golden as "... a wild place ... as are all construction towns, peopled with riff-raff ... all sorts of men and women such as follow in the wake of a railway,"27 were over.
SECOND EDITION (CORRECTED)

PLAN OF PART OF THE
TOWN OF GOLDEN (SOUTH)
Being a Subdivision of part of Sec. 12, Tp, 27, R. 22, W. of 5th Mer.
PROVINCE OF BRITISH COLUMBI

Scale: 200 feet to an inch.

NOTE
Bearings are expressed in degrees and minutes.
Distances are in feet and tenths.
Wooden posts planted are shown thus: •
Iron posts planted are shown thus: • • • .
Numbers of blocks are in Roman Figures thus XX
Numbers of town lots are in Arabic Figures thus 3
Bearings are referred to the astronomical meridian through the north-east corner of Section 11.

Compiled from official surveys by B. J. Jephson, D.L.S. 1st August, 1908.
Plunkett, D.L.S. 27th May, 1908.

Department of the Interior, Ottawa. 2nd. Group.
Initial housing was provided by various means, the most ingenious being that derived from the use of rail ties and sod roofs. Common to all pioneering societies in the new continent, the norm type shelter was provided by the one or two-room log cabin, averaging 16 by 18 feet in size, according to the dimensions of the available trees. The very poorest cabins are reported to have been without openings other than a door which was swung outward so to allow for more inside space. The cabin floor was finished with whatever material was available, planks, stones, or the beaten earth; a fireplace was an integral part of the structure since it gave warmth and a place to cook.

This type of housing evolved because of various reasons: the abundance of lumber, its suitability to the climatic conditions, and the mobility of the inhabitants. It provided a safe and durable shelter that any man could build in a matter of days, with few tools and a minimum of skill. The log cabin, in its essential form an outgrowth of necessity, practical and simple, mingled with the commercial establishments in the town of Golden and spread toward the southern plains in later years, when a subdivision of this area was compiled in 1894 (Map VI).

The new subdivision consisted of 24 blocks laid on the featureless terrain as the obvious extension of the former pattern: streets of 66 feet and lanes of 20 feet form a harsh nondescriptive checkerboard, with lots of 50 by 130 ft. being the basic land use units. The pattern is an almost perfect example of grid-planning, a geometrical cartesian conception.
Over and above considerations of use, it was a solution to the rapidly expanding center, and a hasty but secure sign of the equality and unity of all its citizens.

The resources of the town were promising, but not all were fulfilled. The influence of various activities, which lasted only a few years, had minor effects on the ultimate form of the town, since structures were hastily put up and hastily taken down, upon necessity. They had, however, a greater social significance, since all contributed to the establishment of Golden as a center of some continuity.

Mining, for example, commenced in 1883 by way of isolated fortune-seekers. Many claims were recorded at the Golden Mining Division, even though few ever advanced beyond the prospecting stage. The town did not give up its hope of becoming a mining center until the long and fruitless operations came to an end in 1905 with the dismantelling of two smelter plants, one in Golden, the other a mile north of Golden, neither of which had ever received ore worth processing.

As a result of the mining operations, a large parcel of land west of the Kicking Horse channel was given by the Provincial Government to the smelters' developers as an incentive to industrial implementation.

Lumbering, along with small farming, was the basis for a stable community development. The railroad directly brought Golden into being and indirectly stimulated southward expansion, by opening a market for the production of rail ties.

The "Little Mill," built in 1886 was located near
Golden and operated until 1888, at which time a bigger mill, called consequently the "Big Mill," was established as the most modern sawmill in the Kootenay area. It consisted of two sheds, a boarding house for workers, a mill store, a warehouse and an office building. It was located on the Columbia River, south of the town, and utilized logs cut in the bush by private loggers during winter and sent down the Columbia in spring time.

The mill site had also been a steamboat landing since 1886, when the advantages to be gained by establishing a river transportation facility to the south were recognized by local entrepreneurs. Goods coming from the east would go as far as Jennings, in Montana, passing through Golden, and, in order to facilitate shipments, a tram line was built in 1891 between the C.P.R. station and the Columbia landing.

Steamboating was of paramount importance in establishing the town as a trade and service center, and, while lasting only 28 years, it contributed to the settlement of the southern area along the two sides of the over-flow channel. Both the mill and the steamboat landing became an essential activity node with which the town identified in many ways:

The steamboat landing is, during the summer season, an important point ... The Columbia River Company's sawmill and offices are located at this landing, and much of Golden's prosperity is due to the business which passes over this landing.28

On summer evenings, moonlight excursions by river boat were popular. The old North Star pushed a scow ahead of her on which was a platform for dancing. Occasionally these excursions went as far as Spillima-cheen.29
At the turn of the 20th century, the town had developed a scale of social classes as the result of different opportunities in the agricultural, commercial and industrial activities. Social differentiation became embodied in the physical reality of the residential structures, since not everyone was able to make the transition from the one or two room cabin to the more sophisticated frame house, which the mill and a sash-and-door factory made technically possible.

The community was dependent on these small industries for some of their utilities:

... when the mill shut down for the night the electricity was switched over to homes in the community for use of the residents. But there was no electricity during the day until the boss' wife bought an electrical washer. Then there was electricity on Mondays. When she finally got an electric ironer, the community was supplied with power on Tuesdays also. 30

The mining company, interested in publicizing claims of valuable operations, started two newspapers in 1890. With the fading out of this industry, "The Golden Era" became "The Golden Star," the town's official newspaper to this date.

The natural geographic character of the area was substantially modified, after the "Great Floods" of 1894. The channel between the two rivers was considered a periodical threat and an impediment to the logical extension of the road system that would enable the town to incorporate in an orderly manner those fringes which had developed since construction days. The trail southward was on this side of the overflow, and, because of the strict drinking regulations enforced along
the railway line, it gained a number of establishments called "liquor houses," where whisky could be bought in spite of the law. A livery stable, some homes and a slaughter-house, near the old cemetery, were later acquisitions. The channel was filled and the road pattern that resulted took into consideration the shape of the channel. The wide civic area resulting from this operation gives local character to the abstract grid concept.

Assisted by provincial aid, the community built a General Hospital in 1903, financed jointly by the Province, in the form of a grant, and by the population of the area, as their share in order to obtain the grant. Other community facilities were made available on the same basis of cooperative action. The Public School Act, for example, made education possible on the policy of government salaries augmented by monthly fees paid by the pupils. The request of a teacher had to be satisfied by a minimum number of ten pupils, so that it was customary that every child old enough to express himself would be enrolled. However, in 1908, school population was large enough to prompt the construction of the first Lady Gray School, a four room building erected in the center of the established residential area. This facility was used intensively, with further additions, until 1954, when the present school took its place on the same site.

Churches were essential to the establishment of a community because they provided not only spiritual guidance, but also community leadership; the only other institutions which
met regularly were the Golden Volunteer Fire Department and the local Board of Trade, established in 1903.

By 1912, Golden had acquired much of its present structural configuration, although at random and thinly distributed throughout. The commercial zone north of the Kicking Horse appeared established, the wooden bridge (built many years before by the Queen Hotel's proprietor) had been replaced with a steel structure, Tenth Avenue was decisively shaping into a secondary commercial strip, residential structures had in many sections a clear rural relationship with the land, and the industry was already part of the urban form.

The importance of the industrial site on the Columbia River was curtailed in 1915 by the construction of the Kootenay Central Railway which at first determined the relocation of the tram-line but ultimately ended freighting by any other means: steamboating was discontinued and the landing fell into oblivion. A finishing stroke was given to this node by the 1927 fire which completely destroyed the mill.

Only 25 years later was Golden able to establish a permanent mill on the site of the present one. The years between 1927 and 1952 were very difficult, since the only business was brought in by highway construction: the Big Bend Highway kept the town going from 1929 to 1940, along with minor lumber and commercial activities. At this time 25 ft. x 120 ft. residential lots were on sale for the incredibly low price of $5.00 each. In 1952 the Columbia River Lumber Company, by re-opening the mill, gave the town a boost in population which had dropped
Golden - Phases of Development - Map VII
very rapidly since 1920.

Consequently expansion of the town area in the 1950's was mainly due to the increase in residential facilities, which by now were spreading to the east side of the K.C.R. line. A remaining part of the land owned by the smelter company was sold to the Golden Lumber Company during the mid 1960's and developed as a housing section for company employees (Map VII).

Thus a standard planning concept, based on the conventional pre-arrangement of streets and lots according to general surveying procedures, became a substantially concrete and identifiable organism through a long period of evolution, where need and opportunity were the basic elements in a process of community cooperation.
FOOTNOTES


2 I.M. Robinson, *op. cit.*, pp. 4-6.


7 Queen's University, *The Institute of Local Government, Single Enterprise Communities in Canada*, Kingston: Queen's University, 1953, p. 75.


10 Ibid., p. 100.

11 Ibid., p. 171.


14 Queen's University, *op. cit.*, p. 84.


18 J.F. Gilmour, "The Forest Industry as a Determinant of Settlement in British Columbia," unpublished Master's Thesis, Dept. of Community and Regional Planning, University of British


26 Ibid., p. 88.

27 Ibid., p. 28.

28 Ibid., p. 17.

29 Ibid., p. 60.

30 Ibid., p. 15.
CHAPTER IV

FACTUAL ANALYSIS: THE INSTANT TOWN

A. Location and Resources

Gold River is located on the west coast of Vancouver Island about sixty miles from Campbell River, the nearest center of some importance. The well-paved highway, recently completed, runs through scenic countryside especially in the Upper Campbell Lake and in the Strathcona Provincial Park.

The Municipality of Gold River covers approximately 2,000 acres of land; 1,200 acres are used by the industry, down by the inlet shore, for stacking and processing lumber. An "umbilical" highway connects this site with the townsite, seven and a half miles up the valley; another appendix, to the north of the town, includes the water reservoir.

The town lies at an elevation of about 600 feet, between the Gold and Heber Rivers, and adjacent to the Provincial Highway leading north to Port Hardy, east to Campbell River (see end of chapter, Map VIII). Formerly, and up to four years after its incorporation, the community was relatively isolated because of road conditions, now improved in the section eastward.

As a geographical and resource district, the area where Gold River lies belongs to the typical Coastal Area. The economic base is represented by a single major activity, harvesting and processing of wood. Some relief to the present shallow economic-employment pattern could come about by establishing better communication links with the nearby camps and
company-towns, so as to strengthen the town's role as a service center. At the present time the highway brings seasonal tourists, many attracted by the rich hunting and fishing grounds.

Gold River's industry, a sixty-five million dollar kraft mill in operation since June 1965, started with a seven-hundred tons per day production, now closer to the nine-hundred mark.

The company centers its operations on the Tree Farm License No. 19, which ranges approximately from Tahsis, in the north, to the south and east for over thirty-six miles, covering 458,000 acres, half of which is productive forest land. In conjunction to this holding, the Tahsis Company has quotas in the Nootka Public Sustained Yield Unit, lying to the west of the TFL 19.

However unlikely an economic collapse may be, because of the sustained yield management of the resource, a fluctuation in the wood-products market and in the labour-management relations affect considerably a community such as Gold River.

Another important aspect to be taken into account, in the life of resource communities, is the high turnover of population. As pointed out by reports on the forest industry, the unrest and the consequent turnover of personnel has both an economic and a social explanation:

... development of new resources in or near smaller cities and towns and in remote thinly populated areas have generated ... more new employment in this province than has the expansion of secondary and tertiary industry in or near the main centers of population ... Frontier areas also attract, among others, the restless
and dissatisfied elements who have become impatient with the conservative norms and the economy and social inequalities of the older and more settled regions of the country.¹

Occupational mobility during 1969 brought the turnover figure to 69.4 per cent, reduced in the following year to a 30 per cent level as the result of the economic slow-down in the province; consequently, it can be expected to grow and decrease as opportunities grow and decrease in other industrial sites.

It is estimated² that at present 85 per cent of the working force is engaged in basic industry, comprised of mill-workers and logging operators, while the remainder is engaged in municipal, educational and other service activities.

The job possibilities for female and young people are therefore scarce, and whatever openings were available at the beginning have already been filled. Consequently, the younger population tends to take summer occupations in the bigger centers, adding considerably to the fluctuation of population living at any one time in Gold River.

B. Population

The present population is given at a round figure of 2,100, with a percentage distribution indicating a preponderance of the 25-30 age group. Gold River is a society of young people, with the average age estimated at twenty-seven. It has been observed that "Most northern towns are young people's towns. Birth rates are high and the average age low. Young
people are often the only ones who'll go north."\(^3\) This seems
the case in Gold River, where the two school principals are
both thirty-two, the general practitioner twenty-nine and the
mayor forty-four.

At a certain point in time in the planning stage of
the community, this was optimistically conceived as a center
for eleven thousand people. While this figure could be taken
as a hopeful future goal, the present one, based on the employ­
ment capability of the pulp-mill, is proximate to the 2,494
established as initial population (Table II).

The ethnic background of the inhabitants is essenti­
ally Canadian, with a great majority (eighty per cent) coming
from British Columbia, and most of these from other company and
pulp-mill towns.

To summarize the characteristics of the inhabitants,
we may say that the population is:

- rather homogeneously composed of middle class,
young, married couples with two to three children, and

- from within the country, a good percentage origin­
ating from other small resource centers in British Columbia.

The younger people (Fig. 1), a true resource to the
town, appear to accept Gold River with great enthusiasm. Espec­
ially those between the age of ten and fifteen are conscious of
an environment which provides them with personal freedom,
friendliness, and good schools.

The greatest contrast to the homogeneity of the popu­
lation structure is provided by the natives, many of whom have
come to seek employment at the mill. Most of these native families are living by the shores of the Muchalat Inlet and only one family has chosen to integrate into the greater community (Fig. A2).

C. Climate

The southern portion of Vancouver Island, and the nearby smaller islands, have the most salubrious climate in Canada, because of the combined influence of the Pacific Ocean and the Coastal Mountains. All along the West Coast of Vancouver Island there is the least fluctuation of temperature, with the greatest differences to be found between the windward and the leeward sides of the Island Mountains.

Gold River has the characteristics of the Outer West Coast Region, and the main features are:

a) Temperature - The annual average lies between $17^\circ$ and $20^\circ F.$, with mean daily readings of $30^\circ$ in January and $65^\circ$ in July.

b) Precipitation - The annual rainfall in the Gold River area is averaging 100 inches, with means of 10 inches in August and 40 inches in December. Of the total precipitation, only less than five per cent is snow, which falls during the months of January and February. Snow depths are variable depending on the overall conditions of the weather, especially on the warm wind blowing up the Gold River valley, even in wintertime.
During the winter of 1966 snow depth was 4 inches, in the following winter 14 inches and in 1968 it piled up to 13 feet in the deeper spots.

c) Winds - The prevailing westerly winds are rather strong, the maximum gusts being between 60 and 70 miles per hour. These winds bring moderate temperatures from the coast during the winter months, providing for minimum snow heights.

d) Frost-Free Days - The composite effect of frost-free days and rainfall period determine the growing period of an area. The average number of frost-free days is 200-250, while the growing period has been found to be about 225 days.

D. Social Outline

The town is a typical product of the recent efforts by large corporations to re-think the whole set-up of primary extraction and processing in the wilderness. By shedding the label of "company town" and by fostering early incorporation, it was hoped that the new social structure would relieve frustrations on both sides, would, that is, allow the industry to concentrate on production and favor the establishment of free community life among the workers. In effect, the relationship of community dependence has proved to be inescapable as long as the industry remains the sole economic and political power in the community.

The Instant Town has no poverty, no unemployment.
problems, it is new and visibly affluent: the brand new community has the best of everything, the best schools in the province, the best houses and the best of municipal services, and yet it contains frustrations, resentment and disillusionment. These feelings come to surface as economic in nature, and concentrate on issues such as the freedom of choice. As expressed by members of the community, "... the 2,500 residents are a group of captive consumers." 5

A more moderate view holds that the establishing company has been successful in many ways, in the efficiency of the development, in the provision of adequate services, in the allocation of desirable land uses and functions, and that "The company is nothing but a booster rocket that puts the town into orbit." 6

The local council operated most uneasily during the first years, since its dependency on the company was openly voiced. In 1969 the appointed council was replaced by a liberally elected representation, thus removing a source of constant friction.

Other sources of unhappiness are inherent in the size and location factors, and could, with all probability, be removed by attracting other industry into the area, by providing for greater diversity, choice and security.

With reference to the present situation, diversity and choice appear to be most needed in housing when one considers that all accommodations are necessarily new, similar in appearance and in price range. Since Gold River is carved out
of the wilderness and surrounded by a Tree Farm License, no fringe development may occur, and shack buildings are prevented by municipal control. All the houses built by the company appear similar, the reason often adduced that to build one type of house for the executive and another for the worker would have meant establishing social differentiation at the very beginning of the town's life.

E. Physical Elements

The decision-making team, the Tahsis Company Ltd.'s executives, the planner Mr. D.K. Naumann and the architects McCarter, Nairne and Partners, had the basic objective of creating a pleasant and efficiently modern settlement for the mill's industrial pool, primarily a family environment that would attract and hold a stable working force.

(1) Townsite:

The townsite consists of two-hundred acres of land formerly held by the Tahsis Company plus six-hundred and twenty purchased from the Province at the agreed price of one hundred dollars per acre.

Due to the particular topographical conditions of this part of the island, most of the suitable sites within a thirty mile radius from the mill, considered to be the maximum desirable for commuting reasons, were too small and would have dictated a town of high density. The site on which the town now stands was selected as the only one to offer:

- short time-distance travelling between place of
work and place of living,
  - proximity to an existing highway route so as to link the site to the island communication system,
  - an amount of relatively level ground suitable for a community of five thousand with a density of approximately twenty persons per acre.
  - favorable position with respect to direction of prevailing winds so as to minimize smoke pollution.

The site, with an average 5 per cent slope southward, is marked by two hillocks which rise to dominate other irregularities of the terrain. The two rivers, instead, are less noticeable, set as they are deep in their beds (Map IX).

The original vegetation consisted of a dense forest of Hemlocks and Douglas Firs, as can be readily seen in the remaining patches in the town and in the nearby areas. In order to allow landscaping, extensive care was needed to correct the acid content of the ground; topsoil was used for front lawns.

(2) Roads:

Streets have been laid following, to a great extent, the pre-existing topography of the site, in such a way that the resulting pattern is a system of loops scaled accordingly to the importance of the areas serviced (Map X).

The main artery, which is a section of a provincial highway, has a width of 100 feet. Called locally Muchalat Drive, it runs through the core of the town towards the lower mill-site. Two secondary loops of an 80 foot width distribute
traffic into the east and west parts of town, and residential arteries of 50 feet feed into the residential areas.

The streets have been given names that are reminders of the natural environment, such as Hummingbird Lane, Dogwood Crescent, Trumpeter Drive, or of the cultural and historical background of the area, such as Nootka Drive and Maquinna Crescent.

The street plan was designed according to aesthetic and practical principles:

- The streets follow to a great extent the topography of the site. Many of the water ponds and permanent water bodies were converted into road area, thus achieving a threefold effect: it eliminated a health and safety hazard, it kept the vehicular movement at a lower level, leaving the higher elevations for residential use, and gave the houses the enjoyment of the view and of good water drainage.

- The structural organization of the street layout and main thoroughfares restricts vehicular circulation within the residential areas; lots are serviced by minor crescents intended for local use.

- The characteristics of the road system are: a continuous black-top pavement, a total absence of four-way intersections, of service lanes and sidewalks.

- A functional hierarchy expressed by the variation of widths, and, at night, by the pattern of street lighting.

A few pedestrian paths interconnect areas of the town. The lack of any well-defined pathway appears to conflict
with the basic assumption, by the architects, that "... the center of the town would attract people to go walking, since it is within a ten minute walk from the most remote spot of the housing development." The paths more frequently used are those traced by children as they commute from home to school or to the shopping center. Other paths, which have been municipally developed, are those along the Heber River and around some of the sport facilities.

(3) Housing:

The housing pool is comprised of a variety of types (Map XI). There are:

(a) 218 detached single-family units
(b) 108 walk-up apartment units
(c) 64 garden apartment units
(d) 36 town-house units
(e) 22 condominium-apartment units
(f) 90 mobile-house accommodations.

It may be stated that the present mixture of housing forms is due to a three-fold influence; the designers, whose efforts aim at bringing variety within the unity of the development; the employees, who seem to prefer single-family detached houses of the single-storey or storey-and-a-half type; and the company's, whose influence ultimately suggests the solution, possibly the most economical.  

(a) Detached single-family units:

These constitute 40 per cent of the basic residential accommodation provided at the time of the establishment of Gold
River. Since then, only two houses have been built by private builders; all the others being plant and mass produced.

Roughly occupying two distinct areas, west and east of the Muchalat Drive, the houses are based on five planimetric solutions, variety within the type being sought through variation of the textures, mostly cedar siding and white stucco. Diversification is further pursued by a steady change in the road alignment and a variation in setbacks, ranging from 22 to 55 feet.

The houses, which occupy lots averaging 8,000 square feet, are set in groups fronting the crescents, with front lawns used as a major unifying element. The two houses built privately soon after community establishment show the use of more expensive materials, such as stone work, and of more elaborate landscaping; but because of their number, the phenomenon has little impact on the total result. Nevertheless, it appears as a sign of identification with the town, and of pride in ownership.

The houses are mostly privately owned and the company policy toward selling houses, rather than renting them as was done in the old "company town," is not only economic or administrative, but also psychological in nature. By converting an employee-tenant into an employee-owner, many argue, a sense of responsibility is automatically produced, and, by its very nature, pride of possession is reflected in a correspondingly healthy attitude toward work in the plant. This pride and interest in one's property is manifest in many ways, ranging from
rock-gardens to a variety of front-lawn objects, down to an almost ostentatious exhibition of cars, boats, motorcycles, etc.

(b) Walk-up apartment units:
These units provide for a basic diversity in the housing stock of Gold River, catering to the economic and life style needs of the younger and of the yet unsettled elements of the community.

Set in the center of the community, in proximity to the shopping complex, they have clearly the function of suggesting a compact urban center, a quasi-downtown location.

The buildings are two and three storeys high, arranged in a way so as to divide the site in irregularly shaped court­yards which branch off from the central area, equipped as a recreational swimming pool-barbeque-sauna facility for the use of tenants.

Access to the site is gained by stairways, for ped­estrians, and by service roads, for automobiles. Parking is provided at the periphery in covered areas.

Contrasted with the higher density which gives an urban atmosphere, is a scaling down of the apartments to pro­vide a community dimension. The materials used and the design of features such as steep roofs and wide balconies give the development a human scale.

(c) Garden apartments:
These form a most interesting multiple-family house environment, combining a walk-up apartment type with a cluster of quadruple units. The term "garden" is justified by a
communal space resulting from the spatial organization of the tall walk-up structure and the lower thirteen similar units.

These are of architectural significance in the unity of the development, the sense of enclosure and the precise thematical variation they introduce into the whole of the town image.

(d) Town-house units:

Town-house units are set in rows of ten, close to the road curb, with covered parking facilities occupying the reduced front-yard space.

Located in two distinct areas of the eastern residential zone, these rather "boxy" dwellings at the entrances act as landmarks to this section of town.

(e) Condominium apartments:

The two bulky three storey buildings at the south edge of town represent an attempt to introduce apartment ownership in the residential make-up of resource towns. The experimental nature of the buildings lacks however a necessary definition of form and location. People in Gold River expressed negative response to these accommodations by commenting on the lack of identity of the "barracks," and by pointing out the fact that these were the last to be occupied.

(f) Mobile houses:

Mobile units represent the only low-cost accommodation to be found, at present, in the town of Gold River.

The mobile-home park contains a variety of units, from the simple trailer to the three-bedroom model. As the Master
Plan did not initially foresee a location for them within the greater community, this has developed on separate grounds, somewhat removed from the town.

The site, averaging lots of 40 by 100 feet, is reached by a gravelled road, and the units are serviced by three black-topped dead-end lanes.

(4) Commercial:

Commercial activities (Map XII) take place around a communal shopping plaza, where space is rented out to private entrepreneurs, with the number of firms permitted to carry on the same type of business limited to one. The arguments used to justify restriction of free enterprise is that this policy prevents amateur businessmen with little capital, or transitory investors, from setting up poor quality shops. At the present time the commercial complex is composed of stores, as well as offices and the Post Office.

The concept of the scheme was initially based on the example of "village market," on the type to be found in towns such as Carmel or Monterey, in California, the attempt being to have "... potentials for rich and varied spaces, contrast of character, humanized scale in buildings and spaces, flexibility and adaptability which in time will permit an outstanding town center."9

Even though the proposal has been drastically reduced to the actual carrying capacity of the population, the shopping center has retained the qualities of human scale and architectural compatibility with the greater environment.
The hotel, to the south of the commercial plaza, is a structure similar in character to the shopping center. Developed on one level it has low white walls, and dark gabled roofs covered with cedar shakes.

Both the hotel and the shopping center are provided with generous parking area, divided into various terraces following the slope of the terrain. Future landscaping will eventually break up and screen these areas, now overwhelmingly barren. Where the Muchalat Drive joins the highway to Campbell River, two service stations form a "fringe commercial" area, thus completing the business activities of the town.

(5) Recreational:

New towns cannot rely on the institutions traditionally responsible for organizing leisure-time activities, as in the well-established towns of equal size. Thus, there is a pioneer atmosphere because of the lack of hierarchical structures. Recreation, at the social level, is impressive because of the number of groups and the amount of activities taking place, although many complain that the same individuals are found in the different groups.

The community of Gold River is endowed with a billiard-bowling hall, a library-community hall, and a recently built ice-arena. These recreational buildings are poorly designed and of inferior standard compared to that of other buildings. The ice-arena and the community hall occupy isolated locations, while the billiard-bowling hall is at the borders of the shopping center with which it forms an architectural whole
Community gatherings are held in the school gymnasium or in the smaller community hall, depending on the attendance number. The existing facilities are therefore integrated by the use of the educational structures.

Since Gold River is surrounded by plenty of open space and wild life resources, the town has been planned without significant green areas. However, within the town boundaries one finds Peppercorn Park, a small picnic area along the banks of the Gold River. A steep, unpaved road leads down to this site where the natural flora has been left untouched, in sharp contrast to the signs of heavy exploitation on the opposite side of the river.

Three play areas, within the residential sections, and a sports field at the core of the town appear to be hardly suitable to satisfy the needs of the younger population. However, the development of a larger sport complex south of the Heber River is being planned.

(6) Institutional:

The concept of "community" is expressed through institutions such as schools, churches and municipal buildings, since these are the essentials of a self-contained group.

The local church is a small structure shared by the various denominations, located near the center of the community, but somewhat removed (Map XII). At first glance it would appear that the church is a minor institution, since the location and the architectural design of the building have minor
relevance.

The low white structure of the Public Safety Building, designed to lodge the offices of the Magistrate and Court, of the R.C.M.P. and of the Fire Department, is being also used as temporary municipal quarters. Fronting the Muchalat Drive, its location is such that it actually extends the community's facility spine to the extreme northern boundary of the site.

By far the most significant buildings in Gold River are the two schools which are part of the "Vancouver Island West, School District No. 84." These represent a heavy investment by the Municipality, the Tahsis Company and the iron mine and concentrator at Zeballos, in the educational role of the town, which is expected to service the developing area of the central western coast.

The elementary school located in the northern part of town, designed for a student population of 450, is presently being used by only 350 pupils. The design concept stresses the adaptability and flexibility of the internal spaces by way of movable partitions used to create spaces according to need.

By far the most appealing structure is the secondary school, where materials and forms are combined in a handsome building of clear volumes. One volume contains classrooms and offices, laid out in a traditional pattern; the other the gymnasium. The audiovisual means, the laboratories and workshops, the artificially controlled indoor environment, produce a highly specialized facility. Conversely, its location on the extreme southern end, combined with the strict rules which govern its
use, make it somewhat detached from the community's life.

(7) Service area:

Two service areas are found south of the townsite, one for light industrial and service enterprises, the other used as a municipal garbage disposal (Map XII). At present only one building, that of the janitor service, occupies the light industrial area.

(8) Open land:

Building techniques and methods of implementation involve, in the creation of an instant town, factors of strict practical consideration such as deadlines, costs to the developers, cost to the community, and allocation of land for future uses. Especially these last two factors suggest the practice of "clearing" the land from undesirable features and unsuitable natural forms, a "clean-sweep" solution. The justification generally given for such practice is that any such operation undertaken in the future would cost the municipality a great more money than if carried out right at the start.

In the case of Gold River, the voids resulting within the town layout are of substantial amount, and constitute a physical element in their own right. The shape of this open land has undefined boundaries since it is part of an "open town" structure. It may, therefore, take a variety of configurations at the periphery where it meets the residential land and at the core where it is relieved by the presence of the town center (Map XIII).

A distinction can be made between what is generally
called open space and what is intended here as open land. Open space, at the urban scale, is any land within the residential area which is used for some recognizable purpose and is somehow structured for use. This can be a playfield, a park, a parking lot - all areas larger than the purely incidental space which cater to some communal need for greater space. Tree land constitutes a class by itself, since it provides a visible function vital to the community, although it may not be used as parkland.

Conversely, open land is that which is used sporadically and is thinly distributed. In open land the texture of a town has a minimum of structural and visual meaning. The essence of an open land, in the context used here, is its character of substantial emptiness, of ground not being acted upon. (9) Tree land:

There are many reasons for preserving and planting trees within major centers, where density of population competes for space with natural greenery. The argument proclaimed for this sort of return-to-nature attitude, to provide hygienic and visual pleasure, does not generally apply to centers which by their location and their size are constantly in contact with the greater outdoors.

In Gold River, clearing the site was not merely a technical procedure to facilitate construction, but equally a matter of relieving the monotony generated by the abundance of natural features in the immediate surroundings. It was argued, by the planner, that to contrast the evergreens, it was desirable to landscape the streets and communal areas with deciduous
species.  

There are, however, a number of tree patches which are a relevant feature and therefore form a category of physical value by itself. Within the natural site boundaries, flora consisting of Douglas Fir and Hemlock, although small in size because of the acidic soil content, form a rather thick body of hedgeforms (Map XIV). These accentuate the borders of the town towards the rivers and the highways, and appear as a link between the internal man-made environment and the larger external wilderness.

Three small patches of trees occupy land toward the center of the town, forming isolated motifs of relevance, which contrast the all-pervading openness at the center and recall the natural countryside.

Artificial landscaping has taken place along the town streets and within the parking spaces of the shopping center and the hotel; these trees however are still too small to be of much significance.
FOOTNOTES


5 The Vancouver Sun (June 10, 1968), p. 68.

6 Pat Carney, "All The Best and Uncertainty," The Vancouver Sun (June 3, 1967), p. 32.

7 Morris Beatty, op. cit., p. 28.

8 Queen's University, op. cit., p. 140.


10 M. Beatty, op. cit., p. 9.
CHAPTER V

FACTUAL ANALYSIS: THE EVOLVED TOWN

A. Location and Resources

Golden is situated in the interior of British Columbia, in the East Kootenay Region, within the Rocky Mountain Trench, on the shores of the Columbia River where it meets the Kicking Horse River (see Map XV at end of chapter). The town has long been a stopping point, located as it is just west of the continental watershed which divides British Columbia from Alberta. By air it is approximately 350 miles north-east of Vancouver and 120 miles north-west of Calgary, while the closest center of any relevance is Revelstoke, a community of 8,000 people, 92 miles away by road or rail.

Set at an elevation of 2,580 feet above sea level, the town enjoys proximity to the Rocky Mountains, which rise abruptly to elevations ranging from 10,000 to 11,000 feet, forming to the east the continuous wall of the Van Horne Range. The lower slopes of the Selkirk Mountains which reach the town-site consist of volcanic and sedimentary rock extensively metamorphic, the source of numerous ores and minerals.

Vegetation in the region consists largely of mature forests, and to some extent, of productive farmland. The area, the most heavily forested in the Kootenays, has a variety of species, Cedar, Hemlock and Douglas Fir being dominant, though Pines, Spruce and Birch are also represented. Poplars and Willows form the sub-forest especially along the water courses.
Forest cover thins out at about 5,000 feet and over the 7,000 mark trees give way to some alpine meadows.

Agriculture is carried out locally on small holdings and products are marketed in the district. The area immediately around Golden is a fertile alluvial fan plain, into which the Kicking Horse waters periodically overflow. The greater amount of rainfall in the northern part of the Rocky Trench produces a loss in the soluble nutrients of the surface layers of the soil, so that the terrain is somewhat acidic.

The town, as the center of a small trading area, serves, with its twenty-three retail establishments, the nearby villages of Parson, Donald, and Field, and also some fringe unincorporated communities, all within a thirty-five mile radius.

Its location on a major highway junction, backed by railway development, has given the town the function of a distribution center historically evolved from the era of river transportation. Concurrently, tourism has gained momentum with the opening of the Roger Pass Highway, and is likely to provide diversification in the economic base. At present, traffic is especially heavy during the summer months when motels, hotels and restaurants are busy with scores of tourists; this, in turn, provides summer jobs for students from the community. However, this phenomenon is seasonal in character, ranging from a high of 15,780 vehicles travelling westward during the week ending July 13 corresponded to a low of 707 travelling westward during the week ending January 19, in 1963.¹ Tourist traffic, of a transient nature, has also the effect of increasing prices seasonally,
so that the overall economic benefit is levelled off.

Notwithstanding the above factors, Golden is still a single-resource, single-enterprise community, where the forest industry, namely the Kicking Horse Forest Products Ltd., occupies 80 per cent of the working force. The Kinbasket and the Windermere public sustained yield units, along with the Tree Farm License No. 1 form the resource base of the industry, augmented by the harvesting of the Mica Dam area to be cleared by 1976.

Following the general industrial trend toward consolidation and full utilization, the local company has expanded and modernized the sawmill operations, established a plywood and veneer plant, and proposed the construction of a pulp-mill to be located near Golden. The mill would be supported by a Pulp Harvesting Area and produce 600 tons of pulp per day, thus giving employment to 200 or more men, and providing several hundred more jobs in the woods.

The Kicking Horse Forest Products Ltd., an American owned company, has taken over operations established since 1887 by local entrepreneurs, and successfully stabilized production through better technology and competitive wages. It appears that these factors, plus the absence of local union representation account for an unusual history of continuous performance and avoidance of strike actions experienced by other mills in the East Kootenays during the last four years.
B. Population

Since the Town of Golden has been incorporated only recently, prior to the 1956 Census, figures on population are scarce and available only through scattered sources. These reveal that in

1897 there was a population of about 500
1913 " " " " " 953
1920 " " " " " 900
1936 " " " " " 600

while the Census shows that in

1956 the population was 1,245
1961 " " 1,776
1966 " " 2,590

The overall pattern indicates a steady increase in population with a major decrease in the period between the two wars (Table III). The trend toward urbanization in the region is evident when one compares the 42 per cent population gain by the town of Golden to the 22 per cent increase in the Golden area, or to the 25 per cent increase in the Electoral District Div. 1, Sub. A, between 1956 and 1961.7

The present population of Golden, estimated at a stable figure of 3,000 people, experiences an annual turnover of approximately 20 per cent of the working force.

Despite the predominant Canadian element, around 80 per cent of the population, the town has a distinct cosmopolitan flavor, because of the relatively large number of Swedes of earlier immigration, of French, Italians and Orientals of
more recent arrival.

Occupational mobility, being a characteristic of the industry, has affected the "old way of life," and has changed the town's previous semi-rural, social make-up. A high incidence of seasonal transients has increased thefts and disturbances without yet creating a particular problem. Instead, what appears to be an urgent issue is the need to cater to the older population which, somewhat reluctantly, has seen this community rapidly changing with the times.

C. Climate

Climatrical conditions are closely related to the macro- and micro-topography of the region. The Columbia River
follows the Rocky Mountain Trench up to Boat Encampment, then turns abruptly into the Columbia Mountains, forming a large westward curve. "Big Bend" is the popular name given to the loop formed by the river as it changes its direction from north to south. On the whole, the Big Bend area, which includes the town of Golden, is both cooler and wetter than the rest of the Kootenays, since its northerly position and the almost impenetrable mass of ridges and peaks makes it the receiver of Pacific, rain-carrying winds. However, topography exerts a substantial influence in changing climatic conditions even within short distances. Owing to the barrier effect of the parallel ranges according to a north-west, south-east direction, precipitation varies greatly: Revelstoke, for example, west of Golden, receives 150 inches of precipitation, one-third of which is snow; Glacier, located on the western slope of a mountain, experiences an average of 400 inches of snow, while Golden has a lower precipitation by being next to the last great barrier to air movement.

The characteristics of the Golden area are:

(a) Temperature - The average temperature lies between 12° and 63°F., while the mean averages are of -2° in January and 62° in August. Absolute values have been registered at a maximum of 104° in the month of August and a minimum of -51° in January, during the year 1969. Daily excursions average between 43° and 55° with highest points in the winter months.

(b) Precipitation - Annual rainfall around Golden is an average of 25 inches, with means of 2.88 inches in January and
2.40 in June. Winter snowfalls are abundant, the normal depths being around 8 feet.

(c) Winds - During winter months there are frequent inversions of temperature produced by concentration of colder winds into the valleys, while higher levels may register warmer temperatures produced by the free circulation of warm Pacific air.

(d) Frost-free days - The frost-free season begins around the last week of April, and ends around September, while the growing season has a more limited span, from the beginning of June to the beginning of September, a mere 95 days.

D. Social Outline

The area has changed from an outpost stopping place over the Rocky Mountains, to a river and rail transportation center, to the present industrial center. Strong communal ties, typical of the pioneering stage of community life, have undergone substantial change toward organized and institutionalized social interaction.

Among the fraternal organizations, the most active are the Chamber of Commerce and the Royal Canadian Legion. The first, engaged in promoting the local retail merchants, has gained in popularity by successfully attracting developers on the Trans Canada Highway frontage road (see Appendix). The second provides meeting grounds for a substantial number of senior citizens, veterans and non-veterans alike.

The population enjoys the advantages of living in a
vast natural environment, and being a big-game hunting district, many social happenings are related to outdoor living. Sports activities attract many followers, and a rather impressive number of hockey teams have flourished during the last years, sponsored by local businessmen.

The town is provided with a range of recreational facilities, some of recent construction such as the ice-arena and curling rink, others dating back to the turn of the century, as the theatre and the community center; all, however, built by communal effort.

Relationships between industry and community have generally been described as satisfactory, the only complaints being that impersonal contacts established by the new employer tend to lower the level of co-operation between management and labor which was a traditional social trait of the town.

E. Physical Elements

Golden apparently owes its continuity to an inherently strategic position within the region, a position which has allowed it to grow gradually, to adopt and maintain a role linked to the regional communication system. The river, the rail, and the road have been part of the town's way of life. The airport recently developed has added interest as a status symbol for the community.

(1) Townsite

The town is located by the Kicking Horse River, a turbulent stream which during spring thaw tends to overflow
across the southern plain and reach the Columbia River, a much wider and calm body of water. Owing to the constant threat posed by floods, the Kicking Horse has been harnessed by piles and cement dikes, the stream narrowed and the overflow channel filled by earth, allowing land to be reclaimed for town use (Map XVI).

The townsites consists of 1,372 acres of level land, part of a larger plain, contained within a valley running in a north-west, south-east direction. The two rivers, which flow over the valley floor, are therefore important physical elements of the town form, openly affecting its layout. Industrial location, for instance, is directly conditioned by the nature of the soils, and then by other factors such as transportation network.

The soil, being alluvial and rich, has been cultivated, drained where possible and family size orchards developed, establishing a pattern of visible relationship with the land.

The area around Golden had seen settlers some time before the arrival of the railway which marked the establishment of the community. Historically, sites for new towns were chosen by the Canadian Pacific Railway, first on the basis of railway convenience, and second upon consideration of real estate value. As reported by T. Adams: "The business instinct of this and other companies naturally leads them to select the townsites most useful to them - although the selection may not be the best for the public interest as a whole." Townsite development was therefore a major business venture along the policy followed
by the developing company in many other rail-head locations.

(2) Road pattern:

The circulation pattern in Golden (Map XVII) is based on the rigid, grid-iron plan which was devised, as critics said, "... to facilitate the operations of speculators in real estate." 

The Trans Canada Route sweeps across the side of the mountain, to the north of the town so that from a height of 220 feet one can grasp a view of the intricate pattern below. Highway No. 95 tangent to Golden North crosses the river and cuts through Golden South where it becomes the central artery, or Tenth Avenue East.

The grid is laid in strict orthogonal way according to a north-west, south-east orientation in the northern section, while the portion south of the river has a prevailing north-south, east-west direction.

Except for Tenth Avenue East, which is 99 feet wide, all other roads have a standard 66 feet width, from property line to property line.

Twenty feet service lanes, which follow the same pattern of orthogonal design, have been used throughout, except in the two latest developments, even where the grid has been unconditionally extended. One subdivision, instead, has adopted a "loop" layout radically different from the rest of the system.

Undertaken only four years ago, in conjunction with a new water and sewer plant installation, a paving program is being steadily implemented along with a sidewalk program. Since
there is no single pedestrian area nor conventional shopping center secluded from traffic, casual social meetings take place on the street. Sidewalks have been a long standing tradition, especially in the more central areas, where one can still find signs of the old wooden sidewalks, or "duckwalks" as they are colloquially known.

Railway tracks have typically become an example of a hard-edge boundary between areas and people, when set within a town pattern. This happens to a great extent in Golden, where the railway, parallelling Highway No. 95, cuts through the central areas establishing ground-level railcrossing and determining dead end situations. A main issue has been the crossing of these bottleneck points, and the Provincial Government, requested to ameliorate the function of the circulation pattern, has built overpasses at two points of Highway No. 95: one at the entrance from the Trans Canada Highway, the other at the exit towards Cranbrook.

(3) Housing:

The housing (Map XVIII) consists of 473 single detached dwellings, 4 row-house units, 4 apartment buildings containing 83 units, one duplex, and a large number of mobile units. Golden is therefore predominantly a single-family development where the variety of architectural expression is of the greatest order, especially in the older established areas.

Although boundaries of growth are not easily definable, due to randomness and turnover of buildings, an accurate analysis would reveal subsequent areas of expansion. An
overall distinction arises between four areas having consistent physical traits. The first in the North Golden area, contains only a few old and ill-kept residences yielding to the expansion of commercial and service buildings. Another area, in South Golden, appears to span obliquely from the bridge toward the old mill site. Houses here show homogeneity of age; generally in good state of maintenance, they exhibit a variety of styles. Built at the beginning of the century, a few larger buildings have a "mansion-house" character and dominate the street scene with a complex display of roofs and chimneys. Of particular interest are those houses showing concepts of volume and detail closer to a European style: pure volumes, geometrical emphasis by means of opening and corner details, white stucco giving greater accent to surfaces recall in fact expressions peculiar to the North-European culture, rather than to North-American. The other two residential areas, having distinct physical traits, are recent suburban type developments, located on opposite corners of South Golden.

The remaining residential area is less homogeneous because many new houses have filled vacant lots, many old ones have been remodelled or rebuilt.

Among the many forms and types represented by the older style, a local type appears to be discernible, where a hipped roof and a compact volume is combined to a long glazed front-porch. A number of these houses, strung along Ninth Street South, are set close to the sidewalk and screened by natural shrubs and white picket fences.
In these older parts of Golden pride of ownership is shown by a clear demarcation of property and a general distinction between public and private areas.

Houses in these areas show a hierarchy of social order, where the large family residences contrast with the smaller cabin-like dwellings, without determining visible boundaries of social classification.

In the two sections recently developed, houses are similar to the suburban arrangement with bungalows set at a standard distance from the curb, all parallel to the road. Large front yards - hardly a local town feature - are a common denominator among these residences. The section called "Alexander Block," developed in the far eastern section, is an expansion brought about by the lumber company that built 57 new homes for its employees in the 1960's. The attempt to differentiate this zone from the rest of the town has produced a crescent type arrangement noticeably alien to the pattern of the remaining community and to the nature of the terrain.

Mobile units found in various sections of the town, form a major class of accommodation. Those located in proximity to the secondary school are used as living quarters by students coming from outside the community, while the others provide low cost housing of temporary nature.

(4) Commercial:

Commercial activities, relating directly to the local population (Map XIX), are carried out in two areas, north and south of the Kicking Horse.
The area north of the river sells "convenience goods," such as sporting goods, furniture, clothing, jewellery and household utilities. It also provides space for the various professionals, for the Post Office, two banks, and two barber shops. Hotels are found only in this part of town, all other accommodation being of the motel type. These structures distinguish the area because of their number, their siting, or their historical character.

"Demand" goods are purchased, instead, in the new section, south of the river, where proximity to the residential area favors the sale of groceries. Two supermarket outlets, a number of service stations, and the Government Liquor Store mingle here with recreational buildings and residences. A popular enterprise is George's Cafe, both a coffee shop and a corner grocery store. Strategically located, it caters equally to the young school children, who find it along their route, to the traveller and to the community at large, being the only store which sells primary goods on week-ends. Motels are located in many parts of town; two recently built in the south section of Golden, modern and colorful provide great contrast to the older buildings.

(5) Recreational:

Despite the limited population, the continued intent to provide adequate recreation is revealed by the age of some of the buildings devoted to such activity. The Yoho Theatre (Map XIX) is the oldest, built in 1920 when the population was just around 900. Located in South Golden, close to the river,
its position within the town layout is related to the establishment, during rail construction times, of a number of "drinking places" along the trail to Cranbrook, today Highway No. 95. Together with the neighboring community hall, the theatre forms a "recreational node" of importance, all other facilities being located at random within the two commercial areas.

Three beer parlours, in the northern center combined with the hotel premises, provide public meeting places, while the local branch of the Canadian Legion is opened to members and guests.

The bowling alley, also in North Golden, is housed in a small structure facing the river. A most popular social amenity, it serves several small groups of people, popularity of the game being evident by the number of teams sponsored by local business and commercial enterprise.

Billiards are the usual past-time of the younger population, when not engaged in school or athletic programs.

The eastern section of South Golden is developed as a comprehensive educational-recreational complex, by way of outdoor athletic and indoor sport facilities combined with two school grounds. An ice-arena-curling rink has been recently added to the existing swimming pool and ball field, thus compounding the recreational function of the section. An overnight camping ground is also found adjoining this part of town.

A small public park, found at the very center of the residential area, has a position, classically that of a town "showpiece," plainly contrasting with its equipment, a few
outdoor seats and some playground facilities for children.

(6) Institutional:

The municipal hall is a small, inconspicuous green building, sited on what was once the overflow channel of the Kicking Horse. Along with the Municipal Health Clinic, it occupies a large civic area of which the nearby General Hospital is a marginal part (Map XIX).

The three educational buildings, while not particularly elaborate in design, have a close relationship to the performance of the community, in that they function as the extreme poles of a major town artery within the residential area.

An extension of the civic facilities includes the general hospital and the R.C.M.P. buildings, two institutions of long community standing. The former, established as early as 1893, has considerable weight in determining the status of the town, since, it services, with a capacity of 50 beds, the whole of the East Kootenays.

One of the most interesting single buildings in Golden is the Masonic Temple, a large two-storey structure on Tenth Avenue East, characterized by the broad roof and the fret-work on the external walls. This temple is a milestone in Golden's history since it is one of the buildings relocated from nearby Donald. In addition to its function as a congregational hall, it has also less obvious use as a liquor store.

Churches are located in South Golden and most of the older ones are house-like in appearance. Small in size, built of the same materials, painted white like most residences,
their presence is unobtrusive. The new church building instead are pretentious structures, namely the Lutheran church and the United church (Fig. 39), both on Ninth Street South.

St. Paul's Anglican Church, the first religious building in the community, is a small balloon-frame construction, erected in 1891. As it stands today, it is an example of exquisite proportions and fine craftsmanship. Because the church was built prior to the subdivision of the southern plain, the main entrance is gained from what has become today a service lane.

(7) Service areas and industrial:

The southern alluvial areas of Golden have developed into a service section requiring large space for storage and stock yards. Buildings new and old are thinly distributed throughout this area (Map XIX). The older enterprises, a trucking company and a construction firm, are housed in aged warehouses, while B.C. Hydro, a dairy plant, and the School Board exhibit modern, functional buildings. Farther south, this service area borders an apparently unregulated garbage and car-dump field, close to the site of the former sawmill plant.

Between Highway No. 95 and the Kootenay Central Railway tracks, service activities occupy a strip of land less desirable for residential development. The road servicing these light industrial lots, rather modest in appearance, has major buildings on one side, namely the B.C. Telephone, the Canadian Legion, a hobby shop, and, farther north, a church.

Basic industry, once dependent on river transportation
was located on the Columbia River shores; now it has moved to a site along the Canadian Pacific line, where conditions for transportation and expansion are more suitable to present needs. Occupying only part of the 600 acres of land set aside within the municipal boundaries for industrial purpose, the saw-mill and plywood plant makes a scattered use of land; lumber stacks and incinerators are the main visible elements of use, while the plant buildings, in themselves quite inconspicuous, are screened from view by lines of poplars. A dynamic presence in the quasi-rural scenery of this industry are the endless freight trains cutting across the plain.

Industry reaches town in a gradual way, through a series of conflicting areas: it includes within its precincts smaller residential and commercial pockets, obsolete houses, fringe enterprises, trailer parks and one Jehovah’s Witness congregational hall.

(8) Open land:

The town has an even but thin distribution of structures, creating a uniform and low intensity of use. The problem of identifying activities upon the larger and apparently idle parcels of land, is made difficult by the rural background of the community. This involves the fact that what appears as an unused stretch of land, may be instead a household garden, cultivated only part of the year. Distinguishing uses and ascribing them according to one particular utilization may be debatable owing to the variety of elements one finds gathered in one spot. It may be that a group of lots servicing a retail
establishment is used more intensively as a play area by young students, or it may be difficult to trace boundaries between a spread-out service area and land actually lying idle.

The conflict may be overcome, to a certain degree, when one accepts a concept of "open land" as defined in the case of Gold River, related, that is, to the particular context of an evolved town. Open land would exhibit here a minimum of urban design, would have uncertain use and be of a substantial size greater than the incidental vacant lot.

Open land (Map XX) is found at the periphery of the town, and only small amounts within. These are, strictly speaking, bare spaces within the network of elements and structures which define and shape the rest of the organism. The peripheral open land is of extensive dimensions and will display a certain quantity of trees, sheds, wrecked cars, gravel piles; however, in relation to the amount of land, the prevailing character is that of unintensiveness and openness.

(9) Tree land:

Trees, lining the borders of private properties toward the right-of-way alignments, are a common physical element throughout the pattern of the gridiron structure. Their function is that of creating a structural screen between private and public areas, and it requires a communal effort to offset and harmonize the typical dreariness of the long perspective view down the linear paths.

Interspersed with the size and rich green of the Cedars and Douglas Firs a large variety of smaller vegetation,
of shrubs, hedgeforms, and front lawn fruit-trees, contrast and qualify the function of flora as boundaries between public and private spaces.

Within the limits of the recently developed land extensive patches of trees still exist (Map XXI). A substantial amount of tree-land can be observed along the rail-right-of-way, and along the southern shores of the Kicking Horse River, on land which has been either unsuitable or undesirable for residential use.

The thickest woodland borders the town to the north, above the Trans Canada Highway, and to the east along the slopes of the deep river valley. The species found here are the same which are used for lining streets, Spruce, Cedar and Douglas Fir.

Toward the alluvial fan, which contains the heavy industrial infrastructures, poplars are predominant in a scattered formation, mixed with bushes.

The last class of trees forming a substantial pattern are the willows, planted by concerned citizens to control earth erosion along the banks of the Kicking Horse River.
FOOTNOTES

1 The Government of the Province of British Columbia, British Columbia Regional Index, Victoria, B.C., 1966, p. 23.


7 The Government of the Province of British Columbia, British Columbia Regional Index, Victoria, B.C., p. 23.


CHAPTER VI
STRUCTURAL AND AESTHETIC ANALYSIS OF THE TOWNS

Architecture and Urban Design are activities which relate to the form of cities. The former relates to the constituent elements forming the three-dimensional reality of the town, the latter to the relationship of these into one, expressive entity. Conscious professional urban design attempts to give the environment a harmonious integration among individuals, structures, town and the surrounding landscape; it strives for a qualitative dimension.

Professionalism, generally held to be a guarantee against the poorest results, may hinder the flow of imaginative solutions by a simplistic application of design principles. In other instances, professionalism may be confined by the context in which it operates:

The three stages of town planning (survey, plan, implementation) involve the activities of many kinds of specialists, ... who, although engaged in town planning, are never required to exercise aesthetic sensibility.1

With regard to the two towns chosen for this study, the preceding chapters have hinted at basic differences in the approach to form, in both cases a product of a piece-meal process.

The bias in the introduction to the study could have been expressed as the individuality and freedom of the evolved town versus the higher degree of order and formal quality afforded by the instant community. This position opens,
however, an extensive area for subjective evaluation demanding the support of evidence; our limited sample, instead, can only yield specific comparisons. Furthermore, by surveying the two towns and considering their conditions, it became evident that birth and evolution, are intermediate steps in the general development of the resource town and similarities can in fact be pointed out as bridging the gap between the instant and the evolved town.

The instant and the evolved town are both representative of the same cultural milieu. As communities their shallow economic and social base, tied to factors of size combined with their isolation, is typical of non-affluent societies. The "fragments of the larger whole of Europe," as the early pioneers are often called, had very different incentives than "... the restless and dissatisfied elements who have become impatient with the conservative norms and the economy and the social inequalities of older and more settled regions of the country." However a common denominator can be seen in the quest for personal independence and the substantial challenge posed by the untamed environment.

Another point in common is the fact that implementation of these communities is based, by definition, on the exploitation of the natural resource resulting in the dominance of man over nature. When one considers that both towns have been built through the incentive of private enterprise; that both had a preconceived plan of land use; and that both are being developed according to the "additive" procedure, it
becomes evident that they are basically variations of parallel policies. Similarities may be pointed out in the social significance of the single elements forming the physical community. The residential structures, determining the bulk of land use, are an expression of a "folk" culture; in fact, while the oldest houses in Golden may be said to belong to a pre-industrial vernacular, those of Gold River can be seen as a "mass-cult" product. Both housing forms are the result of group values, the difference being the size of the influencing community.

Many cultures and societies have building of greater symbolism expressing the nature of collectivity. These structures will stand as "monumental" elements of the human institutions. The limited number of monuments in the towns observed is not to be taken as wholly determined by poverty, but from a conscious manifestation of the social mood. Even the more representative building show a desire to fuse into one scale, to fit into an accepted popular vision. This is more evident in Golden, where the unspecialized and open-ended nature of buildings is allowed to satisfy the need for communal space by gradual adaptation of the existing structures. Gold River shows its non-monumental nature especially in the scale and morphology of the central area, in the materials and colors which blend the buildings of non-domestic function with the adjoining housing environment.

At this point in the study, an attempt shall be made to discuss the design structures of Gold River and Golden, the
contention being that patterns, even where vaguely defined, can be recognized and the visual message extracted. Neither of the sample towns are "architectural environments" in the sense that European medieval towns or the modern metropoly are. However it appears from the gathering of the factual analysis that environments, where related to their context, have equal weighted importance.

A. Town-form

The ultimate purpose of town-making is the creation of a good place to live in. Town-form is the perceived quality contained in the building of the human environment as seen against the background of the natural environment. Form may either be a spontaneous "organic" growth or a planned, "rational" product of design. However relative these terms may be, design is "... a problem-solving activity, a decision-making process, and at times an art-producing procedure." Design is more than just utilitarian and hygienic.

As Benard Berenson wrote:

Form must not be confused with shape. Form is never a shape - that is to say, a geometrical object looking the same to everybody ... Form is that radiance from within, to which a shape attains when in a given situation it realizes itself completely.

It is in this sense, as a result of the humanizing efforts and because quality comes before quantity, that the term "form" may be used.
Town-form may be analysed in two different manners, both important in understanding the town as an entity with aesthetic meaning. The first type could be called the "planner's type" of form, that derived from considerations of basic structure, as determined by the broad patterns of landscape, building groups, and circulation. The other type is that of form observed, the three-dimensional evidence experienced by people in every-day life.

The analysis involves these two levels of form, the underlying structure and the visual impact upon the individual. It seems arduous to account for the nature and character of the form one finds in places where voids are dominant, and natural elements are strong and commanding, whereas man-made structures occur in an open and loosely-spaced arrangement. Space and the resulting sense of space are here a function of a wider design. The landscape can be seen as taking the place of building confines, and becoming the unifying agent among masses in space.

B. Framework for Analysis

A number of recent studies which may be useful to this analysis have dealt with analysis of structural and visual form of towns and cities.

A study by S. Williams\(^5\) analyses the character of cities by considering several categories of three-dimensional forms. These are divided into inherently objective forms, such as the urban site, the texture, defined as "the relatively uniform mass of buildings, streets, trees, yards of which the
greater part of the city is composed, "green areas, open spaces, circulation facilities, and individually significant architectural masses; and into categories of perceived forms, such as the panorama, the skyline, the vista and kinesthetic experience.

Prof. Kevin Lynch synthesizes the mental image generated in perceiving the above relationships into five principal elements. He discusses:

- **Paths** as "... the structures along which the observer customarily, occasionally, or potentially moves. They may be streets, walkways, transit lines, canals, railroads."

- **Edges** as "... the linear elements not used or considered as paths by the observer. They are the boundaries between two phases, linear breaks in continuity: shores, railroad cuts, edges of development, walls."

- **Districts** as "... the medium-to-large sections of the city, conceived as having two-dimensional extent, which the observer mentally enters 'inside - of,' and which are recognizable as having some common, identifying character."

- **Nodes** as "... points, the strategic spots in a city into which an observer can enter, and which are the intensive foci to and from which he is travelling. They may be primarily functions, places of break in transportation, a crossing or convergence of paths, moments of shift from one structure to another."

- **Landmarks** as "... another type of point-reference, but in this case the observer does not enter within them, they
are external. They are usually a rather simply defined physical object: buildings, signs, store or mountain."

The graphics derived from the investigation of the "collective image" are to be considered as an ideogram of a pre-existing condition, a graphic notation useful in indicating relationships of position, dimension, and quality between elements of the perceived form. One may reverse the process of the formation of the image and consider first elements of structure, and then vest them with visual significance. This inversion of the perceptual process can be brought about by considering the overall structural theme as determined by the organization of the basic primary elements, devised by Lynch, and then examine how they achieve visual meaning.

Another reason for comparing the towns on a general level is the antithetical statement of the two patterns. The formal plan elements, taken at their nominal level, clearly give way to different propositions: where Golden derives its particular configuration from a rectilinear arrangement, Gold River can be regarded as its opposite, a purely curvilinear scheme. In order to facilitate a comparative discussion, it may be useful to abstract from the particular to the more general, and consider, using Lynch's terminology, town form as derived from the connections between (a) nodes, (b) routes, (c) districts, and (d) prime volumes. These are, in synthesis, the elements of a compositional vocabulary which designers may use to conceive the structural character, as a counterpart to the perceived character.
The visual and aesthetic attributes of the above "skeletal" elements may be analysed with regard to a specific attribute, one which enhances the structural performance by giving it aesthetic relevance. These attributes are:

(a) - **Nodes**, being places of particular concentration, focal points generated by and generating an increase of visible activity, demand a higher level of order. This quality can be pursued by dominance of nodes over the surroundings and **clarity of transition** linking them to the broader areas.

(b) - **Routes**, as main lines of flow are the mainstreams through which people circulate. Their singularity as principal paths of visual experience is revealed by the **continuity** and **sequence** of the experience.

(c) - **Districts**, as prevalent two dimensional entities, achieve character by weaving together a number of thematic elements which define the function, size and personality of an area, while establishing it as a homogeneous part. **Homogeneity**, understood to be an insistence upon significant form qualities, may be one aesthetic attribute of a district.

**Prime volumes**, which are the three-dimensional accentuation of the whole entity, may be aesthetic elements in their own right. But where their mass-function is combined to **spatial prominence** they become intentional statements of a hierarchical organization.

C. **Perception**

The image one perceives of the physical reality is
an interfacing of the external objective state of things with the internal subjective manipulation of the "raw" material. Perception is a compound experience of what a person has, is or expects to sense.

Although we live in essentially a visual world, in order to perceive one uses a combination of sense modalities: of sight, hearing, smell, touch and taste, so as to determine one's position within the environment.

Of great consequence is the selecting power of sight which allows us either to scan over a situation or to choose among forms. Conversely, sounds and smells can only be experienced in totality, for we cannot escape their impact without avoiding them completely.

Visual experience involves the perceptual organ of the eyes. Unlike the eye of a camera, the human eye has two visual angles: one of "fixation," approximately of two degrees, another of "alertness," embracing in one sweep a horizontal angle greater than 180 degrees. The combination of the two angles is an effective visual cone of about $54^\circ$ degrees, so that one has a specific image within a large field of general consciousness.

Apart from being the most direct way of perceiving, the importance of seeing is that through sight one has first knowledge of forms and spaces, colors and textures, and can then transform these into abstract symbols which become the basis for communication. Thus, one recalls past images, associates them with new perceptions and generates new concepts and
sensations. Transference of sight into symbols, writes Leonardo Ricci, determined the first "cultural revolution,":

Sight is the most sensitive, or rather, the most evident, of human senses. Thus when men tried consciously to express themselves to one another, they must have tried, before any other, that language which today is called painting. And so it came about that one man looking at the moon and trying to refashion its form on the wet sand, or dipping his own hand in color and pressing it on a stone, or trying to imitate the form of a running animal, began to talk with the others. It was true that they all could see the moon and hands and running animals. But how could any one of them know whether the others saw exactly what he saw? And then - someone comes upon the place where another man has drawn the moon. He looks at the drawing and he sees the moon the way the other saw it! He feels like shouting with joy. Now things are different: for one man has smashed the door between himself and another, opened the way to pass to the other! And since that time nothing has changed.7

Perception therefore results from the coordination in our brain of what is seen and felt; the manipulation of the perception is tied to the problems of thought and subsequent conduct, regulated by laws which have been formulated to explain the mechanism of seeing, thinking and acting.

These laws imply that basically one idea calls upon another where there is resemblance, contrast or opposition between the two, or that one idea follows another when past experience has had them associated. The implications of this theory, stated as early as Aristotele, are that after initial response, ideas are linked together so that sensations acquire meaning, thus becoming "percepts," in a sort of mechanical way.

Instead more modern views take the position that the
mind operates in a dynamic way, according to a configuration rather than to separate stimuli. Gestalt theory, or example, states that items similar in color, texture and shape, and similar transitions such as sequences between things, tend to generate groups of perception. Perception in motion increases grouping and pattern-making by spurring a flow of impressions, by a continuous variation of sensory positions, by overlapping different items into one pattern. For this reason, the geometry of the "floor" on which one moves is of a central concern in regarding town form.

D. The Field of Towns

Before one considers the specific manner with which primary elements of structure give way to a particular configuration of town, it is useful to examine the "field" of the town involved. This is the territory which ultimately can be assigned as pertaining to the greater community, an outline on the horizontal and vertical plane within which structures, spaces and people consistently interact. In short, the framework of town-building activities.

The instant town of Gold River is located in a narrow valley funneled toward the confluence of the two rivers. These have beds in deep, confined ravines, which form hard boundaries to the south of the "field." The residences are closely connected to this profile as they follow the bank edge with explicit purpose. The north of the field is bounded by a different edge, similarly tangible: the highway from Campbell
River to Port Hardy. The natural topography underlines, by a growing slope, the firmness of the boundary northward.

So compelling are these limits, that to reach any land outside the town, one must in fact make a severe transition: cross a bridge or walk over the highway. The field of Gold River is shown in Map XXII.

The evolved town of Golden must be more closely examined before one can detect with a degree of certainty the outline of its field. Stretched along the axis of a broad valley two miles wide, the town is affected to the north and to the east by abrupt changes in contours, so that elevations ranging two-hundred feet above the plane are easily perceived boundaries. The river and the highway, running parallel, determine a corridor-like extension. The end boundaries of this corridor appear undetermined since there is no definite element of closure. An element of containment is nevertheless present when one considers the limit imposed on the community by the competitive demand of land by the industry to the west.

Marsh and stagnant water bodies characterize the southern portion of the townsite; to the extent that land is unsuitable for development without costly operations, and at present is undefined in use, marked only by incidental vegetation, one may consider the town confined southward by a soft, yet unyielding, feature. The shape of this field is shown in Map XXIII.
E. Nodes

Nodes are structural focuses within the field since they function as polarizers of activities. Depending on the hour, on the day, on the season, the pull they exert varies accordingly with the function and space provided. However their performance may vary, as stable "magnets" of the structure they emphasize physical form along with activity.

Gold River: A pattern clearly emerges in the setup of the focuses within the field of the instant town (Map XXIV). The design manifestly emphasizes a North-South alignment along which people are brought together at highly defined points. The sequence from "S1" (the elementary school), to "B" (the shopping center), to "C" (the hotel), through "D" (ice-arena) and "S2" (the secondary school) may be read as a climax of functional purpose toward the centers specialized areas leading to central activity areas.

This "spinal" axis is not simply a main design element, but, through unrestricted play of tensions, has become a recognizable channel of pedestrian flow. Undefined and unstructured, the path goes from "S1" to "C" and then, because of the drop in the terrain, it shifts to the paved highway by which "D" and "S2" are reached. As the one line along which the inhabitants most frequently commute, this path is distinctly a major element of spatial organization, especially used by the student population.

Important structural relationships can be pointed out within the configuration of the node-pattern;
Both ends of the axis are "terminals" of the activity flow, and of equal purpose as highly specialized spaces;

One point, exactly the center of the spine, identifies the shopping center as the focus of the whole town;

The topography reinforces the concept of the central concourse point, since the ground slopes uniformly and the shopping center is therefore at an average elevation with respect to the "floor" of the town;

The line of vehicular movement appears intentionally divergent from that of pedestrian circulation;

Both recreational nodes, "C" and "D," are set jointly, at a point of confluence of the pedestrian and vehicular flow;

The node "A," representing the community, is set apart at the periphery of the field, in contrast with its symbolic value.

In short, one may say that the conceived relationship between focal points of the field would lead to a clear, effective and "measurable" whole.

*Golden:* We must first of all point out the impossibility of identifying, with the same degree of accuracy possible in Gold River, the physical dimensions of the nodes, since no single area or building can be taken to truly represent their essence. Particularly the nodes "B," "A" and "D" have structural continuity, while "C," "S₁" and "S₂" are instead individual buildings (Map XXV).

Dominating the field, "B" is a true "mixing-bowl"
where commerce, business and recreation give longer time duration to activities. "A" is of central importance because of the magnitude of available municipal services: the City Hall, the Health Clinic, the Community Library, and the General Hospital are a compound structural whole. "D," on a main thoroughfare, is essentially a commercial node.

These strategic points are strung along the main channel of movement. Rather than establishing a connection between each other, they relate through a pattern of flow-pause variations derived from their position in respect to the line of uninterrupted flux. In this context, the node "B" can be expected to have the intimacy and character of an enclosed area, removed from traffic and yet, being set between highway and river, providing a stimulus to motion. "A" may be said to balance pause and motion, deriving its quality from a drastic angulation and position at a point of major structural transition. "D" creates a continuous tension and sequential stimulation, where pause constantly opposes flow.

Other nodes can be recognized and have relevance to the field of the town, although lacking the broader scope of the previous nodes. These are the hotel, at the entrance to the town and the two schools, set deep in the residential districts. The relationship between the school-nodes and the commercial node "D" establishes a configuration similar to that shown in Gold River, namely a major, continuous pathway. On this axis "S_1"-"S_2" converge a greater portion of the population, especially students.
We may summarize the structural qualities of the focal points within the field of Golden as having the following characteristics:

- The central nodes define three essential points along the main traffic flow, rather than being directly related.
- Their structural meaning is expressed by a street narrative rather than denounced by single buildings.
- The two institutional magnets channel tensions along an extended axis intercepting a central, converging node.

The layout obeys no strict principle of organization comparable to that observed in Gold River: the nodal elements determine symmetries and asymmetries in an intricate and composite weave.

F. Dominance and Transition of Nodes

Small towns such as Gold River and Golden are apt to be seen as nodes within their territory. Considered in respect to site characteristics, towns may be grouped into hill towns, valley towns, prairie towns, towns by the side of rivers, lakes or sea. Although set at the junction of two rivers, both sample towns are predominantly valley types, having quality of earth rather than of water. The regional hollows which contain them have well defined and visible form, while the rivers act as elements of secondary order.

Gold River nestles in one of the many smaller bowl-type valleys characterizing its region (Fig. A3). The highway twists and winds through tall mountains, by turbulent rivers
and placid lakes. The sense of space along this route is a succession of smaller and larger enclaves, experienced in a continuous variation of long and short vistas, set at different angulation to the line of travel. Because the town is the only goal which can be reached by this highway, the town is like a hub in an overwhelming wilderness (Fig. A4).

Golden, like many other towns in the East Kootenays, is set on the floor of a large canal-like depression (Fig. B2). Rivers, highway, and railroad weave their way parallel to the main direction of a regional space defined by the towering peaks of the Rockies, on one side, and by the massive benches of the Selkirks, on the other. Thus the traveller is channeled along a linear narrative, where the visual experience is essentially a homogeneous, sequential unfolding of long vistas and short-sweeping panoramas (Fig. B3). The town is one of the foci along this continuity, a point where elements of flow converge, and depart again toward the next focus. In this homogeneous context, it establishes a gradient in relation to the number of smaller and larger centers of the Rocky Trench (Fig. B4).

Town and country may be said to present a "closed" relationship in the case of Gold River, an "open" correlation in Golden. Other structural statements can be observed which corroborate the above meaning. If one considers the larger outlying vegetation, this has a pattern which confirms the closed character of the instant town, encircling the site; this can be thought of as a man-made hole within the empty wilderness (Fig. A5a). The openness of the evolved town is
expressed by the convex delimitation of the forest lands; the site results from a widening of open areas along the highway seam (Fig. B₅ᵃ).

Finally, when the shape of the open land is considered, a similar pattern arises: where one shows consistent central voids (Fig. A₅ᵇ), the other presents larger gaps at the periphery. The resulting transition between built-up areas and these blank spaces is centripetal in Gold River, whereas it becomes centrifugal in Golden (Fig. B₅ᵇ).

The physical reality endorses the structural theme examined. As one travels the island highway, Gold River appears suddenly, as a turn in the road exposes part of the urban texture. The view is paramountly focussed on the town nestled between the mountains and the plain, the contrast between town and country being immediately visible. The river, with its iridescent surface, and the road cutting hard into the mountain slope, act as arrows directing attention toward the presence of man in the landscape. A large mountain background gives the scene a soft closure and with its green hues provides strict relief to the white walls and dark roofs of the urban node (Fig. A₆).

In place of contrast and vividness, Golden seeks to fuse its urban structures into the countryside. It presents itself by a gradual intensification of land use clues, from compact forest to pasture and farmland and to peripheral industrial area. Golden "fades in" gradually, and, until one reaches the highway junction, natural elements yield by slow degrees to
the town's forms. These blend in texture and color into the horizontal landscape. Horizontality and remoteness are accentuated by the two gravel hillocks, which, built recently as an overpass to the rail line, preclude the final realization of the staged transition between the town and the territory (Fig. B6).

The urban plot is largely revealed, and subsequent experience conditioned, by the moment of initial contact, as one enters the actual boundaries of town.

A sign at the gates of Gold River:

WELCOME

to the
Municipality of
GOLD RIVER
BC's Fastest Growing
All Electrical Community

is an important aesthetic key, indicating a major concern for the environment's design. At their junction the two highways meet at sharp angle; one swings upward to the right, the other dives into the built-up area, crosses the slightly sloping plain and disappears around a bend. On the plain, a group of low, expanded volumes is seen as "floating," connected to the observer by a steep ridge and a line of fir trees which frame the scene to the left, and by the road surface so large as to dominate completely the otherwise bare foreground to the cluster of structures.

No other section of the town is visible from the
entrance point with such clarity, and no other buildings show equal emphasis of scale: it is therefore clearly the center of the development. Because of the stress of sudden exposure, the visual interest is reduced by being totally revealed (Fig. A7).

From about 150 feet above its floor, the town of Golden appears as an uncoordinated pattern of scattered elements where buildings, roads and vegetation act in a patternless condition. As one descends to the level of the plain, a pattern of principal volumes "emerges" from the shallow horizon. As one moves along the road the final transition from the outside to the inside takes place. The town, as a node, is therefore revealed step by step.

G. The Town Centers

Gold River: Shopping, in small towns, is often little more than a Parade of heterogeneous stores. In Gold River commercial outlets define a precinct through which passes most of the town's daily life, from dawn to sundown. Because it is the only town enclosure presently available, the shopping center is the main civic feature (Map XXVI).

As most people prefer to use their cars for shopping entrance is normally gained from a large parking area. From an exterior view the greatest impact is provided by the strong quality of the roofs, accentuated through the color and texture of cedar shingles. These roof slopes are in unison with those of the encircling mountains, and, giving a sense of protection
LEGEND

1. MEMORIAL CROSS
2. SHOPPING CENTER
3. BOWLING - BILLIARDS
4. HOTEL
5. LOUNGE
6. COFFEE SHOP
7. VARIETY SHOP
8. BEER PARLOR
9. ICE-ARENA
10. CHURCH

GOLD RIVER TOWN CENTER
SCALE 1" = 100'

MAP XXVI
to the inner area, seem to offer an invitation to enter (Fig. A₈).

The spatial grouping of four low volumes, at right angles to each other, determines a planimetrically articulated enclosure. The height and width of the major central space creates a quality of openness (Fig. A₉). From this larger expansion, one is attracted to the narrower, street-like spaces of the shopping center (Fig. A₁₀), where the greatest variety of goods and services is found. The arrangement of these more intimate spaces, branching off from the larger area of confluence, and providing an immediate scope of vision, is strengthened by the number of outlets to which they give access. The correspondence of visual breaches on opposite sides, gives the mall an almost limitless dimension, extending conceptually to the remote mountain background (Figs. A₁₁-A₁₂).

As one is lead from the parking area into that of pedestrian confluence, the design of the shopping area would demand a climax other than that produced by the vast emptiness to which the alleys of the central square lead. Only the three storey volumes of the Golden Apartments are close enough to determine a meaningful visual relationship (Fig. A₁₃).

The buildings, linked by covered walk-ways, are all the same height so that space becomes framed in a static way. Only by taking sub-level positions does a dynamic quality result (Fig. A₁₄).

The town center is comprised of the Golden Apartments, which form an urban backdrop to the node, the hotel set at the
fringe of the vast open space, the ice-arena and the church, too far and architecturally too plain to act as significant elements of the core (Fig. A15). From the Muchalat Drive the components of the town center can still be visually comprehended as forming a homogeneous entity (Fig. A16).

Goldens: The node north of the Kicking Horse River possesses design qualities and social functions which endorse its prominence as the major gathering place in town. The space (Map XXVII), a main town road, has a wide cross-dimension which does little to enhance its precinctual character. Buildings, standing at 60 feet distance from opposite sidewalks, appear as individual parts rather than as a unifying whole. Great breaches in the boundaries of the enclosure, also weaken the spatial dominance of the enclosure.

Despite these spatial flaws one can point out a basic character derived from three structural themes:
- the very particular plan-form of the precinct,
- the higher vertical closure toward the river side,
- the abutment of the principal meeting places with a central open space, an almost square-like area.

The shopping precinct varies in width from 60 feet, at the entrance, to 45 feet where it meets the nearby by-pass, Highway 95. A town piazza in between makes the transition from the larger to the narrower street space, and becomes the climaxing point of the town center. The space is heightened by the various deflections of the road as concavity follows convexity, thus giving the enclosure a pleasant warped quality.
Two massive buildings, of early-Golden, mark the access to the town center. Between the opposite walls of the precinct there is coordination based on differences in visual exposure of the lateral boundaries. A succession of low, angular walls is counterbalanced by higher fronts on the other side, producing a recession of space on the left and a firm definition on the right (Fig. B_7).

The area of the town piazza delimited by one and two storey buildings, has an irregular shape (Map XXVII). A sense of intimate space arises by contrast with the large open space beyond (Fig. B_6). The post office, among other facilities, gives the square a vitality of its own; since letters are not delivered, "fetching the mail" is a socializing event, and the post office is a favorite meeting place of older people.

The dominance of parked cars on the streets is reduced, to some extent, by four parking areas at the borders of the center. Essentially resulting from left-over spaces on commercial sites, they play down the impact generally resulting from larger utility areas. The parking next to the Big Bend Hotel is quite like a balcony on the river, a spot where one can enjoy a view of the orange lattice structure connecting the two sides of the town (Fig. B_9). The river is first seen from this point and then its' presence is emphasized all through the shopping district by the gentle convexity of the building strip which follows the bank. As one comes out of the shopping area into the larger open area, the deflection builds up an expectancy which is fulfilled as the bridge comes into view (Fig. B_10).
Breaks in the enclosure, while reducing containment of space, provide for its extension as the outer townscape is brought into sight (Fig. B_{11}).

The general effect provided is that of openness; it is therefore interesting to realize to what extent the observer is directed through the town center by what appears a skillful, though tenuous, design.

H. Secondary Nodes

Other nodes, both in Gold River and Golden, lack the spatial dimension and expressive quality seen in the town centers.

The public safety building is at present the representative focus of Gold River. Although its architectural refinements make it one of the outstanding features of the town, it is often missed by the traveller because of its flanking position. Fronting the Muchalat Drive, its location provides a brief transitional zone which denies a clear view of the white, stereometric structure (Fig. A_{17}).

As anchor points in the townscape, the nodes are here expressed, and revealed, by dominance of scale and quality of architecture. A large empty area sets off the elementary school node as a plastic body in space, at the periphery of the townsite. The spatial prevalence of the building is heightened by the absolute bareness of the surroundings, so that a sense of remoteness and static intercourse arises between the school and the houses peeping down from the hills encircling the area.
The secondary school is approached downhill. Seen against the background of natural vegetation, it appears as a composition of strict geometrical forms softened by the warm texture of cedar used on its outside walls. The site is distinctive, located at the convergence of the rivers, and expressive, having a quality of naturally enclosed space (Fig. A_19).

If one considers the "freezing" of the building blocks and the absence of openings in the volumes as an architectural equivalent to the privacy of the site, then the secrecy of the node becomes an intentional, aesthetic goal.

In Golden, the same type of nodes are interspersed in the residential pattern of roads and houses, so that the size of these focuses expands and contracts according to the activity they generate. Physical evidence of boundary delimitation is explicated by road alignments, and buildings are mainly perceived by side views, never trapping the axial perspective (Figs. B_12-B_13).

The representative node shows how a sense of place can be generated by motion itself. The node is in fact identified by the sequential staging of three breaks in the transportation network: the first is represented by the narrowing of space through the lattice work of the bridge; the second, by the expansion of space contained by the buildings which the road is directed towards; the third, by the violent thrust of the road leftward. As the traveller enters this sequence, motion builds up to an apex, at which moment a major decision must be
made (Fig. B_{14}). The experience has great impact for those travelling by car, and, interesting to note, it is not as valid when the direction of travel is reversed.

The commercial node, while partaking of this quality of sweeping motion, as it is entered from its north end (Fig. B_{15}), has an overwhelming road dimension, quite large in relation to the buildings lining its perimeter. The street splits shopping into two sections, which display large buildings set widely apart. An effect of visual containment arises from the two major masses that close the view of the low, extended southern horizon (Fig. B_{16}).

I. Routes

Pedestrian paths, streets, railroads are linear elements which act as evidence of spatial organization, of social interaction and as conditioners of the collective image.

Both towns examined exhibit a clear hierarchy in respect to the vehicular network. The curvilinear pattern adopted by the instant town, scaled by degrees of width, has differentiation by way of origin-destination hierarchy. Conversely, the evolved town which has a constant right-of-way allowance, differentiates by paving only the main roads.

Gold River: Whereas in the evolving context, land values sort out pause-tension relationships between areas, and the alignments in turn affect use of land in a cyclical manner, the process in a designed situation like Gold River is "artificially" determined. The pattern chosen (Map XXVIII) determines
a hierarchy of uses based on decision points along the channeling of activities. Two areas have polarized economic exploitation: one determined by the intersection of the highway systems, the other flanking the central thoroughfare. While the highway intersection with two gas stations has inherent stability, the economic exploitation of the other has been strengthened by a vast parking area, which acts as a transitional zone between systems of movements.

The design of the road layout also determines a focal center and a system of subordinate centers. The relationship is however unresolved since no clear relationship arises, and the flow of tensions merely recoil on themselves without following an explicit order. The pattern is therefore centered and at the same time freed. While following the topography, it tries to express a concept of spatial organization, fluid and dynamic.

Golden: One of the advantages of a two-directional, rectilinear communication network is the fixation of a simple scheme which although not freezing land use reduces variables to a relationship on or from a principle line of flow.

In Golden, the evolution of land values has brought about a condition of symmetries and asymmetries which are active ingredients in the strength of the town structure. A main spine has predominance through its sinuous quality. Opposed to the strict linearity of the remaining arteries, it acquires additional sharpness (Map XXIX). The monotony of the gridiron scheme is relieved by the introduction of other thematical variations,
such as the curvilinear layout inserted at the periphery and servicing the area called the "Alexander Block." This appears, however, in relationship to the whole, as a disruption of the pursued linear order.

As space establishing opportunities for creating a "collective image," the road patterns in Gold River and in Golden, combined with the vertical outline of their fields, give way to differences in spatial combinations. The curved layout in the former gives the possibility of motion by rising and falling while changing orientation. Combined with the permeability of lateral boundaries the network suggests fluid overlapping of scenes and vistas. Golden, on the other hand, does not have the advantage of dominating viewpoints. Interest of scenes is therefore determined solely by juxtaponesition of parallel planes, as one changes direction on the horizontal plain.

Of paramount importance is the relationship between highway and town, as in both regional traffic is tangent and secant; but sense of purpose and vitality is greater by the manner in which through traffic is restrained before leaving Golden.

J. Continuity and Sequence of Routes

Gold River's curvilinear street pattern, combined with the topographical setting, holds the observer in a continuous visual experience where expectation is produced through bodily motion. The observer finds pleasure in those sections
where directional clues are given by the terrain going upward or downward; or where a dominant feature can be seen as term
inus to motion.

There is sequence in some sections of the residential areas where the convexity of the road divides the experience into two significant moments: one which brings the "infinity" into focus, by juxtaposing the dark macadam texture with the sky; the next instant brings a sense of "immediacy" that arises from stronger contrast between the background of vegetation and the urban forms. In one instance (Fig. A_{20}), the forms have an almost hamlet quality; in another, these are represented by a repetitive pattern of roofs, the vigorous lines contrasting with the broad surfaces of the road and the mountains (Fig. A_{21}).

Continuity of the roads in Gold River is primarily a function of floor texture, of border lines and of lighting fixtures. No differentiation in these is provided to mark off the major lines of traffic from the secondary feeders. Continuity is produced by a kinesthetic quality when the sense of motion ties in with major structural anchor points along principal thoroughfares. As one enters, for instance, into the west section of town the road has a broad sweep to the right (Fig. A_{22}). The church building accompanies and contains the thrust of motion (Fig. A_{23}). Once the turn is made, visual interest switches from the small church building to the higher apartment structures, so that the observer is able to establish visual continuity, although structurally the transition is non-climaxing (Fig. A_{24}). Some roads achieve stronger character
by being exposed on slopes either above (Fig. A25) or below (Fig. A26) the average town elevation.

Continuity is maximized where roads are aligned with houses which provide lateral reference with their facades (Fig. A27), though only seldom to the extent of differentiating one road from another (Fig. A28).

Gold River does not have a pedestrian network. Paths, therefore, resulting from an origin-destination relationship, are formed by frequent routine travel, rather than by formal structures (Fig. A29).

Ultimately, one may state that although the road network establishes simplicity of form and hierarchical organization, its aesthetic counterpart relies heavily on the open dominance of the road itself, and on the sensuous flow of motion.

Golden presents two opposite conditions which determine the particular character of the streets: one which tends to differentiate the network into a visibly distinct hierarchy, by way of road texture, the other, which produces an amalgamation by way of the equipotential nature of the grid. Differentiation results from other elements such as trees and power poles which mark arteries running in an east-west direction (Fig. B17). Though the street scene is of an undefined and homogeneous character a primary sense of direction and a quality of containment is given by trees in a perspective view. In those streets where the trees are planted between the road allowance and the property line, there is a strong sense of
fusion between the road and property. A series of elements create the transition from the open roadway to the intimate area of private gardens. The street is seen as space created by string-course physical elements such as tall evergreens, a pedestrian strip, fences, and fruit trees adorning the front gardens. The perspective view is especially a function of tree-lines. These form an optical barrier producing a spatial volume of particular dimensions and quality. By establishing a perspective point they create a sense of common purpose; by being somewhat off a rigid alignment, irregularly spaced, the ideal straight form contains a picturesque distortion. Trees are the unifying element of the scene, binding together the house facades and creating a transparent colonnade effect at eye level, contrasting the heavy mass effect at the upper level (Fig. B_{18}). Continuity of form is therefore present although not sharply pursued.

Against the background of the grid, where the road is "built-up" by a series of lateral references, the main street, by contrast, is clearly defined. Important sequences characterize travel along this route, where a large curve, a sharp turn and a long straight drive are signaled out by structures which add directional differentiation to motion (Fig. B_{19}). The street is perceived in terms of these structural accents, rather than by a continuity of signs (Fig. B_{20}).

The pedestrian network is secondary to the vehicular one, since, except in the very core of the town, sidewalks have not yet been implemented, and people therefore travel mostly on
the same allowance as vehicles (Fig. B_{21}). The back lanes are used by children as a play area and provide an alternate route for pedestrians. The heavy wood fencing and the utility sheds lining the lanes gives a sense of enclosure unlike any other play space in town (Fig. B_{22}).

The railway is a route vaguely marked by pertinent elements, and by noticeable land use features along its tracks. This appears to be a useful device to conceal the break resulting from the intersections of roads and rail, for, while actual continuity of the streets is precluded, visual continuity is unrestricted (Fig. B_{23}). Where the rail becomes adjacent and parallel to the main street, transportation becomes an element adding vitality to the core area (Fig. B_{24}). Given the particular manner by which the main road and the rail are related to one another, the long freight trains have the aesthetic function of visually enclosing the panorama seen just before leaving the town center (Fig. B_{8}).

Golden has therefore a route system where a standard indefinitely extendable pattern can be said underlined by factors of local character. Above all continuity and sequence are two qualities which appear to give vividness to the central spine which achieves a clearly perceivable priority among lines of flow.

K. Districts

The grouping of structures and spaces into identifiable wholes is a process which takes place generally through
time, as a population ascribes historical significance to particular phases of development, or as architectural form and continuity becomes so pervasive as to suggest an outstanding identity. General nomenclature such as "downtown," "uptown" and "midtown" refers to subsequent phases of expansion, while in respect to locational differences there may be a "west end" and an "east end," a "water front" or an "over the tracks" area. Where past events, locational differences, and visible activities are combined with genuine physical differences, area designations refer to a true concept of locality, rather than to an abstract quality.

Gold River: The people of Gold River refer to one area as having particular attributes: commonly called "Section A," it forms part of a larger residential section to the west of the Muchalat Drive. The physical characteristics of this area are in every aspect similar to that of the remaining section. The sole reason for identifying it as a part in itself would appear to be historical, that is to say its distinction as the first area developed. The persistence, however, in singling out this section six years after the establishment of the community, suggests perhaps other reasons. The topographical features of the terrain, its location near the Gold River and the Peppercorn Park, and the continuity of the houses bordering the road, may be more legitimate reasons for designating it as a separate area.

The houses on "the Hill" designate with unmistakable clarity another district within the town of Gold River. The
prominent contours of the site, the immediacy of the topographical feature, a decided slope of the servicing roads, combined with the prominence of the houses, serve to accentuate its presence in the landscape.

Some districts achieve distinction by way of location, others because of a substantial physical difference. The district, for instance, formed by row houses and garden apartments, stands out as a residential area of higher density and greater architectural emphasis. Rather than creating interest by varying each neighboring unit and their siting, as in the single residential areas, the device used is the repetition of the same unit so as to form a composition of masses as a variation within uniformity. The same can be said to occur in the center of the town, where the Gold Crest Apartments define a district of prevailing urban spaces, generated by buildings of greater mass, of finer detail and a more distinct character, which dominate the site. All other parts of the town are either extensive residential districts, alike in character, or single buildings; the schools, the church, the public safety building are edifices lying within what could be called an open-land district. An exception, owing to relevance of position, of function, of coordinated architectural scale and of related style, is the shopping center-hotel complex which forms a district of sorts.

Districts in Gold River show uniformity of land use and building typology. Boundaries are at times established by natural features, namely the two rivers, by man-made features such as the roads and the highway. The most notable boundary
is the quantity of emptiness and its pervading quality. In summary, one can say that districts are essentially measurable through continued similarities and obvious boundaries.

Golden: Considered in its broadest sense, Golden is a continuous composition of single standing volumes and of small parcels of open land, arranged according to an indefinite two-dimensional pattern. Where it appeared possible, in Gold River, to trace with a degree of certainty the extent of varying districts and define their content, in Golden, definition and categorizing may become abstract and ambiguous, especially when the attempt to trace boundaries is made. Successive stages of development have brought about expansion of one district at the expense of the neighboring one, with radical changes at the cores and only compromising alterations where districts merge.

Two sections are referred to by special designation; the "Alexander Subdivision," a suburban residential type of district, and "The Old Mill houses," a cluster of houses of equal size and appearance, dating back to the times of the Big Mill on the Columbia.

"Downtown" has a definite meaning for the inhabitants of Golden: it is an area tightly contained at its borders, considerably homogeneous at the core, with singularity of architectural forms, prominently visible from the outside. It is therefore a strongly humanized precinct.

The district which gravitates around the civic area is characterized by a variety of large open spaces, but
paramountly by its institutional purpose. Some of these large spaces are structured into wide vistas such as the spacious street-like expansion of the civic area confined at the sides by a row of low buildings; others, such as the hospital site, have a park-like quality, and others still result from the merging with adjacent districts. The district presents therefore an uncertain quality at the center, a flexibility of definition at the borders.

The area formed by the aligned buildings and parking spaces in the new commercial section, has continuity and homogeneity of pattern, consisting of an equal spacing of these two elements on both sides of the wide pavement.

Residential districts generally are similar in the over-all urban intent since differences depend on architectural detail. Intensity of use and housing styles may vary from one block to the next, determining sub-districts, which conform however to the whole. Radically different in character are the two residential areas of recent addition, where the variety seen in the older districts gives way to the uniformity of suburban texture.

Perhaps one of the most important districts within the town, which determines a true spatial quality and reflects the nature of the whole entity, is the stretch of river area immediately adjoining the two commercial districts. The quality of this space is derived from the semi-transparent lateral boundaries combined with the depth of view without terminal features.
L. Homogeneity of Districts

Gold River combines an internal homogeneity of its districts with an external delimitation of their boundaries - two factors which condition its visual outcome and overall visual enjoyment.

Internal homogeneity results from an architectural problem as well as from the urban design; its consistency is in fact derived from the connections between the detail and volumetric design of the dwellings, from the external spaces that arise when one relates dwellings to one another, from the system of communication and from the landscape elements used to unite housing groups. These single-detached residential districts are comprised of houses modelled on five basic designs, varied by the use of different facade solutions. The ideal detached house is, by its inherent nature, generally thought to stand in its individual landscape, intermingling directly with the natural surroundings. In Gold River emphasis has instead been placed on the overlapping and amalgamation of the small individual buildings into a unified whole. By varying the setbacks and individual orientation of the houses aligned along curved road layouts, variety within a uniform condition is maximized. A sense of neighborly environment arises in the spaces between residences (Fig. A30), where absence of property delimitation allows space to flow freely from one house to another.

Observed from lines of travel, the single-detached residential districts show consistency of spatial quality,
undifferentiated from one district to another. Generally speaking they are seen as a cluster of houses compounded and fused together by topographical changes in the terrain. The effect is stronger in those sections where slopes are such as to allow views over the roof pattern of clusters (Fig. A_{31}).

The three single-residential districts, in final analysis, are homogeneous by the simple device of identical design objective, and show an effort to produce a pleasant looking environment for suburban living (Fig. A_{32}).

Rather than by internal differentiation, districts can be more easily identified from the outside, with reference to the particular way each exposes itself from major points of view. The western district, as seen from the Muchalat Drive, appears to have boundaries only partially supported by topographical features (Fig. A_{33}). By contrast, "the Hill" has sharp characteristics because of the convexity and small size of the district, which allows it to stand as a visible whole (Fig. A_{34}).

The eastern section can be considered as one district structured into two sub-districts: one formed by single dwellings, the other by multiple units of various types. The sub-districts penetrate each other so that overlapping of character is not left to the selecting power of the eye, but is structurally determined. The Garden Apartments establish a relationship of visual hierarchy between the different mass volumes of the area. The scene acquires a sense of an interrelated whole when viewed from the street at higher elevation than the apartments'
eaves line. The apartment complex is a focus not only by dimension and proximity to the road, but through the pronounced concavity of its site. The horizontal eaves create a repetitive pattern which is seen to contrast harmoniously with the long horizontal line of the background. The vertical form of trees and the small house-volumes mark the boundaries of the district while providing a clear closure of the view (Fig. A35).

When one enters the communal area of the apartments, the concavity of the site conceals the outside environment and the space becomes an intimate enclosure. The sense of collective area is strengthened by the staggered pattern of the building blocks accompanied by the sloping line of roofs directing visual interest toward the center (Fig. A36). The central space, which could benefit from a special floor treatment, is used to interlace, with cement sidewalks, the various residences. Consequently, small private gardens take the place of one large communal area, thus contrasting the quality of togetherness embodied in the scheme. Unity between the apartment complex and the adjacent detached residences is sought through architectural design and planimetric solution. The change in direction unites in fact the subdistricts at their border, while subtly inviting the observer (Fig. A37).

Seen from the shopping-center parking area the eastern section has a strong edge feature where the residential border coincides with an abrupt break in the topography, rimmed at its base by the highway pavement. The screen formed by the tree line is an effective device for achieving privacy while
leaving the two areas to interact (Fig. A38).

A sense of urbanity distinguishes the highest density district, near the town center, from any other area in Gold River. Viewed from a distance, the bold scale of the complex creates a clear spatial expression of the district. Borders of the district are formed by parking facilities which, while providing a proper recession of the architecturally accented volumes, preclude penetration of vision within the precincts (Fig. A39).

The quality of the internal spaces has been intentionally emphasized so to establish an urban relationship with its enclosing elements. By setting each building in a free, asymmetrical manner it becomes possible to view a number of buildings in the same instance. Roof profiles are seen as diverging lines which open and close the internal space in many ways, multiplying the perspective effects (Fig. A40). The internal central area has an engaging visual quality (Fig. A41) resulting from a specific pedestrian network which forces the viewer to move at different levels as he is approaching the center (Fig. A42). From the swimming pool-barbeque area the view toward the town center is framed by buildings so that the aesthetic relationship between higher density and central location becomes evident also from the inside (Fig. A43). Thus this district achieves greater homogeneity than any other in Gold River, while at the same time evoking, as an entity by itself, an image of harmonious variety.

Ultimately one may say that Gold River is formed by
several distinct and homogeneous districts, although not always visually engaging.

By contrast Golden emphasizes amalgamation of its various sections: mixture of architectural character and fusion of boundaries, rather than breaks or barriers.

In the residential districts the major aesthetic characteristic is the openness of the design. The spaces in between the houses are generally too large to enable visual continuity to be established by the structures alone. Each house can therefore be seen as an isolated world of its own, seeking, in some instances, dominance over its plot and the adjoining streets (Fig. B22). In other instances, houses are screened at their fronts and sides by trees and shrubs, almost excluding neighbors and allowing only discrete glimpses of the facades through the gateways (Fig. B26).

Generally comprised of medium detached units, the residential districts have an assorted scale of houses, ranging from mansion-type structures (Fig. B27) to small cabin-like dwellings. The subdistrict named "the Old Mill houses" is comprised of a strip of houses, all small and regularly spaced (Fig. B28), set on the same building line. Given its fairly large size the repetition of the form and the rhythm they establish are enough to distinguish this from any other section of town. The western section of the residential area has a strong quality derived from its varied architectural forms and its unifying elements. Especially in the older blocks, continuity is achieved by showing pride of ownership, possession and
participation with the community at large. In many cases, the window-porch, which is an architecturally common trait in the community, becomes a display area for bric-a-brac. Shrubs, fruit trees and fences are all elements determining visual transitions from the road area to the house area, and from one house to the next (Fig. B29).

The eastern section shows a less consistent character whereby houses are left to relate directly among themselves, while toward the road fences are a noticeable feature (Fig. B30). In the newer developments aesthetic ties become less evident, and houses acquire the more formal quality of a suburban area (Fig. B31). The layout is modelled on the prototype applied in Gold River, where the scheme is more successful in achieving unity other than by uniformity of building type and a common building line. Here the planimetric solution by crescents does not generate visual grouping. Given the perfectly level ground, houses are seen as strung in rows, and lack of a unifying landscape or of a common structural quality accentuates the effect of a "tooth and gap" arrangement.

Different aesthetic quality can be assigned to the service and industrial area next to the commercial center, and to those at the periphery of the town. Whereas the first emphasizes the boundary effect of the railway, and has therefore structural meaning (Fig. B32), the others lead to open country by a transition dissolving structures into the landscape (Fig. B33).

Transitions between districts are generally left to
land use values, and roads assume in most cases the function of boundaries. Where trees have a consistent boundary function, as between the civic area and the residential area of mixed character (Fig. B34), the linkage becomes apparent and harmonious. The greatest lack of boundary definition is evident in those sections of the residential districts bordering the peripheral industrial zones. The view down these road-boundaries is often cluttered by industrial volumes, and because of the generally poor terrain, there is no vegetation to act either as unifier or divider (Fig. B35).

Of paramount clarity and efficacy is the boundary quality of the Kicking Horse River. In fact as a boundary it provides a sharp edge on which the whole of the town center leans. The connection between the town-center and the southern district is plainly expressed by structural ties, i.e., the two bridges, and by visual ties, i.e., the permeability of the barrier (Fig. B36).

M. Prime Volumes

Prime volumes, as such, tend to emphasize the structural quality of the towns by introducing accentuation of the central space in Gold River; by reinforcing the importance of focal nodes and routes in Golden.

Gold River: The group of three-storey buildings forming the Gold Crest Apartments dominates, by way of size, structural intensity, and location the core of the development. The land on which they are sited rises sharply some ten feet to
form a long shelf parallel to the shopping center. Opposite the mall, houses aligned on the upper bank of the Muchalat Drive, have dominance of position over the lower town floor. Also overlooking the town center is the Hill, on which stand out with blunt prominence the sharp contours of houses. Prime volumes underline and strengthen the structural value of the center. This consideration is further justified by the existence of the stand of trees which appears to form a circle of elements functioning as backdrop to the one focal area in Gold River.

Golden: In the town of Golden, the over-all homogeneous height of the buildings, combined with the flatness of the terrain stresses the shallow horizon of the town. It is therefore of considerable interest to point out the prime volumetric facts having more than the plain utilitarian function explicated by the few apartment buildings.

A number of buildings, relevant because of their position within the central area, act either as structural confines to the mall-like space of the older core, or as isolated features marking points of transition along the commercial segment of Highway #95. All these volumetric elements can be considered as operating within the same context by establishing a sequence of higher ranking masses along the major linear element between the two greater focal points of Golden.

N. Spatial Prominence of Prime Volumes

The one-neighborhood structure of Gold River has an
aesthetic equivalent in the visibility of the volumetrics (Fig. A44) encircling the center. Distances between the volumetric elements are such as to allow visual connections to be established from almost every position within the field. Topography is the limiting factor determining the extent of the area from which these prime volumes can be conceptually tied to the central focus. The high visibility of the Hill (Fig. A45) enables one to relate this feature to the core; it is a clue especially important in linking the most removed sections of town with the image of the center.

Topography also explains the importance acquired by those volumes which appear at the edges of the townsit (Fig. A46) overlooking the southern approach to the center. The steep slope which would otherwise be a visual barrier, becomes, through their mediation, a seam between the two levels of the townsit. Unobstructed and visually simple to comprehend, the hotel and the condominium apartments have particular distinction and therefore are salient volumetric elements, coordinated to those characterizing the center.

A pattern of prime volumetry emerges in Golden, and here the relationship rather than being static, i.e., determining focuses as in Gold River, has a dynamic quality, i.e., underlying routes. Related to the major nodal joints, threaded along lines of communication, their significance lies also in the human dimension as historical testimonies that some of them still retain. Seen against the background of less typified structures they acquire vividness and landmark distinction.
The singularity and intensity of roof characteristics possessed by the C.P.R. station vivifies the scene at the entrance to the town. The isolated position of the building makes it a very noticeable feature, while at the same time providing for a visual connection between the town, lying in the background, and the major transportation systems (Fig. B37).

A large hotel, of pleasant volumetric proportions, stands in contrast to the openness of the view downward and has a confusing effect on the inexperienced traveller, who by missing the directional signs is lead toward the shores of the Kicking Horse River (Fig. B38), consequently bypassing the core.

Wood detailing, massiveness, and location distinguish the Masonic Temple, which combined with three other larger structures delimits, in visual terms, the commercial space. Its weight as a paramount visual anchor is derived from its relationship to the perpendicular route system, which it marks as a major axis (Fig. B39).

The industrial sheds are mass-structures which in some instances achieve contextual relevance, such as the Golden Truck Company terminal building. Built in the 1890's adjacent to the first tram line, it is impressive for its geometrical finiteness of form, in contrast to the soft, hazy background of poplars (Fig. B40).
FOOTNOTES


A. Summary of Findings

The historical analysis showed that the eastern and the western sections of the province each have had a different basis for development. Resource, climate, and topography have generated local character, especially in the pattern of settlements. Through time industry and social patterns have instead shown a tendency to become uniform throughout the province. A more efficient industrial production has resulted in a change in the evolved town, whose population is experiencing pressures unknown to the previous inhabitants. The town of Golden must face the need for change and adaptation to the technological and social climate which produces towns such as Gold River. The evolved town has a pace of its own, although the underlying mood is to modernize the older towns and to make them competitive on the same socio-economic basis as the instant town. The phenomenon has been sensed as "dissolution of the urban settlement," or as a prelude to a society of greater opportunities.¹

It appears as if the ultimate result of change might be a "flattening" of the physical character in each of the systems involved. It is the view of this thesis that both should develop their unique identity, and this can be brought about by a study of their inherent differences.

Planning which attempts to develop for more than
plain economic reasons, namely comprehensive planning, has taken place in Canada, and noticeably in British Columbia, since the turn of the century, but the theories and the men behind them were foreign to Canada, being imported from countries having different situations and problems. Their influence has resulted in the development of a planning consciousness, but failed to develop a design concept, a structural and visual model more pertinent to the Canadian landscape. Most likely they failed because of their temporary engagement and because of the impossibility of most industries of the time to embark in a total rethinking of new towns.

The great majority of new towns has therefore adopted design concepts and prototype solutions worked out by other countries and applied here indiscriminately.

One of the techniques suggested to produce towns of greater social and physical character is participation of the user in the planning process. This process has inherent limitations in the case of an instant town. Gold River provided little chance for citizen participation, since the location, the structures and the regulations are geared to maximum efficiency and rapidity of implementation, whereas in Golden quality of social life has been heightened by consciousness of sharing in the life of the place. Birth of the community was conditioned by large capital investment; the initial town scheme was provided by the developers. Subsequent progress was however the result of the coordinated action of single individuals, single industrial expansion an outcome of local entrepreneurs.
It is almost wholly on the basis of individual initiative of group organization, risk and responsibility that the main advancements in the Building of Golden have been made. This is shown by milestone achievements, such as the building of the first bridge over the Kicking Horse River, the raising of funds for the construction of the hospital, and the constant attention paid to educational facilities.

It is the claim of this thesis that the social characteristics which apply to Golden are not restricted to this town alone, but form instead the basis for growth of most evolved towns. The virtues or faults of a new development may stem from the fact that it has been designed. This state is intrinsic in its condition of instant planned accretion. What the historical analysis suggests is that the social and physical patterns generated by the continuous interaction of people can be a source of support in the planning of instant towns of similar character.

The factual analysis indicates that the factors of the two urban settlements, namely work, housing, and community facilities present noticeable differences:

- Working conditions appear to be substantially more productive in the older community, as a result of two specific traits: satisfactory relations between labour and management, and greater employment opportunities. Conversely, in Gold River the relationship appears sterile and shall likely remain so until industry and town become relieved of the forced dependence.

In Golden, where primary industry absorbs eighty per
cent of the working force, secondary activities are probably one reason for better labour-management relations, since farming, transport industry, and tourism, though small, provide a degree of choice.

- Housing, a chronic problem of resource towns in terms of construction, variety, and price, has been taken care of in Gold River, so that residential types appear to satisfy the variety of needs. Housing achieves a good standard of construction and this is maintained through municipal control. Fringe communities cannot be expected to develop since the townsite is tightly surrounded by the industry's timber holdings. As a side effect, activities involving substantial amounts of land, such as breeding of livestock or household farming, are also impossible.

By comparison the evolved town is much more independent of municipal control. Only very small holdings are owned by the city whose immediate problems are concerned with obtaining suitable land for expansion. Among the sites proposed, a parcel of land above the Trans Canada Highway would create a condition of unrelated spreading of the urban forms.

Another paramount difference can be seen in the extent and pattern of mobile-house development. The town of Golden appears to tolerate, and even to accept, the inclusion and spread of trailer courts throughout many sections of town. This position is not a stated objective of the municipal government; it has some positive aspects illustrated by the consequences arrived at in Gold River where these units
have been confined outside the main body of the town, in an unfeaturesque grouping. Those who live there are visibly the lower-income group of the community.

- Social facilities such as commercial, educational and recreational appear to be affected in the amount and quality of buildings by the time factor and the size of population.

Commercial facilities have been found to adhere to different patterns. In Gold River shopping is concentrated into a shopping area which is expected to gradually grow with the local population and merge with the municipal-representative facilities so that a true town-center will gradually come into being. Golden, instead puts emphasis on the provision of single shops and on the opportunity of window shopping.

Schools are one of the most valued asset of the service role of the communities. Both towns have invested a conspicuous amount of effort in providing structures capable of regional functioning. In Gold River there is a degree of physical, as well as psychological, isolation of the schools from the community. In comparison, the evolved town has a much more traditional concept of education, and as such the buildings tend to be less conspicuous and more an integral part of the townscape.

A point which has strong social implications is the lack of recreational facilities with which Gold River was initially built. Recreational facilities have been subsequently built by the company, as other new towns, such as MacKenzie, have recognized the need to provide recreation, and provisions
for this important function are included in the planning stage. In Golden all facilities for recreation have come from the community which has come together to meet its recreational needs. The swimming pool, the ball park, the ice-arena are a symbol of social participation explicated early in the life of the group. Commercial entertainment, such as cafes, a billiard hall and theatre testify to the long standing effort of the people to provide their own leisure facilities, thus strengthening the communal ties. Ultimately it appears that Golden is in a more balanced condition which, it is suspected, derives from factors of cooperation, as well as from factors of gradual growth.

In visual terms, each town presents a form which can be assessed in various ways, largely dependent on criteria used of perception. One may possible summarize, according to Prof. Arnheim's categories of Homogeneity, Coordination, Hierarchy and Accident, the degree of order between elements of a pattern.

- The pattern of Nodes adopted in Gold River is hierarchical, according to an axial arrangement from north to south. The principle of organization clearly provides a structure to set in motion the involved process of town-building. The ordering principle appears to be the establishment of a main center which defines the tension between the elements on a spinal line. The geometrical relationships of educational facilities as terminals and shopping mall as center, underlie the clarity of the axis.

The pattern in Golden has grown and the relationship is less architecturally structured. Three Nodes, equally
important, integrate their functions so that they can be said to be coordinated entities. The nodes are distributed with ease on the town-field, so that the rigid alignment of the educational buildings appears to be in a definite contrast. When one considers the inter-relationship of topography, nodes and transportation links, the plan of Golden comes to life.

- The pattern of Routes is based on opposite design forms, the one adopted in Gold River being a hierarchical circular crescent plan, while that of Golden is a coordinate grid system. The two systems appear to pursue different objectives: the first to maximize visual effects by bodily movement and juxtaposition of scene, the second to unify by internal characteristics the over-all network. Since both systems have consistency of design, it is useful to point out the incidence of variation in each ideal pattern.

In Gold River the road structure presents little divergence from the stated intention to follow the contours of the terrain. As a result of lack of opposition to the basic concept, the possibility of greater visual experience is reduced. Conversely, in the evolved town the attraction of the central thoroughfare is due largely to the sinuosity of its design, which puts slightly off-balance the concept of linearity expressed by the gridiron.

- Differences were noticed in the character of the towns as a result of dissimilar textural quality of Districts. In Gold River districts are set up as isolated entities related to each other by the road network and surrounded by open land.
Each section has internal homogeneity and clear boundary delimitation as a result of an exploded plan-arrangement. Open land is a confusing experience, as a visual conditioning where the observer is not always capable of relating to the various parts of town. The effect of emptiness and loss of reference are especially noticeable at the core of the town.

This quality of town texture by incidental areas is antithetical to that of Golden, where the design tends to spread over the whole of the site. Borders between districts are generally established by roads and in some cases they become hardly noticeable. At the inside of the precincts districts are instead clearly distinguishable, as a result of architectural styles, of volumes and landscaping details. One may then say that the pattern of districts in Golden tends to minimize contrast and to produce an effect of coordination. Coordination can be seen in the use of trees which are employed as unifiers of street scenery, by confining the lateral view and by giving, together with power poles and lines, a sense of direction to the grid.

- Prime Volumes can be seen to produce different visual effects in the two towns. It was found that in Gold River the larger volumes reinforce the concept of a one-neighborhood community. The symbolism of a center is quite accurate and profits from building volumes, earth forms, tree patches and edges, arranged in a circle to emphasize the lower volume of the point of confluence, the shopping center. This intentional arrangement could have profited from a more
imaginative use of the Hill, which appears a difficult site for houses. Places of dominant position almost automatically have inherent expressive form which may build identity into function. The houses might have been better on the plain below and a building complex of interest to the whole of the community would have taken full advantage of site factors.

The town of Golden reveals a different disposition. The principle behind the positioning of the higher volumes is to minimize centrality, and to suggest an indefinite, modular extension of the pattern. The relationship between the form of the town center, the grouping of higher buildings to the side near the river, and the form of the encircling mountains appears to be an intentional ordering principle. The center achieves distinction as an enclosure opened to the view of the high Rocky peaks while allowing sequential glimpses of the south part of town, on the other side of the river.

The order and complexity of the arrangement of prime volumes in the two towns differs greatly: in Gold River we have an intentional centralization so to produce homogeneity with the over-all concept of the town structure; in Golden we may see coordination of volumes articulated along a specific alignment and in relationship with the natural features of the place.

The towns have shown consistent divergency of intentions and solutions to the problem of town form. All the elements analysed: Nodes, Routes, Districts, Prime Volumes, seem to have opposite arrangements: where in the instant situation
the patterns appear to reinforce the aesthetic concept of a "closed" inner-related system, in the evolved town elements are arranged to reinforce the "open" structure of a modular system. We must conclude that the towns cannot be compared in terms of form. The suggestion that derives from the study is that each town can benefit from the qualities of the other. It would appear that one area of experimentation should be the study of the factors which make an evolved resource town so much more intricate and human. It is our belief that the evolved town can provide guidance to the principles which should stand behind the planning of new communities.

One of the most basic contributions of this type of research is the possibility to study the problem from within - rather than as suggested by some authors, by adopting solutions stemming from alien conditions of other countries. "Advocacy urban design" can consist in the study of form as an outcome of the activity of people for the people. Possibly our evolved towns have been considered haphazard realizations, too dull or unimaginative to contribute to a formulation of urban aesthetics. Aesthetic standards have been subject to constant change and at present, as H.S. Churchill observes: "... we have as yet no good examples of what the new town-scape will be, only indications and trends, such as the highways and free-ways."³ Existing communities can become the basis of a broadening basis of participation in the formation of a new aesthetic.

It is our belief that we can learn and build from what we have, that perhaps what has been learned and applied
in the building of older communities has until now been disregarded, while the new towns have gone to apply preconceived and alien notions, which can only tentatively reach one of the basic objectives of town building: the fulfilment of town identity.

B. Recommendations

Visual interest of the evolved town appears to be derived from three relevant factors:

1) **Adherence between the form of town and the natural form of the land**;
2) **Gradual clearing of sites** as expansion takes place;
3) **Clearing controlled by the citizens**;
4) **Relaxation of zoning regulations** to the extent of minimum necessary control;
5) **An open plan-arrangement** based on the non-subjecting gridiron scheme.

1. **Adherence to site features**

The one possible aesthetic basis of suburban development is the sensible adjustment of houses and other buildings to the form of the pre-existing land. Where single-family houses are a basic volumetric module of town-building, ingenuity in the use of the land is essential. The opportunity given by features such as hills, rivers and trees must lead to a wise exploitation of siting and grouping of structures to either contrast or harmonize the natural character of the landscape.

The site on which Gold River was built presented initially hillforms and waterbodies which a rapid and efficient
technology was not prepared to deal with. The designers might have been aware of the forceful qualities of the natural environment, but were able only to produce stereotype solutions. Difficult sites provide inherent personality traits, act as a discipline which stimulates designers to produce the best result they are capable of; but these benefits can be cancelled altogether by unyielding technological pressures. To design from site implies personal involvement so that full advantage may be taken of site character and techniques, such as the creation of vistas, of skylines, and kynesthetic incentives may be used to produce places of true identity.

2. Gradual clearing of site

This proposition is of great concern because notwithstanding the obvious disastrous consequences of bulldozing techniques, the justifications behind such procedures make exertations to spot clearing all together vain.

The fundamental reason behind a "clear sweep" approach to site clearing is stated as economic, for it is less costly to the community when done at the very start of the town's implementation. Land at the core of the town is allocated and cleared of existing natural features. As stated by the Town-Clerk of Gold River, Mr. Paulson, it may take from ten to twenty years before the town will need to expand its present facilities. As it is today, Gold River's core area would certainly appear less desolate and empty had the natural vegetation been retained. Voids such as those left by construction in Gold River are not to be considered open spaces, but rather as open land, where
all is bleak. An all-embracing concept of the relationship between man and habitat must take into consideration short term as well as long term needs of a community.

The second reason is said to be the desire to contrast the overwhelming natural green in which the town is established with an internal artificial flora inclusive of many exotic species. This, which is likely a desirable objective, can be carried out in stages, and above all, it may be used constructively. As stated by a sensitive writer on landscape, Nan Fairbrother:

A negative policy of not disturbing the old cannot therefore for long succeed. We must disturb it to survive on a vast scale and everywhere. ... But though we have ample land as such we waste it extravagantly. We are squandering our habitat in entirely new ways for which we have no proper land-use pattern, and like all our resources we exploit and misuse our landscape. For essentially it is not resources we lack nor even knowledge, but the vision to use them constructively.4

The evolved town has shown a positive use of the old. It has retained the natural evergreens at the inside of the town, it has planted a variety of other trees within private lots, and willows on the bank of the river, so that types of trees distinguish different functions. In the instant town constructive use of resources can mean different things. It can mean that landscaping procedures should be left to the citizens as one of the most important ways they may become involved with the visual building of their town.

The third reason for removing trees is the need to
simplify building operations. From the big operator to the small individual house builder trees are considered a "nuisance." On this matter Nan Fairbrother has to say:

Equally important is the growing concern for the quality of our environment. Amenity is no longer brushed aside at the slightest practical objection, and it is heartening that the higher we go in the planning hierarchy the more seriously amenity is taken. ... It is also the direct motive of much planning legislation, and planning which does not now take amenity seriously is in fact inefficient in a prosperous and therefore selective society. 5

Single trees or in groups should be considered an amenity and as such regulated against the abuses of practical considerations. Where one considers the stages of complexity the present industrial new town has developed from, the sort of environmental consciousness depicted above may become necessary for the success of resource operations.

3. Control of clearing by the citizens

The natural features existing at present in Golden are a communal achievement since preservation practices have been constructively bent to underline the character of the plain. It appears that the natural features of the two localities provide equally agreeable backgrounds for the appreciation of town form, while the man-determined natural environment is considerably more pleasant in the evolved site.

It is argued by many that an instant town must necessarily be built and then passed on to the inhabitants. These have thus little voice in the physical character of their environment; they can only bring changes in the individual plot
of land. An extensive area for citizen involvement lies instead in the moulding and gradually planned implementation of those areas set aside for future uses.

Control of the amount of changes to be brought into the natural environment can be instrumental also in augmenting a much needed community consciousness.

4. Relief of zoning

The practice of zoning in the instance of a small resource town has little reason for being applied in rigid compartments. It might be enforced because of preconceived thinking, or even as a status objective of the municipality, to enforce the image of suburban living.

Golden proves that order in arrangement can be achieved through recognition by the citizens of communal objectives. The evolved town demonstrates that by easing conventional segregation between functions, interesting forms may derive in the most spontaneous way. The relationship of independence of parts may result in a heightened town-form, while its smallness enables development to be reconciled with the best interest of all the citizens (see Appendix).

The relief of standard zoning regulations can set in motion a process whose objective would be the creation of significant variety, so that aesthetic satisfaction may derive from the old rule "variety within the overall unity." Satisfaction deriving from unity has an instinctive basis since it provides for a sense of security. Conversely a town with no sense of unified whole may generate insecurity in the inhabitants.
Variety on the other hand contributes greatly to this sense of security by reinforcing a sense of place and giving it a peculiar identity.

Planning has attempted to create better living conditions by isolating activities through a policy of zoning. The result is often the dullness and monotony of many single function city districts. Instead of rigid segregation the attempt can be made to integrate land-use functions so to have what Eugene Raskin calls "... the interweaving of human patterns." He goes further to state that:

Considering the hazard of monotony ... the most serious fault in our zoning laws lies in the fact that they permit an entire area to be devoted to a single use.6

Zoning when applied to a community of 3,000 people simply sorts out the different land-uses in the various parts of town, resulting in a crude dissecting of the human patterns, which need instead to be multiplied and enhanced by social intercourse. Thus resource towns can show a proliferation of human possibilities and become places where people can achieve a vivid sense of community life.

5. An open plan arrangement

It was found that the evolved town has an "open" structural and visual arrangement as a result of the geometric pattern of routes. The significance of the open organization lies in the fact that in this context the observer is able to combine and select the objects of his observation in a free unrestricted manner.
Structurally the grid is an abstraction which laid upon the land allows identity of functions to emerge in the normal process of evolution. Accidents of form can occur as a natural interplay of needs and possibilities, thereby bringing qualitative changes by adding or subtracting to what already exists.

The arrangement chosen in Gold River has instead forceful implications because the overlapping of scenes is determined by the road network, and the juxtapositioning emphasized so that the observer is inherently conditioned. The hierarchy of land uses on the other hand determines location of functions in a much more restrictive way, so that parts are more easily changed than added to what already exists.

The route network of Gold River appears to follow the mainstream of present planimetric solutions adopted in most new towns in the province. The grid is almost automatically discarded as obsolete and old fashioned.

Many examples of city building confute this assumption and prove that the grid provides a valid basis for qualitative, growth by natural extension. Qualitative changes can be brought about in stages of development where reorganization and restructuring can be extended to the whole of the town. Such an example is Savannah, where, according to Edmund Bacon:

The actual impact of the Savannah system of land organization is both practical and delightful. There are efficient streets on the normal gridiron pattern.  

There is a need to understand the visual possibilities
of this geometric system where simplicity of scheme requires a
greater degree of urban discipline from town designers. In this
sense the evolved towns pose a challenging and valid proposition,
while at the same time they are a rich storehouse of ideas for
the new-towns of today.

Resource towns in general have a need to participate
in the changes which are taking place in the Canadian urban
scene. It must be remembered that these towns are as no other
new towns of other countries. They are not satellites to large
cities. More likely they represent the evolution of the front­
ier in the Canadian landscape. As such they must cope with
problems of insecurity deriving from shallow employment, isol­
ation, and of social unbalance.

When considered in this context, one must recognize
that the sense of community and pride in the achievements ex­
pressed by the people of Gold River are a measure of remarkable
success.

In visual terms, a new town is a starting point and
time is necessary to mitigate the effects of fierce construction.
In time, trees will grow and improvements occur quite naturally,
as the citizens form an attachment to the town. It may take
approximately twenty or thirty years before anyone can attempt
to judge comprehensively the success of a new town. Its citi­
zens in the meantime must take it upon themselves to further
the process of town building, for, as Edmund Bacon says:
The building of cities is one of man's greatest achievements. The form of his city always has been and always will be a pitiless indicator of the state of his civilization. This form is determined by the multiplicity of decisions made by the people who live in it.8

The architect's main task may be that of facilitating these decisions, and at times that of directing their formal outcome.
FOOTNOTES


5 Ibid., pp. 163-164.


8 Ibid., p. 13.
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APPENDIX

Zoning Map of Gold River

The map is a copy of the zoning ordinance adopted by the municipality in 1966. It shows, by comparing it to the Land Use Map, that only smaller changes have occurred in the actual layout and that only minor variations have taken place through the six years following initiation.

Residential expansion is planned to take place mainly as multiple-family additions, east and west of the Muchalat Drive, while some single-family lots are still available in parts where the terrain commands higher construction costs.

The ultimate figure of 11,000 population would necessarily mean the creation of another town center and the expansion of the residential area toward the site of the present trailer court.

The area forming the present townsite is classified and divided into:

<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Residential</td>
<td>R.1</td>
</tr>
<tr>
<td>Multiple Family Residential</td>
<td>R.M.1</td>
</tr>
<tr>
<td>Multiple Family Residential</td>
<td>R.M.2</td>
</tr>
<tr>
<td>Central Commercial</td>
<td>C.1</td>
</tr>
<tr>
<td>Fringe Commercial</td>
<td>C.2</td>
</tr>
<tr>
<td>Public Institutional</td>
<td>P.1</td>
</tr>
<tr>
<td>Heavy Industrial</td>
<td>M.1</td>
</tr>
<tr>
<td>Service Industrial</td>
<td>M.2</td>
</tr>
<tr>
<td>General Holding</td>
<td>G.1</td>
</tr>
</tbody>
</table>
Permitted uses, standards of construction, signs and notices, minimum site dimensions and coverage, minimum dwelling size, height, setback and separation limitations, accessory buildings and structures, parking standards and fence regulations determine the particular character of each section, along the lines of traditional "monopoly planning."

**Land Use Map of Gold River**

The Land Use Map is the result of a personal survey; it provides information on distribution and quantity of a number of observable activities taking place upon the land. The function of chart is to indicate the geographical position and the extent of each major use, thus integrating the visual comment of the study. It accounts for six categories: governmental and institutional, commercial and business, residential, parks and playgrounds, industrial, tree-land and un-used land.

The land use map must be considered with some care, since importance of use is not necessarily measured by the amount of land occupied. Industry, for example, might occupy very large sites at a considerable low density, while uses requiring little land might be of equal importance and value to the community. Intensity of use, though difficult to assess, needed to be given some indication. One way by which this is proposed is by two basic entities, land and outlets where outlets indicate a special concentration of use; generally corresponding to a three-dimensional structure, they are grouped according to the categories of the land they serve.
A zoning map has been adopted by the municipality only lately in the development and reorganization of the community. Prior to 1969, year in which a by-law was passed in council, location and use of buildings, and use of land was regulated by merit of proposal, holding as guidelines the "promotion of health, safety, convenience and welfare of the public." Land was developed merely according to a subdivision plan, its function that to produce a system of parcels which could be bought, sold, developed independently one from the other. Any strict control over this independence, it was felt, would have discouraged private development and investment in the community. The pursuit of individual liberty of action was of maximum consideration. One device set forth in order to accomplish the maximum fluidity of conditions was to subdivide land at a minimal twenty-five foot frontage. The subdivision of the land east of the alluvial canal, now filled, was carried out during the 1940's when the town was recovering from a period of depression. By fractioning the land into small parcels, it was possible to attract a greater variety of investors.

The present by-law, rather than an instrument of enforcement, is a reference for proposed uses. This consideration is inherent in the structure of verbalized and mapped by-law.

The town is divided for purpose of land use into four zones, referred to as:

"A" Residential Zones
"B" Motel Zones
"C" Commercial Zones
"D" Industrial Zones

and the relative permitted uses are very briefly outlined.

The zoning map, while indicating the extent of each function, does not regulate in detail the location of type functions within each class. No attempt is made to regulate specifically development of apartment buildings. The few existing ones are located on secondary arteries, in the peripheral areas.

The written by-law on the other hand is just as permissive, when one considers for example the definition given of "Auto Camp":

"Auto Camp" shall include a "motel" and a "trailer camp" and means a group of living unity designed primarily for the use of the travelling public.

which explains how in Golden a trailer-camp is often given the status of a motel complex.

From the above emerges the intention of the local legislature to leave an opening for various, almost conflicting conditions to materialize.

Land Use Map of Golden

The Land Use Map indicates divergencies between intentions and implementations, and illustrates the degree of flexibility of a system based on community control rather than on a set of standard codes. Within reasonably wide limits, the
local planning authorities are empowered to determine application of uses upon merits. The procedure is naturally yielding to intricacy of use, as a result of the structure of control and the structure of land.

Mixture of land use is especially pronounced around the two commercial cores, where public buildings, business buildings, residences and light industrial lots intermingle freely. The two cores express a typical "tug-of-war" situation between a central but narrow location (the older center), and a larger but relatively undesirable site (the new center). A majority of business establishments in the North Golden center dates back to the initiation of the town, and some still combine place of business with place of residence, so that mixture of land use means also mixture of building uses.