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ABSTRACT

THE ALBERNI VALLEY MUSEUM
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The Alberni Valley Museum is a community museum on Vancouver Island that uses, primarily, a Visible Storage format to display its collection of objects and photographs of and about the history and culture of Port Alberni and the surrounding area. This Master's Degree Project incorporates the use of precedents and a theory of typology to help create a new museum for this collection.

A discussion of typology; its history; and design usage; are followed by studies of the typology as applied to museums and local buildings. These studies are combined with information on a museum's physical requirements, such as conservation needs, to produce a design for the museum.

Key Words: museums; precedents; typology.

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i. The Project: Alberni Valley Museum

Figure 1: MAP OF VANCOUVER ISLAND

This project is a new structure to house the visible storage collection of the Alberni Valley Museum. An expanding collection is the result of any museum, and the increasing programming and roles taken on by many museums, including this one, necessitates additional space. Previous alterations of the existing museum have alleviated some space problems, but have generated others. The addition of more cases, shelves, and even more floor space, within the existing building has resulted in a crowded impression, and makes it difficult for a visitor to become oriented within the maze of cases. The only natural light in the museum enters through two skylights over two of the offices, which means that there are no side windows, and no views to the outside. Furthermore, the mezzanine and basement levels are not accessible to the mobile impaired.

Located in Port Alberni, a city of 20,000 on Vancouver Island, this community museum was developed by members of the community to celebrate the Canadian Centennial and the formation of the town of Port Alberni through the amalgamation of the cities of Alberni and Port Alberni. The resulting Alberni Historical and Museum Society eventually turned the museum over to the City of Port Alberni, but still operates the archives in the museum building

The mandate of the museum is to collect artifacts that relate to the history of the Alberni Valley, and thus the collection reflects the people and industries of the area with both native and pioneer artifacts. The Cedar and Cedar Bark section contains an extensive basket collection of Nu-chah-nulth and Coast Salish work. Artifacts relating to the fishing, agriculture and forestry industries found in the Valley also make up part of the collection, as well as household items and textile pieces. There is also a section called *Made by Hand* that includes pieces of folk art in addition to a local mason's work and that of a violin maker.

The economy of Port Alberni has always depended on the forest industry. Although agriculture, fishing and other businesses have contributed to Port Alberni, the mainstay of the economy has always related to the forest industry. Recession in the 1980's and more recent downsizing have caused this strong union town to look at diversifying its economy. One of the areas that the town looks to for expansion is the tourist industry.[1] Recent trends in *soft adventure* and *eco-tourism* are to the benefit of Port Alberni which terms itself: "Gateway to the Pacific Rim." The three divisions of the Pacific Rim National Park (West Coast Trail, Broken Group, and Long Beach) are accessed by travelling through Port Alberni. Kayaking, hiking, and whale watching are some of the many activities this area offers. An expansion of the museum can only add to the growth of the tourist industry.

ii. Approach

The design of this project begins with analyses of different sets of precedents, involving the nature of the building, a community museum, and its location. Undertaking a study that compares a select group of museums as well as the kinds of buildings found in the Alberni Valley, I have discovered not only an idea of what is *museum*, but evolved an idea of what this particular museum should strive to be. I have approached the study of both museum and local buildings, by using a theory of typology to promote an understanding of how precedents, or *models* in the typology, can be incorporated into the design process.

This more theoretical side of the project is followed by an overview of the architectural considerations required by a museum and a discussion of the particular requirements of the Alberni Valley Museum. A discussion of the site which leads to an explanation of the design and why it takes the shape is does, concludes the project.

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[1] Gateway to the Future, CHEK 6, Calgary 7, Calgary, Dir. and Prod. Lynn Charman (1997).

"... every building creates associations in the mind of the beholder, whether the architect wanted it or not."
- Nikolaus Pevsner

II. THEORY (TYPOLOGY)

i. What is Typology?

Typology is, in the most basic sense, a classification system. When applied to the study of architecture it is the act of classifying buildings into types. How exactly we organise our thoughts such that we can clearly understand how this classification occurs and furthermore, how this classification can be of benefit to design, is an idea that has been tackled by many theoreticians, and has resulted in as many conclusions. A study of the various ideas of some of these theoreticians leads to an individual understanding of what is typology, and how it can be utilised in the design process.

One of the first thinkers to deal with the issue of typology was the eighteenth century theoretician Antoine Chrysostôme Quatremère de Quincy (1755-1849), whose idea of type was derived from a search for the origins of architecture. Contemporary thought, in Quatremère's time, as seen in the works of the Abbé Laugier, proposed that the primitive hut was the beginning of architecture. Quatremère broke with this tradition, proposing an epigenetic theory of architecture based on three ideas of primitive man: as a hunter, a gatherer, or a farmer. The three corresponding architectural types that would then generate all architecture were: "la tente, les souterrains et le cabane ou la charpente";[1] the tent, the cave and the hut. These three distinct types are based on both the physical conditions and social organisation of man. By basing his theory on social terms, Quatremère secularised a tradition of history that was considered to be formed and inspired by the divine. He described the progression of a typology to be driven and inspired by humankind; influenced and intertwined with how it organises itself socially, and how it deals with its surroundings, both physical and abstract.

Quatremère's theory uses only three types to characterise all architecture. Egyptian architecture, he said, was derived from the *cave*, Chinese architecture from the *tent*, and classical architecture from the *hut*. Yet despite an approach that integrates ideas of architecture evolved separate from a Western tradition, Quatremère still concludes that the hut produces the most sophisticated architecture, and thus proclaims that architecture derived from this type is superior. Classical architecture and its descendants in Western architecture, including Renaissance palaces and gothic cathedrals, were of the same type; all derived from the *hut*. These beginnings illustrate how Quatremère, who investigated the origins of architecture by distilling it down to the most basic form or forms, arrived at a theory of typology and a definition of *type*.

Based on historical notions, the nature of the object, and on the fundamental uses of the object, *type* was, for Quatremère, more of an idea than a concrete object. He wrote that type was: "the original meaning of a thing," and was: "more or less vague".[2] A description of a particular *type* of building would not, for Quatremère, provide the details of the form of a building; rather, the *type* was the idea behind a series of buildings that had been grouped together. A better understanding of this definition of *type* is accomplished by comparing Quatremère's definition of *type*, with that of *model*. He writes:

> The word *type* presents less the image of a thing to copy or imitate completely than the idea of an element which ought itself to serve as a rule for the model. [3]

A *model*, therefore, is the individual building, with all its particular details and forms, in contrast with the more abstract concept of *type*. In further exploration of the idea of *type*, Quatremère developed the *ideal type*. The *ideal type* could not be fully described, could in fact never be realised; and thus could also not be copied.[4] It was the embodiment of *type*, yet it was not an actual, physical thing. Therefore, the typology is the accumulation of all the *models*, and *type* is an idea of the thing based on the typology. Yet, because new models are always being created, the typology is continually expanding and perpetually alters the meaning of type.

Type, however, despite its hazy description, still has certain formal characteristics. Each building, according to Quatremère, should have a suitable type, and when an architect designs a new building, it should be made to conform to the type, in part by having a related physiognomy. Failure to use type in this manner, maintains Quatremère, would cause disorder in the continuity and understanding of architecture.[5] But the need for a new design to ascribe to a particular type is not meant to inspire historicist buildings; an architectural design should be connected to the past in such a way that it can be understood by the present, but should not be a copy of the past.

Ahmet Gulgonen and Francois Laisney address the issue of typology by dividing it into three *conceptual poles*.[6] The first pole concerns types inspired by social conditions, an aspect of typology that evolves from certain social circumstances and relations to the surrounding environment. An example is the building type that has evolved in the Eixample in Barcelona, the gridded portion of the city laid out in the nineteenth century. The rhythmic spacing of the Cerda blocks in the Eixample, combined with the social conditions of Barcelona, have evolved to create a standard building type that accommodates the building needs of the population within the grid frame of the city street system. This idea can be seen in Quatremère's work where the three types of architecture are derived from the three states of primitive man. The social patterns that evolved out of the nature of a society based on hunting, gathering, or farming, were responsible for the development of the building type of each. The hunter, constantly moving after prey would quickly dig shelters out of the earth or inhabit an existing shelter such as a cave; the gatherer would need a shelter that was moveable and developed the tent; and the farmer, who could build a permanent residence and would also need a place to put stores, realised the hut.[7]

The second pole in the explanation of typology by Gulgonen and Laisney, is based on spatial and formal characteristics. It relates how a particular shape or volume is specific to a certain type because of the value of the shape, as opposed to the first pole where the shape is more likely to have been derived from external factors, such as lot size.

The third pole is based on function; a classification of buildings that is formed by the use of the buildings. Jean-Nicolas-Louis Durand was one of the many French theoreticians in the nineteenth century to use typology in this manner.[8] For Durand, architecture centred around the composition of architectural elements, such as columns, vaults, and foundations, in order to accommodate a program.[9] Based on an axis that provided symmetry; and the grid, Durand put forth a variety of compositions of parts of buildings to be copied and used in the composition of a design. In later writings Durand classified buildings according to their function, and although this resulted in a particular idea of typology, it is only one pole of the more rounded explanation of typology as given by Gulgonen and Laisney.

The Modern movement had no need for a classification of architecture according to function, in the development of a design. Architecture, in the Modernist view, was the result of capturing an idealised space, and only later would an activity be produced in the space.[10] Later theoretical developments of the Modern movement, that incorporated mass production, ignored Quatremère's idea of *type*, that vague reason behind the building, in lieu of the more *model*-like approach of the repeatable object. With the *unités*, Le Corbusier did on some level create a new type by inventing a new arrangement of community organisation. It can be compared to the series of buildings that fill Haussmann's Paris in that the *unité* is a specific, repeatable system, but unlike the Paris apartment buildings, the *unités* are placed in any landscape; they are not made to be particularly suited to any one place. Thus on another level, the *unités* are only *models* that are repeated in various settings.

The use of typology in design is found in succeeding generations of architectural theory. G. C. Argan (1965), followed in the direction of Quatremère's idea of type, but redefined it to respect the Modernist doctrine. Argan defined the design process as having two *moments*. The first moment identifies with Quatremère; it was the link with the past, the *natural* given. The second moment, the moment the form is defined,[11] allows for more individual expression and Argan considered it to be much more important. Using such an emphasis, Argan was able to maintain a connection with the idea of a constant underlying type, yet was also able to sustain an approach to design that was open to new avenues of exploration, rather than being tied down with the historicist associations that are often grafted onto theories of typology.

In a similar vein, Ernesto Rogers (1965) defined type as a framework within which an architect worked: "the development of a project was a process that led from an abstract type to the precise reality."[12] In other words, type could serve as a starting point; a blurry definition of the idea of the building which would then be transformed into the particular architectural object. Put into the terms of *type* and *model*, as defined by Quatremère, we can rewrite the idea of Rogers to say that the process leads from *type* to *model*.

Louis I. Kahn's article *Form and Design* gives a similar idea of typology as it relates to the design process. Although Kahn did not specifically address the idea of typology in this essay, his ideas of form and design, provide a particular insight to this study of typology. Kahn wrote: "Form is *what*. Design in *how*."[13] For Kahn, form was the expression of the object in question; it was the idea and spirit of the thing that included physical attributes, though it did not define them precisely. Design was the actual thing, and it could be defined in detail because it was real. If we compare Kahn's theory to that of Quatremère we can understand Kahn's *form* to be related to Quatremère's *type*, as *design* is to *model*.

Kahn's example of a spoon displays his thought by clarifying the difference between a spoon and spoon:

> Spoon characterises a form having two inseparable parts, the handle and the bowl. A spoon implies a specific design . . . ." [14]

In Quatremère's words, *spoon* would then be the type; an abstract notion of what is a spoon. It has no size, no material, no depth, and yet it still contains an idea of form. There is involved in the notion of spoon, the idea that the handle must in some way be used to hold the spoon, and the bowl to hold some physical matter that is not part of the spoon, and that there is some connection between these two. All this implies a form, yet not an exact design.

A spoon, once it is made, and is a thing, will conform to Quatremère's definition of *model*, and Kahn's idea of *design*. Kahn writes:

> Design is a circumstantial act, how much money there is available, the site, the client, the extent of knowledge.[15]

Thus the design is the thing in the real world, a specific spoon, fed not only by ideals of *type* or *form*, but by such mundane considerations of available materials, technology, craftsmanship, and budget. As a *model*, the spoon could be repeated again and again, to make a set of identical spoons. But the *type* or *form* 'spoon' cannot be copied, as it cannot be made. It is an ideal from which models can be derived, and though it has formal attachments, the forms are not defined enough to exist in reality in any single manner.

This process, from form to design, or from type to model, is akin to the design process, mentioned above, in relation to Rogers. However Kahn further defines this process when he states that he does not intend to imply a linear progression from form to design, but that form and design could inform each other: "This interplay is the constant excitement of architecture."[16] Using this basis we see typology can be used as a tool for design, in that it is a tool for understanding. A study of the *type* can give an ideal of what a particular building, a *model,* should be, but at the same time the creation of a *model* will alter the meaning of the *type.*

Raphael Moneo addresses type as the: "*frame within which change operates*"[17] Rather than being a static device, type can be constantly changing, although change is not required. Similar to Kahn's idea of the interplay of design and form in the creation of architecture, Moneo posits the interplay of type and typology to create the architectural object. Typology is the plethora of buildings that fall into the idea of the type, and type is the amoebic definition that moulds and reshapes itself to define that which makes up the typology. The architect can use this typology in many different ways, as Moneo writes:

> ...the architect can extrapolate from the type, changing its use; he can distort the type by means of a transformation of scale; he can overlap different types to produce new ones. He can use formal quotations of a known type in a different context, as well as create new types by a radical change in the techniques already employed. The list of different mechanisms is extensive - it is a function of the inventiveness of architects."[18]

In this way, typology is seen as a very versatile tool, that can adapt and change to the constant transformation of the social, economic and technological spheres which can impact the role and meaning of architecture.

Alan Colquhoun writes about use of type for its value of recognition, in terms of communication. He states that by beginning the design process at a *type*, the architect establishes:

> a path for its communication ... between the past, the moment of creation, and the world in which the architecture is ultimately placed.[19]

The idea of type is based, of course, on history, on precedents, and on all those buildings that have come before; and must therefore retain certain historical associations. However, typology should be seen not as a vehicle of historicism, but as a tool to help understand the reason and the thinking behind the architectural object, such that we may re-use, reject, or adapt the typology to help us in our own design, according to the individual circumstances of the specific architectural object.[20]

In conclusion we have seen many views on what comprises a typology theory, and how it can be employed to aid the design process. It is most important to see typology as a tool for design, and not as an absolute mandate. We can learn much from pre-existing buildings and the thoughts that made them take the shape they do. Yet this should not restrict us from adventuring in new directions. What has been, is reflected in the typology, and it orients our understanding for what is yet to come.

Time past and time future
What might have been and what has been
Point to one end, which is always present.
-T.S. Eliot

"Museums began as human society's equivalent of cultural memory banks."

-David Dean

ii. Museum Typology

The typology of the museum is all things that we call *museums.* This study is based on the use of a building for a specific purpose. Starting with the function of the building as a museum, we can then look at the formal and ideological elements that help to distinguish a building as a museum. As we cannot look at every museum existent in the typology, we will derive an understanding of it by looking at a selection of museums. To begin, we will look at a history, or chronology, of the museum type to give a general view of the buildings we call *museum*, investigating not only the function of the museum, but also its form and character. Nikolaus Pevsner, Helen Searing and Witold Rybczynski[21], among others, have given similar accounts of the history of the museum. From these analyses we can draw a fairly linear history of the museum. This history is followed by more detailed studies of particular museums and the ideas that shaped them.

Formation of the Museum T pe

The beginnings of the museum as a public institution are found in eighteenth century Europe. The Enlightenment, or the Age of Reason, as the period is called, was interested in science and reason. The era was responsible for dictionaries, encyclopaedias, and a search for answers and origins, out of which the public institution *museum* was born. The museum was a place to store and display a collection, but it was also thought to add to the betterment of society. Art museums were the most common and it was felt that exposure to great art would improve those who could experience it, although museums of all kinds would provide a beneficial and educative experience.

The roots of the public museum can be traced back to a number of collections developed privately by individuals. Göran Schildt attributes the creation of the first museum to Attalus I of Pergamon (241-197 BC), who came into possession of a number of Greek statues through various plundering. Finding no natural setting in Pergamon to place the statues, Attalus created a special place for them: a museum.[22] Hadrian's Villa in Tivoli can also be seen as early example of a museum. Hadrian (76-138 AD) collected both original and copies of the best pieces of antique art; and even had entire environments of places he had visited, rebuilt.[23] Both Attalus and Hadrian preserved objects out of their natural context in an attempt to keep a culture's ideals alive.

In the Italian Renaissance, princes and the wealthy, such as the Medici family, collected icons, books, paintings and sculpture, which were displayed in rooms or galleries. Meanwhile, in Renaissance Germany, gentlemen and scholars developed *Wunderkämmer*, or cabinets of curiosities.[24] In the late sixteenth century with the development of easel paintings, pictures were collected and displayed in the residence of the owner; often in a separate picture cabinet, a room devoted entirely to the display of pictures, or a gallery. The gallery was a long, narrow corridor that ran alongside rooms in a large house, and was a place where family treasures such as furniture or silver, and eventually art and other collections, were displayed.[25]

Therefore it is not surprising that when princely collections were displayed for public viewing, they were housed in former palaces, or structures built to resemble palaces. Built to impress, with lavish rooms and grand staircases, as well as to accommodate large numbers of people, a palace adapted well to the function of display. The enfilade of large, connecting rooms provided appropriate viewing spaces, and also had a stately air appropriate to the nature of the collection.

The Louvre in Paris, and the Belvedere in Vienna, are examples of the palace adapted to perform as a museum, however, buildings designed purposefully to act as museums also followed in the palace tradition. In 1783 and 1803 respectively, Etienne Bouleé and J.N.L. Durand, each proposed designs for a typical museum. Both designs have long galleries organised around courtyards, with a large dome, or rotunda, at their centre. Though never built, these models influenced later museum designs such as the Altes Museum in Berlin (1823-30), the British Museum in London (1825-27), and the New Hermitage in St. Petersburg (1840-49). In all these examples, long galleries and grand staircases, organised around courtyards intimated the elevated ideals of the institution, as well as its collection.

In addition to the gallery and grand stair, features that became common place in museum design, the Altes Museum included a central domed room. The double-storey, coffered rotunda, similar to that found in the proposal of Durand, is a direct reference to the Pantheon in Rome. Thus the Altes museums refers not only to the grandeur of the palace, but has the transcendent allusion to the temple. The museum is given the imperial essence of a palace and the reverential quality of a church.

Unlike the railway station, a building type that evolved in the same time period as the museum and initiated an entirely new form, the museum drew upon the existing typologies of palace and temple to create a building that represented its ideals. The result is a museum type that has taken the formal characteristics of gallery, rotunda and grand stair to be its own, rather than that of the palace or the temple.

Though not found in the very first museums, the feature of top-lighting early became a popular trait of museums. Sir John Soane, reconfiguring a corridor into a picture gallery at Fonthill House, Wiltshire in 1787, was required to use skylights to provide natural lighting in the gallery. He used this solution again in the Dulwich College Picture Gallery (1811) to provide natural lighting in the gallery spaces. Overhead lighting, as Soane discovered, has many advantages for the museum purpose: it gives a good quality of light; it leaves the walls free for display; and it also provides a measure of security, as the walls are solid and therefore more difficult to penetrate than glazing. This solution for gallery lighting became common practice in many succeeding museums, as can be seen in the Glyptotek in Munich (1816-30) and the National Gallery in London (1832-38; 1872-76).

There are some problems with toplighting as it can only be used for the upper storey of a building, and daylight in general can be destructive to the collection of a museum. Museums today either eliminate daylight, or incorporate a means to control it. In the Kimbell Museum in Texas, daylight enters the galleries through a slot in the ceiling, but is filtered before it reaches the galleries. In the National Gallery of Canada (1988) special light wells are used to conduct natural light down to galleries on the lower floor.

Also indicative of the early museum type was the classical style in which they were built. An emulation of European palaces and temples, this style was used for museums in Europe, but also in North America The Montreal Museum of Fine Arts (1910-12); the Metropolitan Museum of Art in New York (1894); and even the National Gallery of Art in Washington, D.C., not built until 1937-41; all used the classical motif to epitomise the magnanimous idea of museum. The Modern style of architecture changed the shape of the museum, as it changed architecture in general, but it also altered the idea of museum, and the museum type.

In 1942 Mies van der Rohe proposed a design he called *Museum for a Small City.*[26] The most important element of this design was to eliminate any barrier between the collection, and the community. Organised around courtyards, the resulting spaces are not the typical long galleries admired in the palace tradition, but large open areas that are flexible and can be rearranged according to the needs of the curator. Mies consolidated this style of museum when he designed the National Gallery in Berlin (1962).

Conforming to the ideals of a modernist doctrine more than to any previous ideas of the museum type, the National Gallery presents a simple, undecorated building, with vast glazed walls. Like Philip Goodwin and Edward Durell Stone's Museum of Modern Art (MOMA) in New York (1937-39), the resulting interior is a large, flexible space rather than any defined gallery spaces with the usual accompaniment of grand lobbies, ceremonial staircases, or temple-like domes. By neglecting the formal associations of palace and temple, these museums make statements about the accessibility of their collections. They do not, as does the classicist style of museum, speak of a nobleman's collection that the general public is privileged to see. Instead, they speak of a collection that is accessible to people, and the privilege of viewing it is therefore inherent in the value of the collection. As Mies wrote in 1943: "The building space would be available for larger groups, encouraging a more representative use of the museum than is customary today." [27]

The basic white walls that make up the partitions of the Modernist museum are now *de rigueur* for the art gallery, as a museum or for commercial purposes. And though the modernist museum altered the museum *type*, it did not change it all together. Rather than replacing the traditional museum, it added to the typology of museum, giving new styles and ideas that would redefine the museum type, but not replace it.

If we look at Louis Kahn's Kimbell Museum (1967-72), we can see influences of both the traditional, classicist museum, and the Modernist museum. Like the Modernists, Kahn provides a simple, flexible space without the trappings of grandeur found in the traditional museum. However, he does not leave a plain stark room. The six vaults that make up the museum have a certain elegance, and their repetition gives distinction to a series of galleries rather than one open space. The result is a flexible use of space with movable partitions, but with a rhythmic framework to ground their organisation. Akin to Mies' Museum for a Small City, courtyards break up the space; yet instead of defining space like Mies, Kahn uses the courtyards in the rhythm of the vaults. Toplighting, common in the traditional galley, is reiterated to provide a compliment to the architecture, as well as natural lighting.

Kahn's solution at the Kimbell has been accoladed, yet not often copied. Newer museums have discovered a need to attract visitors not just with their collection, but also with the collection container. The subtle harmony of Kahn's architecture, though beautiful, does not provide the striking image that many newer museums attach to their identity.

Seen earlier on in the sculptural formation of Frank Lloyd Wright's Guggenheim Museum in New York (1943-58), the museum as monument is a common theme in post World War II architecture,[28] where the museum has become *the* architectural commission.[29] Intended to provide a remarkable and memorable image, the museum building itself, has in many cases become an important piece in the collection of the museum. The New Staatsgalerie in Stuttgart by James Stirling and Michael Wilford; the High Museum of Art in Atlanta by Richard Meier and Partners, and the Centre Pompidou in Paris by Renzo Piano and Richard Rogers, are all better known for their museum building than for their collection. The museum building acts not only as a draw for visitors, but also as a symbol that adds to the identity of the museum.

In conclusion we see that museums have grown out of collections. And though people have been collecting various objects for thousands of years, the museum as public institution did not take hold until the eighteenth century. Originally museums emulated the palace or temple, which reflected not only the original homes of many collections, but also appropriated the august connotations of these buildings. From this base of museum as palace or temple, many ideas were founded about what it means to be a museum. Formal remnants of palace and temple remain in many museums: the dome, the grand staircase, the gallery. In studying the formal characteristics associated with museums, the design response does not need to include them, but should be based on an understanding of: how these characteristics have benefited the idea of the museum; how they are still applicable, or entirely inappropriate; how they can be used for a new idea or altered to fit a new context; or how the same problem in the museum setting will simply result in a similar solution. As museums change over time in terms of function, technological advancements, responsibility, and purpose, the typology of the museum, both the idea and the physical form, will also change. But existing museums will continue to set a base line for the understanding of what a museum is, as new buildings set standards for what a museum should be.

Studies - Approach to using typology

ABSTRACT IDEA OF MUSEUM

As we have seen above, by looking at the historical tradition of museums, museums are often viewed as buildings - different and various as they may be. But the idea of museum expands beyond solid walls. Herbert Distel developed the Museum of Drawers, a structure with drawers that are filled with tiny pieces of art, many of which were commissioned especially for the piece.[30] Contained within a piece of furniture, this tiny museum belies our expectation of the typical museum building, yet still maintains the spirit, or idea, of a museum.

Downtown Chicago, referred to as the *Loop*, has also been called: "A living museum of skyscraper architecture."[31] Here, buildings are the collection, but this museum has no walls, no interpretations, no little white card with an explanation; yet it can still be referred to, and thought of as, a museum.

Andreé Malraux created the term "Museé Imaginaire" or "museum without walls" to describe the photographic representations of the world's art found between the covers of a book.[32] Like the previous two examples of a more abstract notion of a museum, the final product is not something we commonly associate with the term museum. Yet each of the examples maintains the spirit of museum though its collection. Although they do not inhabit the typical museum building, nor do they house the functions of curating, research and exhibition commonly associated with a museum, they still contain the idea of museum: that of a collection, and a collection with a value.

In terms of a form, these abstract examples do not indicate to us specific features to aid in the design process; yet they help to define museum, without cluttering up the mind with formal features of grand staircases and top-lighting. They allow us to experience an idea of museum that excludes the built form.

POMPIDOU CENTRE / BARCELONA MUSEUM OF CONTEMPORARY ART

The Pompidou Centre in Paris was the winning design of an architectural competition intended to revitalise the Paris art centre, which on a global scale was losing ground to New York. The brightly coloured ducts that cover the exterior of the museum provide a vivid contrast to the standard grey buildings of Haussmann's Paris. In a similar fashion, the typically white Richard Meier building, the Barcelona Museum of Contemporary Art, in the gothic quarter of medieval Barcelona, stands in stark contrast to its surroundings.

Statements against the homogenous background of a European cityscape, these museums seem to comment on the unique nature of their exhibitions of contemporary art that are themselves a contrast to the tradition of art history. These buildings make a distinct comment by their difference to their immediate surroundings, not only in shape and colour, but also in scale. Their front facades lead onto wide civic plazas that will contribute to their function as a civic institution, as much as their exhibitions, and also help merge the museum into the city.

Figure 2 & Figure 3: POMPIDOU CENTRE

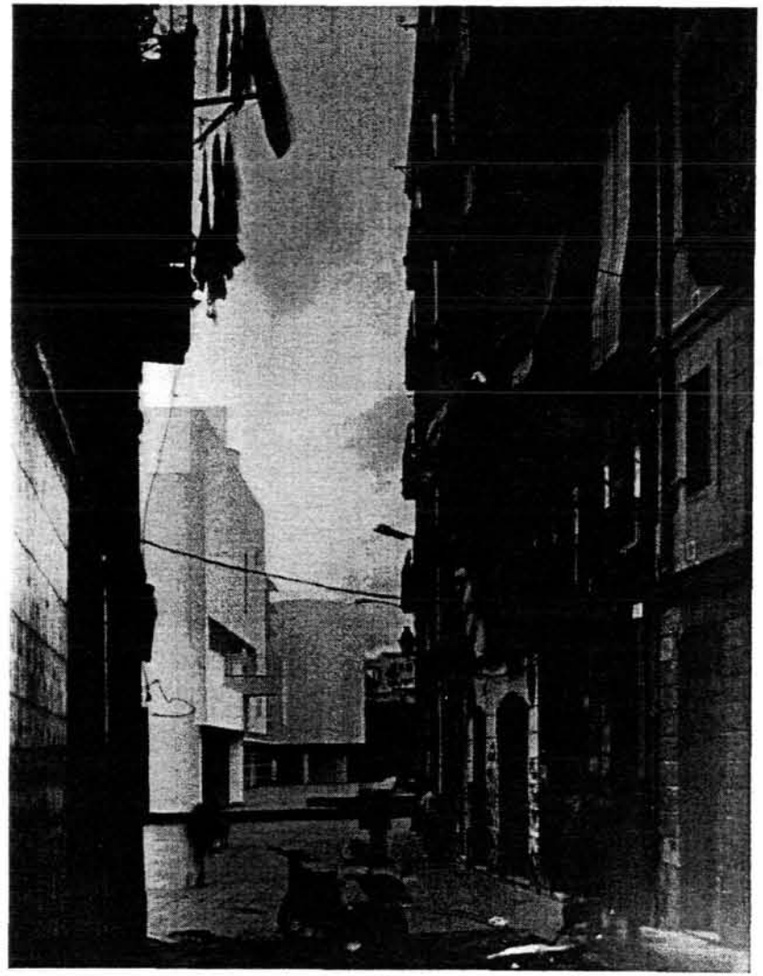
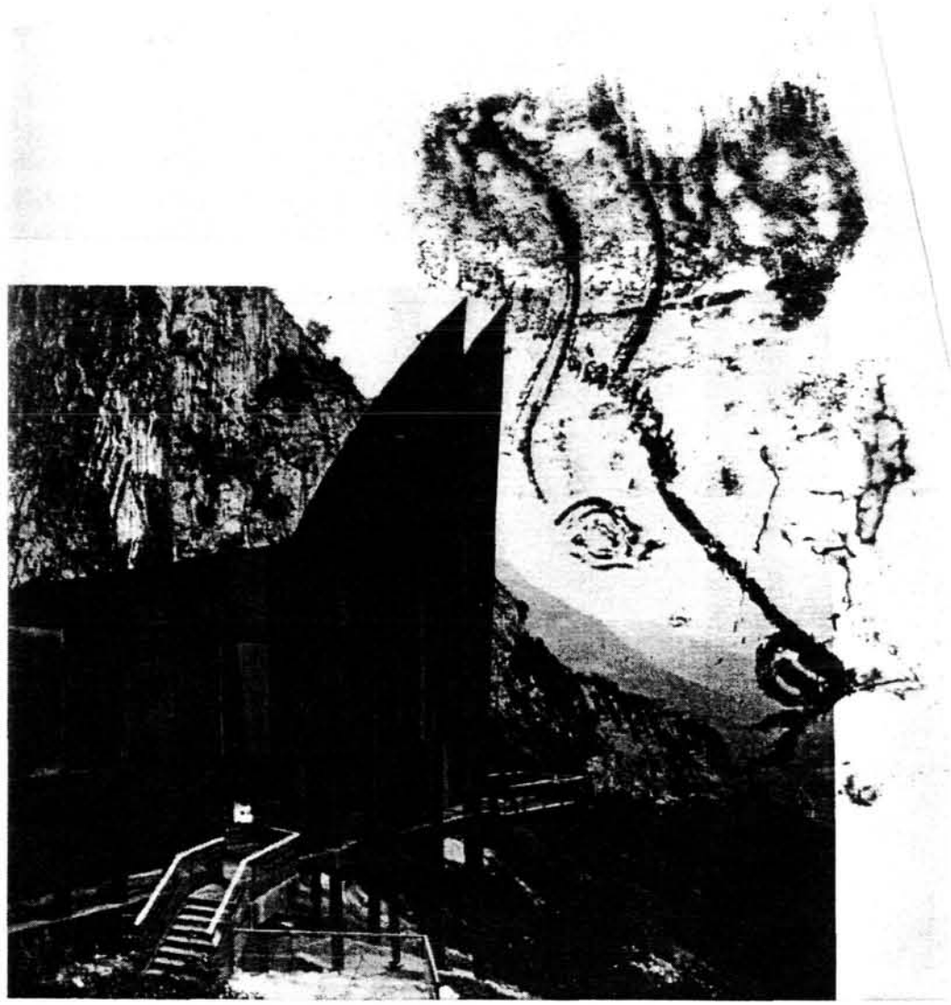


Figure 4 & Figure 5 BARCELONA MUSEUM OF CONTEMPORARY ART

These two museums, also stand out from their backgrounds, but unlike the previous study, they are distinct as unique sculptural forms, in addition to being set into a natural, rather than an urban environment. These two museums are more like interpretative centres because they are not a place where a collection has been stored, but a place where the object of interest resides. The cave paintings in Niaux cannot be moved, and the stars are more easily observed away from the city.

The rusted steel that shields the entrance to the Niaux museum recalls, in shape and form, the beasts represented in the cave drawings within. Similarly, the aeronautic shapes of the Japanese museum relate to the museum's celestial objective.



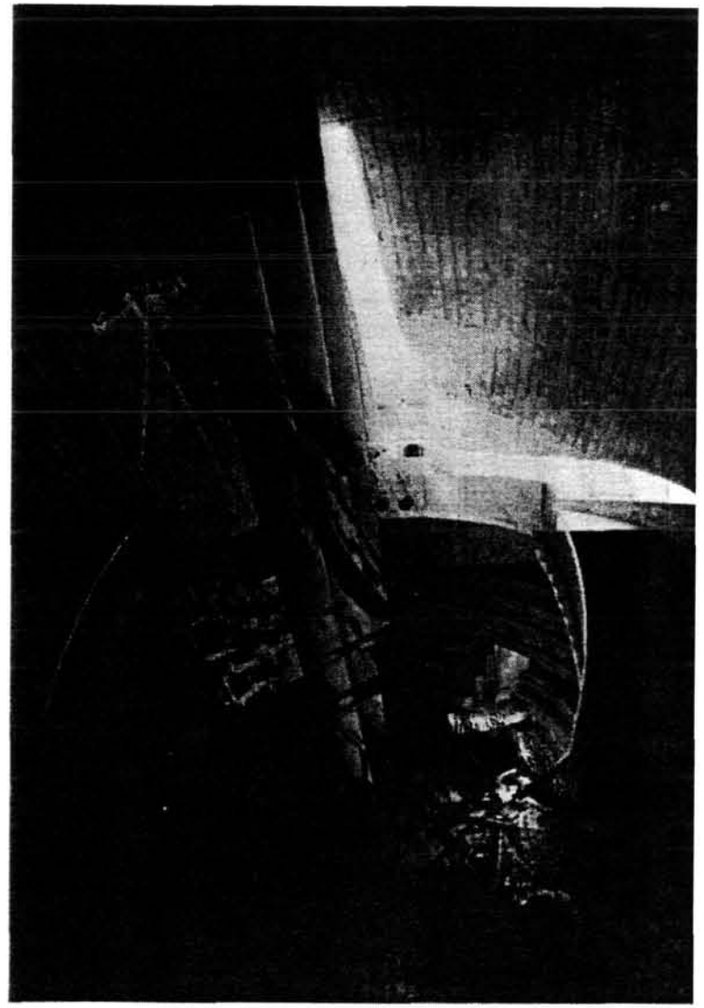


Figure 6 (left) NIAUX, FRANCE

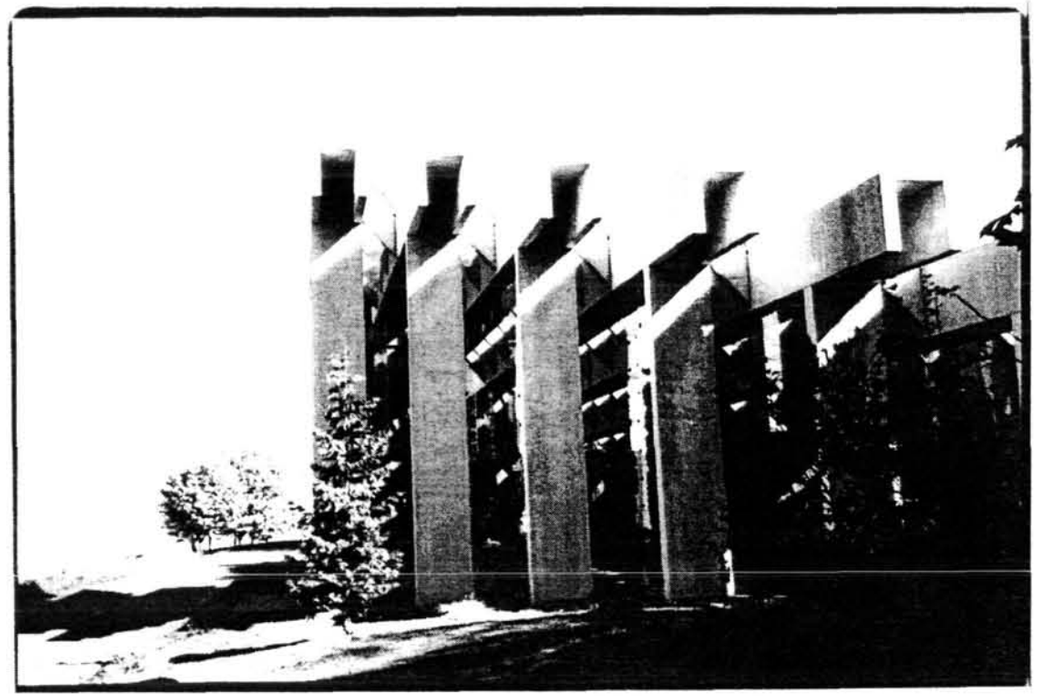
Figure 7 (right) SOUTHERN JAPAN

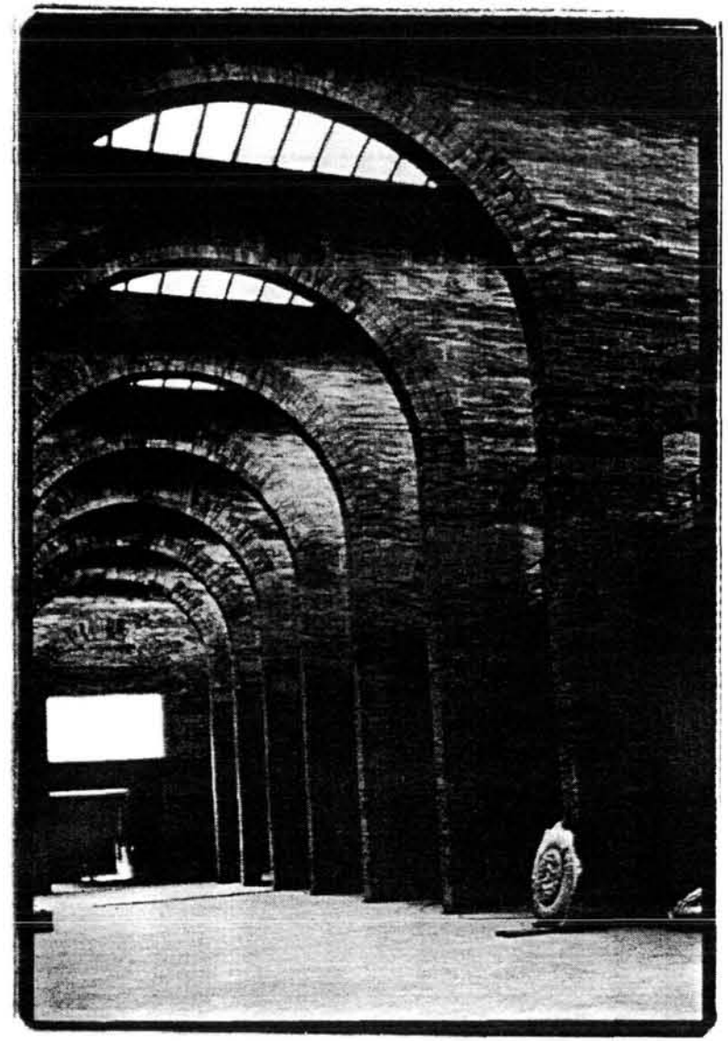
National Museum of Roman Art / Museum of Anthropology

Raphael Moneo's Museum of Roman Art and Arthur Erikson's Museum of Anthropology both use a structural system that emulates the culture of the collections that they house. Moneo uses a rounded arch system composed of flat bricks that recalls Roman architecture, while Erikson uses a post and beam system common to some of the native groups represented in the museum. However, both architects rework the structure so that is does not copy an existing system, but uses it as inspiration to create something that is new and also appropriate to the construction of a museum.

Figure 8 (left) Museum of Anthropology

Figure 9 (right) National Museum of Roman art





From the above studies, of both the more classical tradition of museum buildings and examples of more recent museum work, we are exposed to how these museums have taken their form, for both physical and ideological reasons. As a result, many possible routes for the development of a museum become evident.

Some of the elements introduced by the classical tradition are: enfilade of rooms; domed ceiling; grand stair; top lighting; organisation around courtyards; and symmetry. Contemporary buildings are obviously set in a different context and their style will be more suited to the current age in terms of various factors, including social change and technological advancements. Yet, apart from referencing to the classical museum, some features of the tradition may prove useful in the design of a new museum.

Courtyards were used as an organising element in the traditional museum, though this was more likely a side-effect of the use of courtyards for their ability to bring light into the central areas of a building. With the use of electric light, courtyards are no longer an absolute necessity in terms of lighting requirements, but they can still be used as an organisational feature, as well as to provide natural light.

The enfilade of rooms found in the palace tradition sets up a progression for visitor viewing. This is one way of organising a museum, and it can be incorporated into a space where a defined progression with distinct separations is desired. The room with a domed ceiling, often included in the progression of spaces, is a temple allusion, and spatially, it emphasises a particular space as being special. This element could be used to denote a place of importance in a museum, such as the entrance or to show off a centrepiece object.

The grand stair is a very theatrical element. It can provide views into other areas of the building, and can add to the lofty experience of visiting a grand building. Escalators and elevators have added to the repertoire of means of vertical movement, thus newer museums can utilise alternative methods to create the effect of the grand stair, or can arrive at something entirely different by employing the new mediums.

Top lighting can be employed by contemporary museums for the same practical applications for which it was originally used: security; quality of light; and additional wall space. Discoveries in the effects of UV rays and visible radiation on artifacts will deter its use for more sensitive objects; just as advancements in electric light will render it unnecessary. However, the quality of natural light will still make toplighting a coveted addition to newer museums.

In terms of the more modern examples of the museum typology previously discussed, we have seen how a collection has influenced a museum's design in terms of style, form and structure.

A contrast in style to the surrounding environment as seen at the Pompidou Centre and the Barcelona Museum of Contemporary Art, shows how a collection's situation in history can be reflected in the museum's

standing in the urban milieu. The possibilities this engages for new designs range from a museum that stands in direct contrast to the surrounding environment, to one that blends in, seamlessly. Alternatively, parts of the museum could contrast each other; again to make comment on some aspect of the museum.

The museums in Niaux, France and Southern Japan show how museums can help to interpret their collection by starting the experience of the museum before a visitor steps inside. This can happen with all sorts of buildings, including museums, but here the reference to the interior matter is very direct through the imitation of some aspect of the collection.

A more subtle means of interpretation is shown by the Museum of Anthropology and the Spanish Museum of Roman Art, where the structure is inspired by the collection. The result is buildings that feel appropriate to their collection, and yet are not simply copies of historical edifices. Newer designs can therefore respond to the idea of collection interpretation in many different formats; style, form and structure are the beginning of this investigation.

iii. Typology of Local Buildings

Discussing the buildings of Port Alberni architecturally, there is not a lot that can be defined as distinctly *Port Alberni*. An overview of all the buildings will show that Port Alberni has few grand or showy buildings. There is only one high-rise building in town, and most of the other buildings are under 4 storeys. But in terms of a particular style, or features of a building that would define a "Port Alberni" building, there are few distinctions.

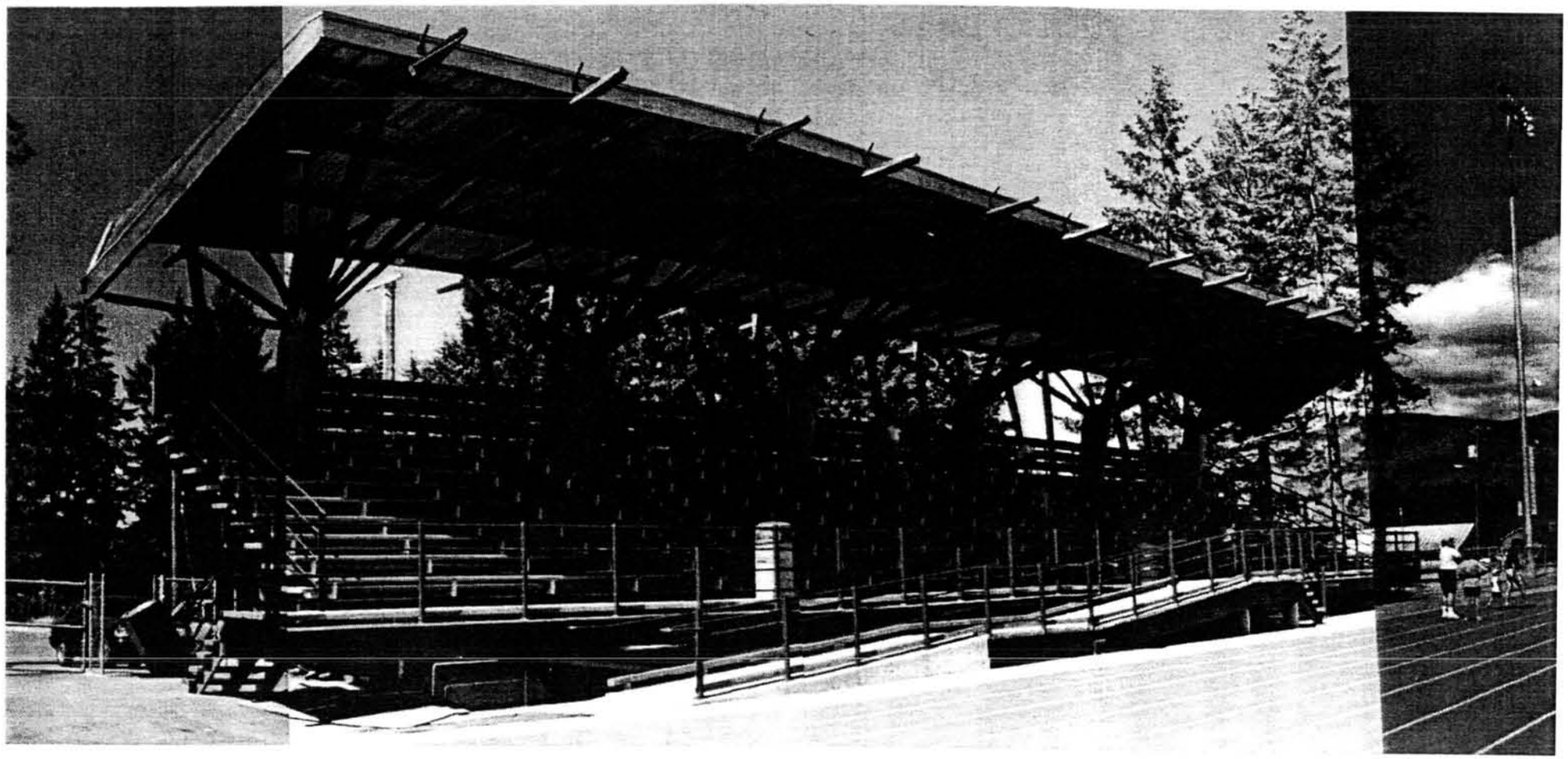
For example, if we look at residential buildings we see that houses are like those we would find in most towns in British Columbia. There are Victorian houses with wood sides and porches from early in the century, bungalow houses from the 50s, two-storey rectangular box houses from the 70s, and multi-roofed, multi-storied houses from the 80s. Although the houses are a large part of the buildings that make up Port Alberni; the idea *Port Alberni* is much more prominent in community buildings than in residential buildings, particularly those community buildings built in recent years.

The Field House, Bob Dailey Stadium and North Island College are three example of Port Alberni Community buildings. The Field House and the College are defined by exposed timber framing and sloping roofs, while large pillars (1m in diameter) support the roof of the open-air stadium. Sloping roofs help negotiate the West Coast rainfall (1.55m average annual rainfall)[33], and the blatant use of wood products in these buildings obviously has relation to the forestry economy of the town; but these characteristics are also related to the size and feel of the buildings. These community buildings have a distinct image, and instil pride in the community; but are also of a humbler scale than their functions suggest. For example, the College feels more like a lodge or a large house than an institutional building. These community buildings, distinct, but on a scale appropriate to a small city, best express the character of Port Alberni. It is a community made of people that take pride in a city that is large enough to provide most amenities, yet still feels like a small town.

The design of a new museum for this community will therefore have to consider the elements that help make a building suit Port Albeni and the people that make up this city.

Figure 10 (top) NORTH ISLAND COLLEGE

Figure 11 (below) BOB DAILEY STADIUM



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"People are the only reason for museums to exist."

-David Dean

III. MUSEUM - FUNCTIONAL ASPECTS

In the ICOM (International Council of Museums) definition of a museum, it states that a museum is an institution that: "... acquires, conserves, researches, communicates, and exhibits ..."[1]. As the collection is the basis of the museum's existence, to preserve the collection is of primary importance. The artifacts in the collection can be even more inspiring if they are accompanied by explanatory documentation, thus the need for research. In order to share this information, the museum communicates through various means, in particular, through exhibition.

Functionally, the museum building plays a part in the ability of a museum to fulfil a mission, such as that stated above. Even though a more prominent building might attract donors, in terms of design, the architecture of the building usually contributes little to the museum's mandate to collect. More understandably, design can facilitate the needs of the museum to conserve, research, communicate and exhibit, as it provides for other requirements of a museum building.

i. Conservation

When museums collect objects, they plan to keep them indefinitely; not just for the next generation, or the one following, but for as many generations as possible. Extending the life of an object far beyond that for which it was originally intended, requires that museum objects be treated with great care as the effects of environmental factors as such light and gravity, build up over time, and lead to the deterioration. Within the museum setting, the practice of maintaining and restoring collections is called *conservation.*

Larger museums will have a conservator on staff, or even a number of conservators. They are responsible for maintaining the collection, but are also involved in the restoring, repairing, cleaning, etc. of the collection. A conservation laboratory is often a part of the program of a museum. A smaller museum, which usually cannot afford to hire a conservator, could benefit from an area set aside for conservation purposes, such as small cleaning jobs and condition checks (regular inspection of artifacts for signs of deterioration) however, any larger conservation needs would probably be contracted out. Thus the main objective, in terms of conservation, for the smaller museums tends to be *preventative conservation..*

Preventative conservation, sort of a preventative medicine for artifacts is practiced by all museums, though it is the preponderant source of conservation in smaller museums. Its purpose is, as defined by the AMA (Alberta Museums Association): "to limit deterioration by controlling its causes."[2] The main causes of deterioration are: movement of the object; exposure to light; environmental considerations such as Relative Humidity (RH) and temperature; and storage techniques. As such, preventative conservation can be incorporated into the design of a building.

One of the biggest problems with caring for artifacts is the people who handle them. The design of a building can help with the convenience of the layout within which the museum employee works. Objects should be moved as little as possible, therefore when designing space for objects, the designer should keep in mind the effects of level changes, doorways and traffic patterns on someone transporting a museum object.

Light

Light is a conservation problem as it deteriorates all organic matter and even some inorganic matter. Fading is a well known reaction to light exposure, but light can also break down the fibres of a material. The easiest solution is to turn off the lights however, though objects have no need of light, the people viewing them do. A balance must be found that provides enough light for the objects to be viewed, but does not cause excessive deterioration.

Ultraviolet rays are the most dangerous part of light, followed by blue and across the spectrum with red light probably causing little damage at all. Some of the dangerous rays of the light spectrum can be filtered out by placing UV filters over windows, and over light fixtures that emit UV rays.[3] Alternatively, bouncing light off of a white painted surface will help eliminate the UV rays as they are absorbed by the titanium dioxide found in white paint.[4] However, simply filtering out the UV rays of light is not adequate to protect artifacts as visible radiation is also damaging and must be limited.

With the need to control light to adequately conserve collections, daylight becomes an issue in museums. Artificial light is easier to control, but daylight is perceived to be more pleasing to people. A designer must find a balance between an environment suitable for both objects and for people, and must also weigh the impacts of different kinds of light in different areas of the museum. An area without objects, or without objects susceptible to light damage, could be flooded with daylight, whereas areas with delicate objects may have no daylight at all.

Relative Humidity & Temperature

Just as objects and humans have different responses to light, they also have different acceptable ranges with regard to RH and temperature. Without water, an object may split, crack, or become brittle; however high RH and temperature values are usually not beneficial to museum objects as they promote the growth of moulds and may attract insects. More dangerous than the extremes of temperature and RH are differences in these levels. Large fluctuations can cause a museum object to expand and contract, resulting in cracks, warping, breaking, or other damage. Thus choosing a RH and temperature setting is related not only to the artifacts and the people who interact with them, but also with the ability to maintain these settings.[5]

On the simplest level, a museum design will avoid any features that could cause sudden differences in these values. These would include doors and hallways that promote drafts, and large windows causing heat gain. A more advanced approach would include an HVAC system and humidity control system, with sensors, to maintain a constant, steady, museum environment.

As mentioned above, RH and temperature can contribute to insect infestation. To control insects, a museum should also control other sources of infestations such as food and new objects brought into the museum. Any areas of the museum where food consumption is allowed should be isolated from areas containing artifacts. New items entering the museum should be put in a separate holding area, essentially an artifact quarantine. This allows for a more thorough investigation for possible infestation before the object is placed in proximity of the rest of the museum collection, and also lets the new artifact acclimatise to the environment of the museum before it is unpacked.

Storage

The way museum objects are stored is an important part of conservation, as they spend most of their existence in a museum in storage. Most museums will only exhibit about five percent of their collection; the exception to this is a Visible Storage museum where, in theory, all artifacts are put on display. Although the responsibility of storing an object falls to museum staff, the design of storage space can aid in their efforts.

Ideally, there should be a secure, centralised storage space that is separate from any display storage, exhibit preparation area, or storage for an educational or study collection. There should be no through traffic in a storage area, and no unnecessary doors. What doors there are should be large enough to accommodate the most unwieldy object, and whatever accoutrements are necessary for its transport. Within the storage space, aisles should be wide enough to manoeuvre the largest object, and the layout should avoid sharp corners and bottlenecks.[6]

Water, and changes in temperature and RH are always a problem. Therefore, basements and attics should not be used for storage as they often have unsuitable environments in terms of RH and temperature, and are also susceptible to floods and leaks. Storage areas should not have exterior walls, should avoid placement near, and especially under, pipes, and should also not be placed near the heating system or a vibrational space.[7]

Storage areas should also attempt to eliminate daylight, and artificial light should not exceed 150 lux, UV 75 µ/lm. Lights should be turned off when not required. [8]

ii. Research

Research is conducted in the museum setting both by museum staff and by the public (for personal interest or scholarship). For the museum, research is important for making sense of the collection; for providing a history and a background for the artifacts. Research may include interviews and analysis, but in terms of architectural spaces, the library and the archives are important. Information sources can be anything from books to on-line access, and the spaces may be used by museum staff only, or may be available to the public. Depending on the different information sources, and the users, a library may be a simple bookshelf or a series of rooms providing study areas and other resources.

Archival material requires environmental control as well as space and security. Like museum objects, archival material, predominantly paper, is to be preserved to serve future generations, and must be cared for accordingly.

iii. Communication & Exhibition

Museums communicate in various fashion and media. The most common forms of communication are exhibition and public programming, although the museum finds other ways to communicate, an example being more recent investigations incorporating the World Wide Web.

Exhibitions

"Only exhibition provides a controlled contact with the real, authentic object, and this is what makes museum exhibition vitally important."

-Michael Belcher

Exhibitions use collection objects as their primary means of communication. Exhibitions vary in content from being a straight forward arrangement of objects to a highly interpretative information display, depending on the nature of the collection and the objective of the museum.[9] As a designer of gallery spaces the architect will have an impact on the interpretation of the collection. While wanting to contribute to the museum experience, the design must be careful to support the exhibition of objects without detracting from, or overpowering them. The design must accommodate the scale and size of the collection, but must also consider the physical requirements of installing new exhibits. Temporary exhibits are short-term exhibitions, either in-house or from another institution, that change regularly. Permanent exhibits, however, will also change. At one time, a permanent exhibit meant one that would last as long as the building; today permanent exhibits are more *long-term* exhibits whose display time is around ten years.[10]

In addition to exhibit display (gallery spaces) the design of a museum must also accommodate exhibit preparation spaces; an area that allows for the production of an exhibit, and also storage for the accoutrements and materials involved in display. The type of equipment and spaces required will depend on the skills of the museum personnel and the nature of the collection. Whereas a larger museum with designers and carpenters on staff may devote entire workshops to the creation of exhibits, smaller museums may have larger display elements developed outside the museum, and would therefore have smaller and less specialised exhibit preparation areas. Although it does not need the specialised details of artifact storage, storage is still required in exhibit preparation to store plinths, screens, matt board, ethafoam, and other equipment and material necessary to the production of exhibits. For travelling exhibits, storage for the shipping crates, a place to unpack them, and a loading dock are required.

Public Programming

"Museums are, of course, a form of theatre. They tell us stories - great and small - about what it means and has meant to be a human being."

-Neil Postman

A museum also communicates through its different programming. Programming may include school programs; after-school and summer programs for children; lectures; films; and discussions. They are a form of education, often based on the museum's collection. Some museums have an educational collection, one that can be used and touched, as part of their programming.

Programming can be as simple as a guided tour through the galleries, and would require only a sign and a meeting place where the tour can start; or it can be an intensive week long program with different activities and objectives to be reached. A separate room may be required, or specific facilities depending on the nature of the programming, and the public partaking of it.

iv. Amenities

A museum acquires, conserves, researches and communicates. These are the special functions that define an institution as a museum, but a museum building also incorporates other basic functions such as washrooms, fire security, and access for the mobility impaired. Necessary functions of special note are: administration, security, food services, and museum shop.

Administration includes offices, office equipment, board room and admission services. Again, the size and necessity are dependent on the size and nature of the museum. Security of objects and the museum are required; physical security such as effects of light and humidity and temperature have been discussed above, but one also needs to include protection of objects and the museum from intentional harm, i.e. vandalism and theft.

The museum shop and the café are new functions that found their way into many museums. They are not a specific need of the building, but they can compliment the museum experience. *Museum fatigue* or *exhibit fatigue* are terms used to describe: "Mental and physical overstimulation or over-exertion."[11] Seating and/or an alternative view can help to relieve fatigue and thus make the museum experience more enjoyable. A café or restaurant is often included in larger museums, to give patrons a chance to rest during their visit.

A museum shop is commonly found as an adjunct to a museum today. They are a source of income for the museum, but they are not simply a store. The objects in a museum store usually have some intrinsic value related to the museum's mission. A museum shop sells souvenirs, but they often have a quality or educational objective, and the museum shop also gives patrons an opportunity to support a worthy institution.[12]

Individual institutions must decide whether they feel a museum shop and/or café would be appropriate and useful for their mandate and needs. These functions can provide additional revenue as well as compliment the museum experience, but each must be weighed against other factors such as the operating of such projects, and how much they will be used.

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"People everywhere define themselves through the places where they are born and grow up. This relationship ... shapes us in deep and lasting ways.... Museums can play a crucial role in encouraging and enhancing this understanding of one's roots and surroundings."

-William Ferris

IV. ALBERNI VALLEY MUSEUM

The Alberni Valley Museum, is a community museum in a town of 20 000 people. It is a substantial museum for a town of this size, but is by no means a large institution. Seeing that the museum is run by three full time staff people, with volunteers manning the archives, begins to give an idea of the space requirements. Conservation work and collections management, as well as curatorial duties and exhibition design fall to the Collections Curator. Thus although different spaces will be required for these different tasks, a series of offices is not required, as one person handles all these tasks. Public programming and travelling exhibits in the Temporary Gallery are the responsibility of the Education Curator. Administration and general planning of the museum are the responsibility of the Director. Although more staff may be involved in the future, or in special cases (i.e. summer students, volunteers) and space must be considered for these extra personnel, the scale of the museum is still relatively small (currently 1000m^2).

i. Conservation

Basic preventative conservation measures will be the primary focus of the conservation practices in this small museum. A separate area for conservation work is desirable, and although the area need not be a large, or a separate room, it should provide a work space large enough for artifacts to be laid out and inspected. Additionally, an isolation room or closet is needed to "quarantine" new objects coming into the museum.

Artifact storage is required, but as this is a Visible Storage museum it does not need to be as extensive as that found in museums that display less of their collection. In theory, a visible storage museum displays all of its collection, however in reality there are always objects that are not on display, for differing reasons. Objects may be in the process of being catalogued, cleaned or repaired, or simply waiting for an appropriate space for it to be displayed. Therefore storage is required for objects, but it should be acknowledged that few items are left in storage permanently. Photographs are the exception as they are very sensitive to light and the Alberni Valley Museum collection is also very extensive (20,000). Copies of photographs are put on display and the originals are stored in a safe and secure area.

Relative Humidity and temperature are regulated by a mechanical system that also includes dust filters to protect the objects further. A mechanical system not only protects the objects in the museum regardless of outdoor weather conditions, but also means that sensitive temporary exhibitions from other institutions can be displayed here safely. Lighting must be regulated to protect artifacts, yet provide enough illumination for visitors. The parts of the AVM collection that are most sensitive to light are: the cedar bark collection, textiles and photographs.

"If a museum's purpose is to be an accumulation, then it can only fail. But if its purpose is to give a sense of family and neighborhood, then it will succeed by being incomplete. There will be sections straight as a narrative, all sorts of portraits, histories, and souvenirs, and many curios. Studied separately, they will fascinate; and, taken together, they will give a small sense of the vast mosaic."

-Diane Ackerman

ii. Research

The Alberni Valley Museum has a library of around 800 volumes used for research purposes by museum staff. In special situations a member of the public can request to use the library, but it is primarily for staff use. The library needs to be secure as theft has been a problem in the past, and would be most useful if it was in close proximity to the museum objects being researched.[1]

All artifact information is now input on a computer system. Although the primary focus of the museum is the artifacts, public access to the computer information will be a part of research of the collection conducted by the public, and an area for this access would therefore be required.

iii. Exhibit & Communicate

The AVM is a historical collection; its mandate is to collect artifacts of and pertaining to the history and culture of the Alberni Valley. The existing museum is 1000m^2, nearly 600m^2 of which is gallery space. The collection is divided into the following categories:

Cedar and Cedar Bark
- -baskets, clothing, ceremonial pieces of the local first nations people (Nu-chah-nulth)

Food Production
- -fishing, dairy, agriculture

Household
- -cooking, refrigeration
- -sewing, washing
- -table wear, hat pins, clocks, bottles, trunks ...

Trades and Professions
- -barber, mining, carpentry ...

Light
- -electricity, lamps, light bulbs

Industry
-saw blades, wood, model of sawmill

Communication
-printing presses, ink
-telegraph, telephone

Textiles
-quilts, clothes, hats, shoes

Made by Hand
-folk art, china painting, violin,
-marionettes
-masonry and metal work

The museum is about the community and for the community. The users are predominantly local people, as attendance goes up in the summer with out-of-town visitors, but it does not double.[2] The museum also serves the neighbouring West Coast towns of Bamfield, Ucluelet and Tofino.

The collection is presented, predominantly, in a Visible Storage format. Sections are labelled, and each artifact has a corresponding page in the catalogue books located throughout the museum. Some more interpretative exhibits are interspersed within the Visible Storage format. It is felt by both the Collections Curator and the Director that a Visible Storage format is a successful form of exhibition that this museum will continue to use.

As a community museum, many of the artifacts have been donated by people in the community. Visible Storage allows for everyone's donation to be viewed. Additionally, all non-confidential catalogue information on each artifact is available to the public in the catalogue books in the museum. Visitors, often local people, have the opportunity to inform the museum about any unknown particulars of an object, or can add to the information already provided. All in all it is felt that the Visible Storage method allows the community to participate more and be involved in this *community* museum.

Permanent exhibits in the visible storage collection are the main body of the museum, but the attraction for many local people to return again and again is the temporary exhibits. These usually consist of travelling exhibits from other institutions that are housed in the Temporary Gallery from one to two months.

The museum staff needs space to do work pertaining to the maintenance and development of the permanent collections, as well as to prepare temporary exhibits, (both in-house and travelling exhibits). As a part of the Parks and Recreation Division of the City of Port Alberni, the museum can utilise City resources such as city workshops and carpenters for larger or more skill-demanding projects, and therefore does not need a large workshop in addition to an exhibit preparation area.

Apart from exhibits, the main ways the museum communicates is through public programming. Currently public programming includes: school programs, summer children programs, Elderhostel, lectures and talks, and special events. The school and children programs are predominantly for younger children (under 12) and are often hands on programs that can become messy and noisy. The museum artifact can be a important part of the programming, but a separate area is desirable for some activities. Elderhostel programs that discuss how a museum works, as well as give workshops, can also take advantage of a separate programming area as well as programming space within the galleries. Special events can be anything from a family fun day to a book launch and tea, or a demonstration by the Spinners and Weavers' Guild, and will make use of gallery or alternative space accordingly.

iv. Amenities

Administration requirements will require office space for at least three full time staff as well as office equipment such a photocopy machine and a fax machine. Payroll and certain other administrative duties are handled by the City.

The museum has a few items that it sells; for example: Christmas cards that are old photographs of the Albernis; books about the Valley; and T-shirts with the AVM logo. A shop would be a source of revenue and would also distribute things that relate to the Alberni Valley and its history. There are gift shops and galleries in the area of the museum, but the museum sells specific museum-related items, and would not necessarily compete with local business. A gift shop would provide some income without being overly burdensome, and may also attract some visitors.

Because of the small scale of the museum, a café is probably not a good function to include in the museum, for the amount that it would be used. There are restaurant and cafés in the area that could provide a rest for patrons after their visit; while seating and restrooms are provided in the museum. In busy summer months some of the portable vending carts in town may choose to locate close to the museum. Whereas it is possible for a staff member to open a gift store to sell something to an individual when the store is closed on a slow winter day, this flexibility is not available with a café.

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[1] Charlene Garvey, personal interview, 12 October 1996.
[2] Jean McIntosh, personal interview, 16 October 1996.

V. SITE

i. Alberni Valley

Port Alberni is an inland deep sea harbour located at the head of the Alberni Inlet, a body of water forty kilometres long that connects the town to the West Coast of Vancouver Island and the Pacific Ocean. The product of the 1967 amalgamation of the twin cities *Alberni* and *Port Alberni*, the layout of the city is a reflection of this history. There are two "downtown" areas, or main commercial streets, one each on the north and south sides of town. These areas each have a post office and a government building, and one branch of large chains such as banks, and grocery stores. The separation of the two original towns is maintained due to the geography of the land. Many creeks are located in the Valley and divide the town north and south. This is a small town, and the two sides of the city are not far apart (it only takes ten minutes to drive from one side of town to the other), however there is only one road through town that connects both sides of the city. Again, this is a small town, and these separations are not a big factor in the lives of the people who live here, but it explains a lot of the layout of the town.

The north side of town, north of Roger Creek, is smaller, but connects to the outlying area of Beaver Creek (predominantly a farming area), and Sproat Lake (as the inlet waterfront is used for industrial purposes, waterfront property for Port Alberni is located at this lake.) Additionally, the paved highway that connects the east and west coasts of Vancouver Island, runs through the north side of town. The east side of the island is where most of the Island's population resides, and the west coast is home to Pacific Rim National Park (Long Beach, West Coast Trail, Carmanah Valley etc.)

The south side of town, south of Dry Creek, is larger, has more stores, and a larger population, and though you can pass through it to get to the West Coast via a gravel road, most visitors prefer the paved road. The "main" store, the movie theatre, city hall, and the main post office are all located on this side of town, as well as any homes with a view of the inlet.

Between Roger Creek and Dry Creek or, in between the north and south sides of town, are located some commercial stores, but also all the community buildings: the hospital, the swimming pool, the library, the community centre, the college, the stadium, the fall fair grounds, and the high school (with the community auditorium).

Taking these factors into consideration it is easy to put the museum in any of these three areas. To put it in the north side of town would place the museum near the highway, and perhaps attract visitors passing through Port Alberni on their way to the west coast. To place it in the centre of town would mean, like other community functions, it would be accessible to both sides of town. To put the museum on the south side of town, would mean putting it where there is the most population.

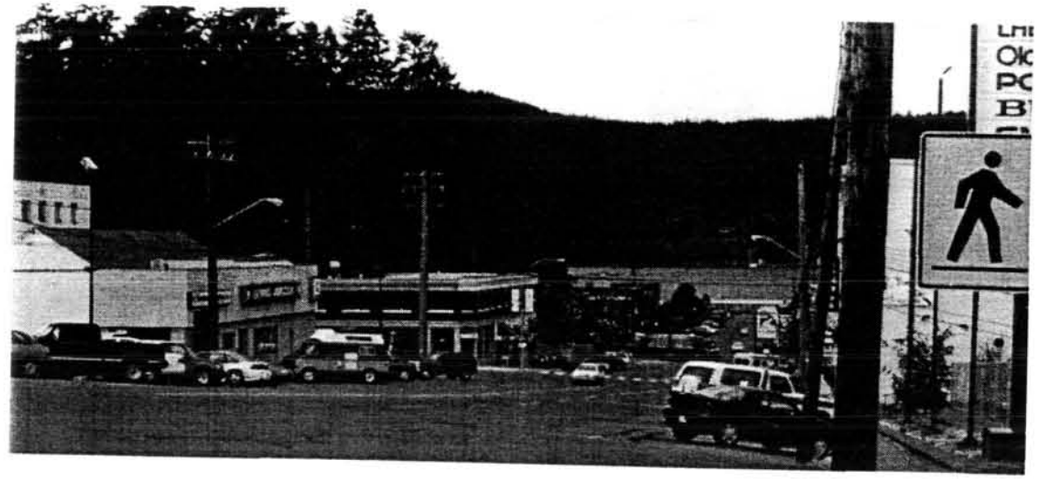
ii. Site

The site chosen is on the south side of town. It was chosen for a combination of reasons, in comparison with other sites available in town. To begin with, it is a pleasant site. It has some large trees typical of the rain forest area, a view out over the inlet, and ample room for building and parking. It is located in an historical part of town, adjacent to Stamps Landing where the Settlement of the Alberni Valley began. It is across the street from the train station that was built in the 1920's and is now run by volunteers in concert with the museum, during summer weekends, where visitors can visit, and ride a restored train. There is a possibility that the train will eventually run out to McLean Mill, a steam powered Mill in operation from 1926 until the 60's that is now a heritage site under restoration. Beside the Carmoor Block, the first office block built in town, the site is generally in the area where the town began, and this is still a commercial area of the town. Only three blocks from the major commercial cross streets on the south side of town, the site sits on a small cliff that overlooks the Alberni Harbour and *Harbour Quay*, a park/shops/restaurants development that is the only portion of the waterfront accessible by the public.

Figure 13 (top) VIEW TO WEST

Figure 14 (below) SOUTHEAST VIEW FROM HARBOUR QUAY

(Site indicated by grouping of trees)



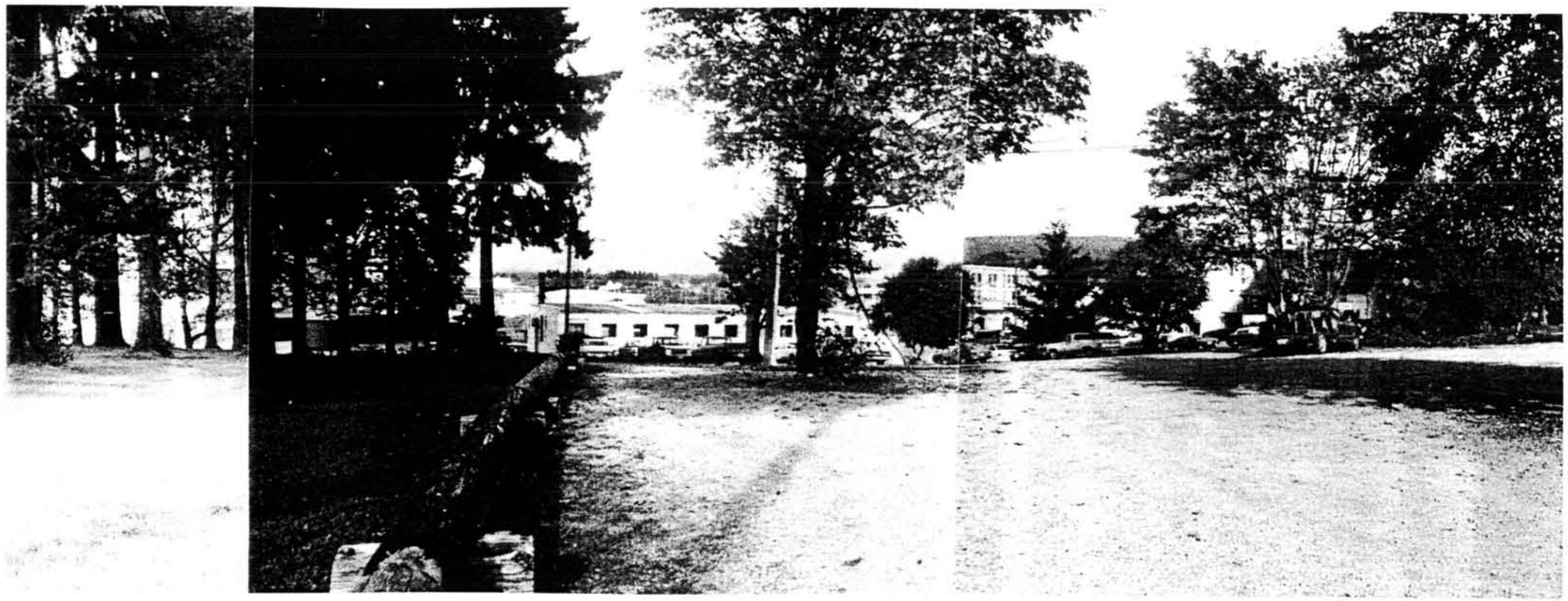


Figure 15 VIEW FROM SITE, LOOKING NORTH

Gift Shop -shop 36m²
-storage 4m²
ETC. -loading dock 27m²
-washrooms 48m²
-chair & table storage 7m²
-mechanical room 50m²
-entry 21m²

Total: 1798m²

ii. Model

The form of the museum utilises the understanding derived from the studies of museum, location, and site, while incorporating spaces and requirements necessary to the functioning of a museum. The process of design is one that moves back and forth between requirements, precedents and design solution, but it is discussed from looking at the final product and how it was developed, as if it were a linear process. The typology of museums, as discussed in this document, has dealt mainly with larger, more well known museums, as they are better documented in the literature. However the study of large museums is still relevant to the community musuem as the typology is seen as a tool, or a guide; and elements can be adapted or rejected according to the varying contexts of new work, including scale. Additionally, the community aspect of the museum is further developed through the analysis of local buildings.

The overall form of the building strikes a balance between the monumental idea of the museum and the small scale of the city in which it is placed. This museum uses a distinct form that helps to identify it as a museum, and as something unique that town can be proud of, but retains a certain humility through its materials and facade so that it fits into its surroundings. The general massing of the building houses the galleries under the rear, sloping roofs; services such as washrooms, the mechanical room, and offices, in the long, central bar; and support services in the frontal rectilinear forms.

Due to the scale of the town and the museum, an element such as a grand stair would be out of place. This feature derived from the palace tradition of the museum is too grandiose for the more modest scale and community nature of this museum. However, the approach to the museum includes a large outdoor public stair and ramp that can be likened to the element of the grand stair that in this setting becomes a much more modest element.

Exhibit spaces are provided by a series of galleries, similar to an enfilade of rooms in a palace that, defined by the structure, are like a set of rooms. However, the resulting spaces are open enough to provide a flexibility that, while not a wide open warehouse such as can be found in the Pompidou Centre, can accommodate changes in exhibits through the years. Following neither the palace tradition, nor the modernist aesthetic, the galleries try to find a balance between the two systems. The dome feature of the palace tradition, or any derivation from it are specifically avoided as there is no one centrepiece artifact in this community collection.

The structural system used to create these galleries employs a series of large round columns that emulate the large Douglas Fir trees found on the site, as well as paralam beams, a forestry product, relating to the economy that built this town. The structure is derived from the museum analysis involving the Museum of Anthropology and the Spanish Museum of Roman Art. However, with the great variety of objects that make up the Alberni Valley Museum collection, it is difficult to pin down one particular structural form that would be appropriate to the collection. Thus the structural system is inspired by characteristics of the Valley and the community, rather than particular pieces of the collection.

The front view, or the approach to the museum, shows the galleries peeking out over the more standard shaped service areas of the museum. Like the Visible Storage system within the galleries that has visitors open drawers, turn on lights, and look through books, the galleries are something that are discovered by the viewer, with a hint from the front facade. The front portions of the museum take their form from the street buildings, such as the Carmoor Block, so that the experience of the museum begins as that of a more standard building, and becomes something more special as one moves through it to the galleries.

A strip of clerestory North facing windows, inspired by the top-lighting found in many museums and a desire for natural light, allows light into the galleries and compliments the artificial lighting system. In terms of the museum form, the clerestory windows provide a visual gap between the long service block and the galleries.

In contrast to the galleries, the service oriented pieces of the museum are more regular in shape. The angles are laid out according to site and function. The more object oriented spaces are at right angles and fit into the regular grid, paralleling the street system, such that the loading dock and adjacent rooms have access to the street. The people oriented spaces are situated at an angle that leads along the tree covered cliff so that the occupants of the space can enjoy the experience of the building set among the trees, and glimpses of the inlet view beyond.

The layout of the museum allows for offices that are in a more centralised location. This allows museum personnel access to monitor the galleries, and makes them available to any visitors who may have questions. The courtyard, as seen previously, is often used in museums as an organising element, as well as a means of providing light into interior spaces. The scale of this museum does not particularly suit an interior courtyard, but the idea of a courtyard was used to resolve some of the spatial issues of this museum. The offices, functionally, work better if they are in the centre of the museum so that the occupants are not isolated from the galleries or from the service areas of the museum. However, by placing an office in the middle of the museum, it is difficult to include side windows to provide both natural lighting and a view to the exterior, making a more aimiable workspace Using an enclosed courtyard, the offices could be placed spatially in the centre of the museum, and could still have side windows, but it was felt that the scale of the museum, both in size and in stature, did not suit such a courtyard. Yet, by narrowing the building in the middle, a half-courtyard is produced that also gives a certain organisation to the museum, while providing natural light into more centralised areas.

The gift shop is placed at the entrance so that if admission is charged in the future, it can be purchased at the gift shop. Education space, like the archives, is separate from most of the museum to allow for more boisterous activities, but is still accessible to the galleries. Work spaces in the back rooms are fairly flexible in their layout, but provide separate areas for the more messy exhibit preparation work and the more sensitive object storage. The loading dock is situated to provide immediate access to both the back rooms of the museum and to the temporary gallery.

In the end we have a *model*; a museum that used existing typologies to guide its shape, and becomes part of the museum typology. However, design is not a linear process. While the typologies have been used to explore the design, the design has also informed the study of the typology. The result is twofold: an understanding of museums and the location, that are used to design the museum; and an appreciation of the various details required to design a museum, that spur on a continued interest in the typology.

Figure 16 (right) MUSEUM AND SURROUNDING AREA

a. Museum
b. Carmoor Block (offices/commercial)
c. Somass Hotel
d. Train Station
e. Lady Rose Dock
f. Harbour Commission Dock
g. Harbour Quay (shops/restaurants)
h. Alberni Inlet
i. Railway Tracks

Figure 17 (below) SITE SECTION

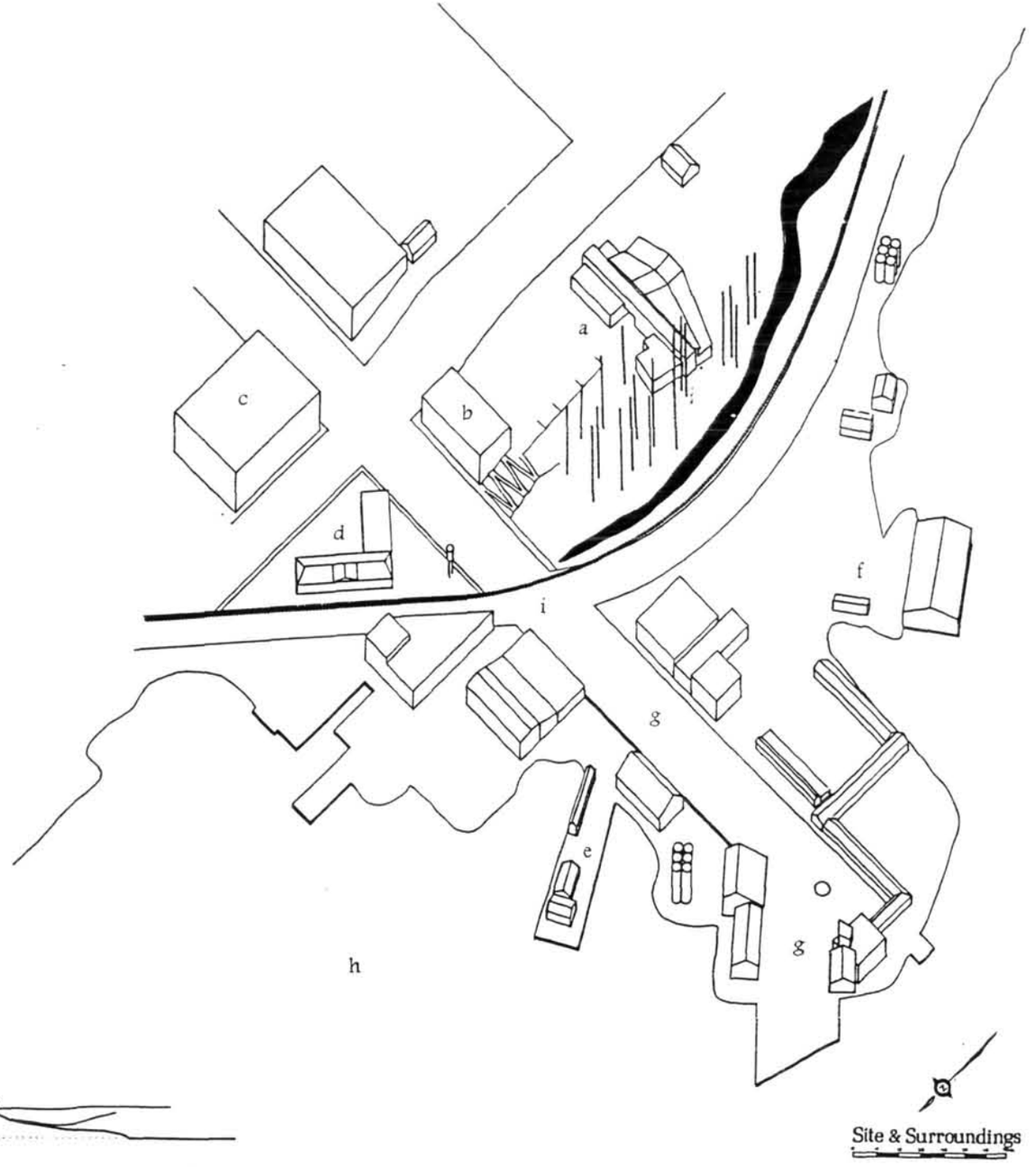


Figure 18 PLAN

a. Education/Programming
b. Education Entrance
c. Education Collection Storage
d. Archives
e. Storage
f. Washroom
g. Permanent Galleries
h. Temporary Gallery
i. Mechanical Room
j. Office
k. Gift Shop
l. Entry
m. Public Research
n. Library
o. Artifact Storage
p. Artifact Working Area
q. Dark Room
r. Isolation Room
s. Exhibit Preparation
t. Loading Dock
u. Crate Storage

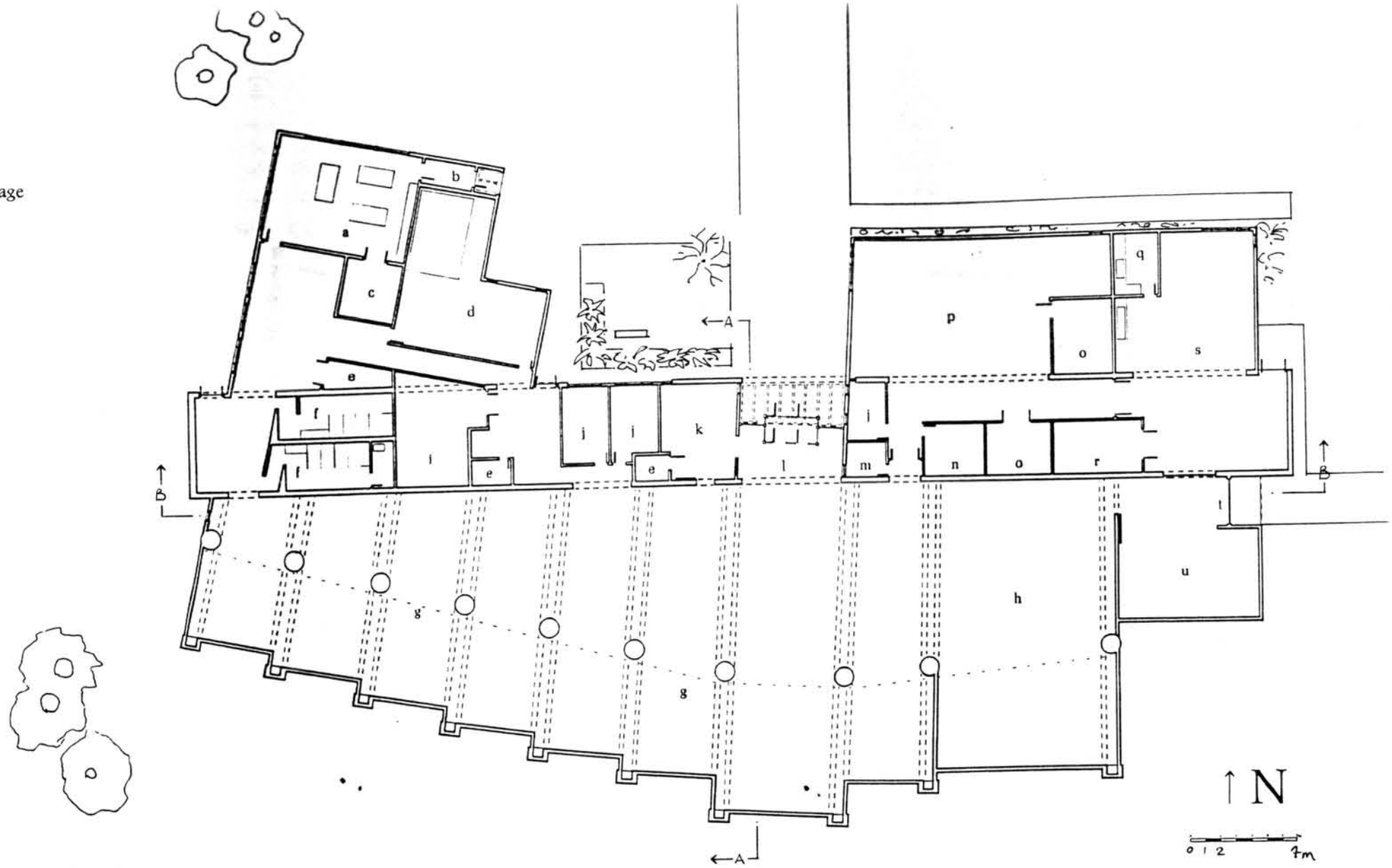
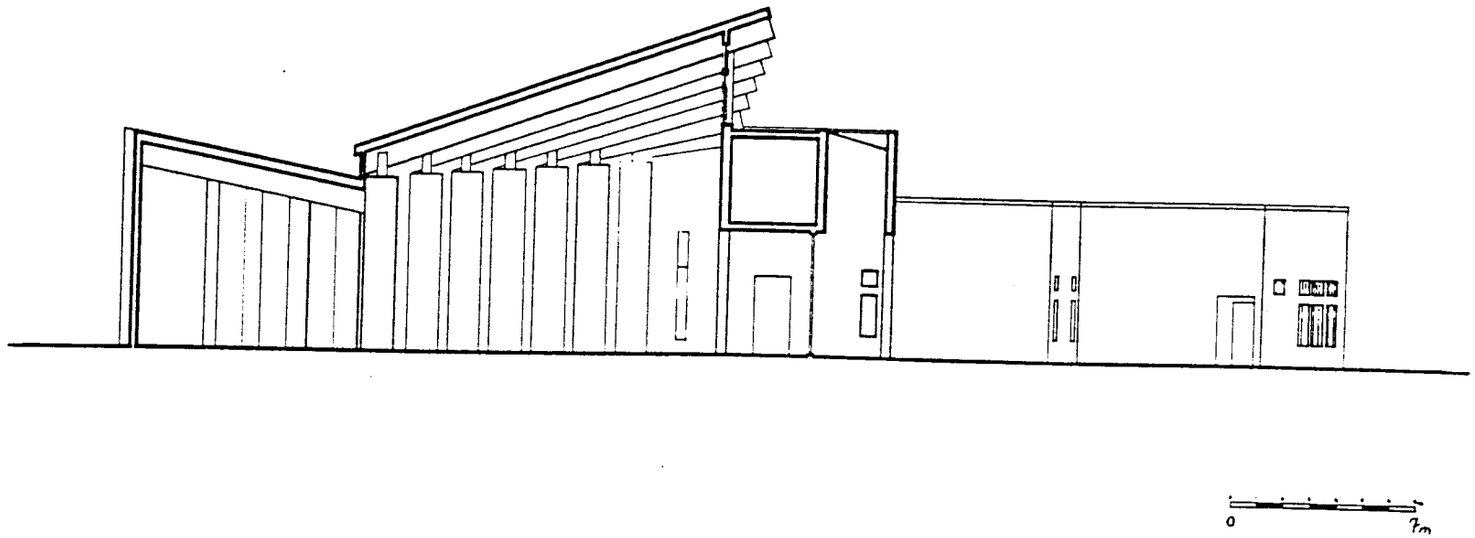


Figure 19 (top) SECTION A-A

Figure 20 (bottom) WEST ELEVATION



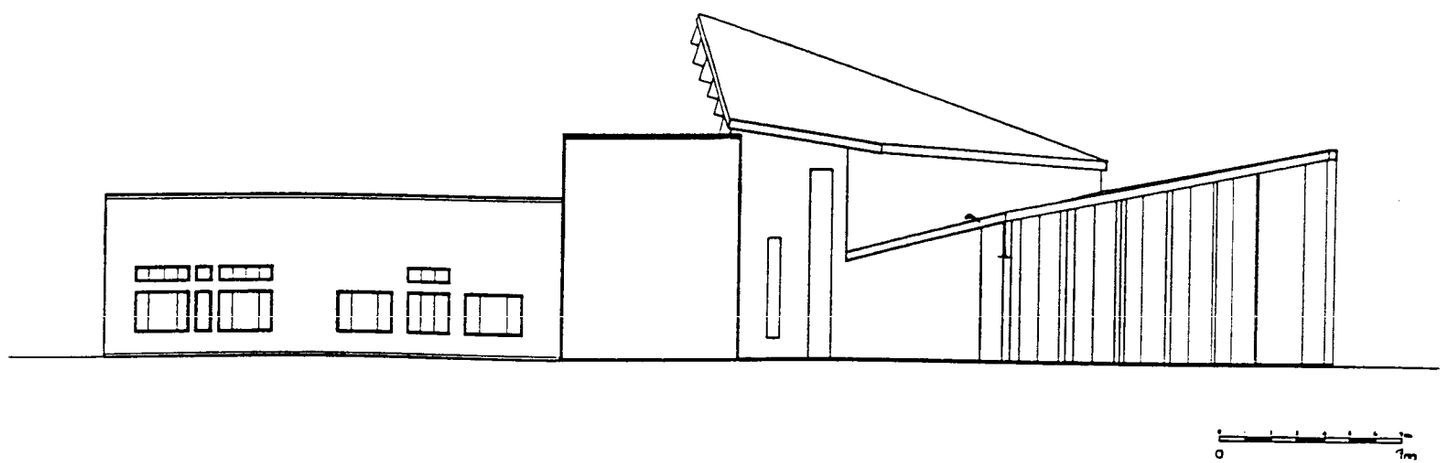
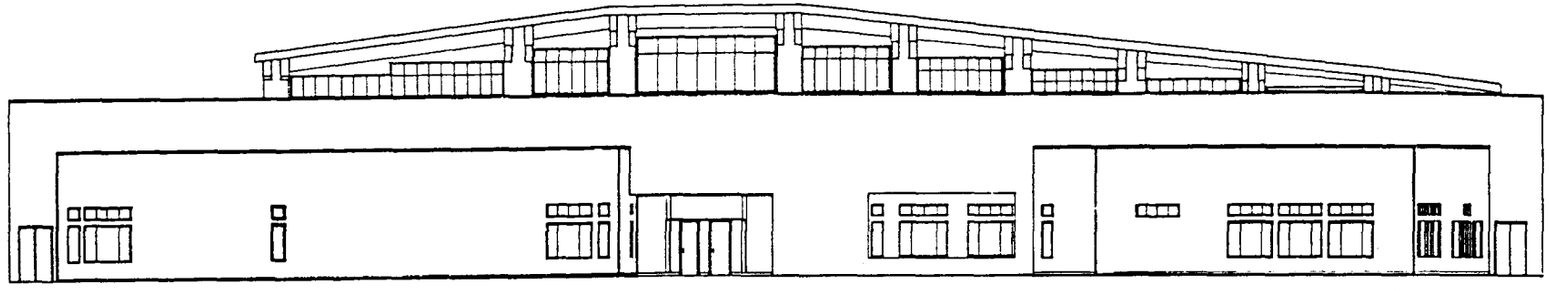


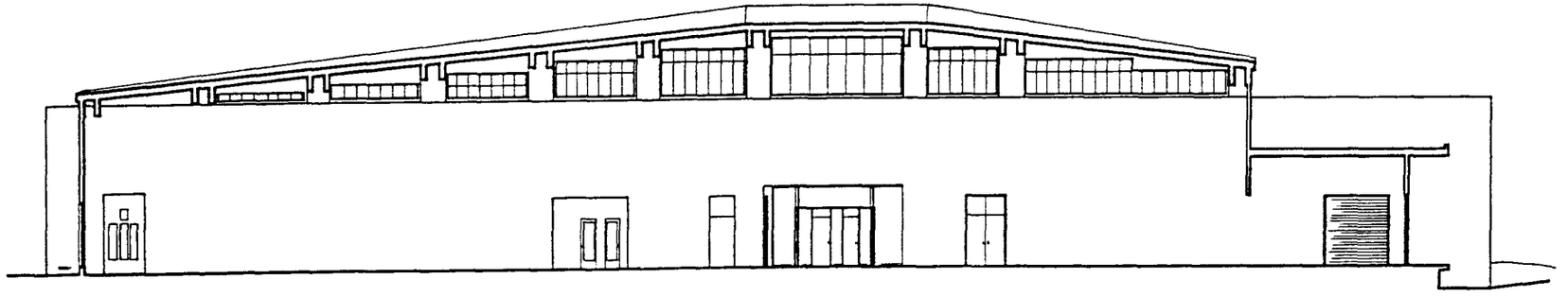
Figure 21 VIEW THROUGH GALLERIES, FACING WEST

Figure 22 (top) NORTH ELEVATION

Figure 23 (bottom) SECTION B-B



Front Elevation



Section B-B

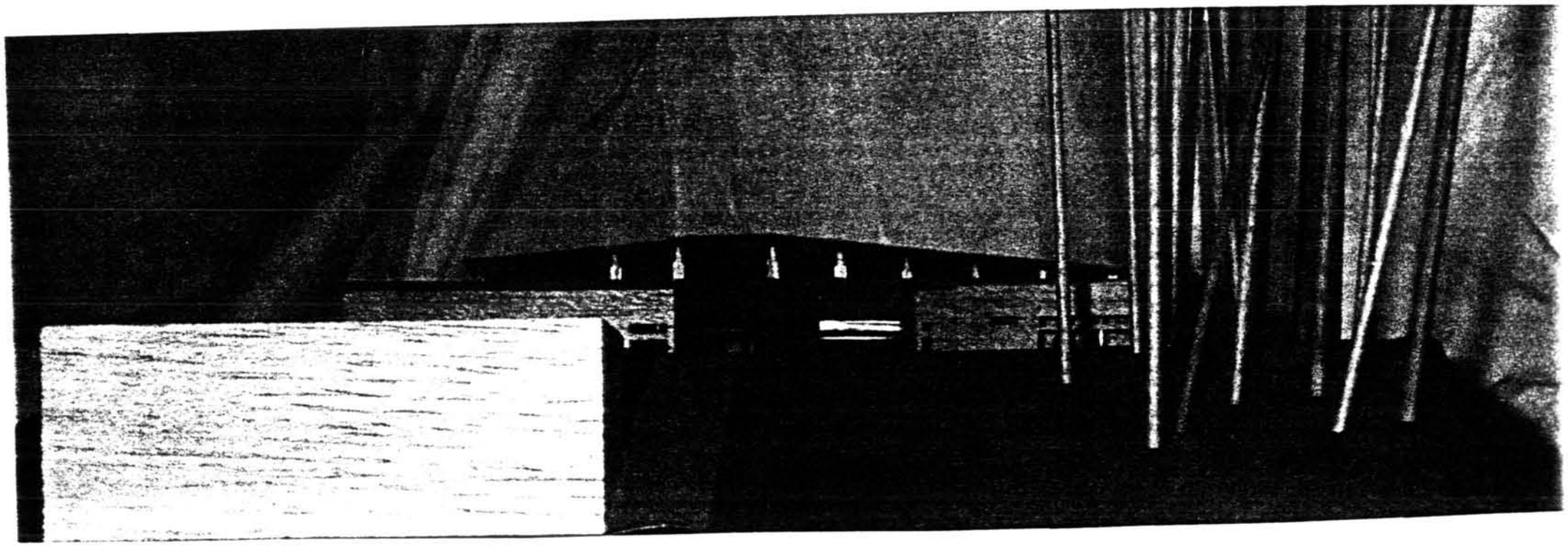
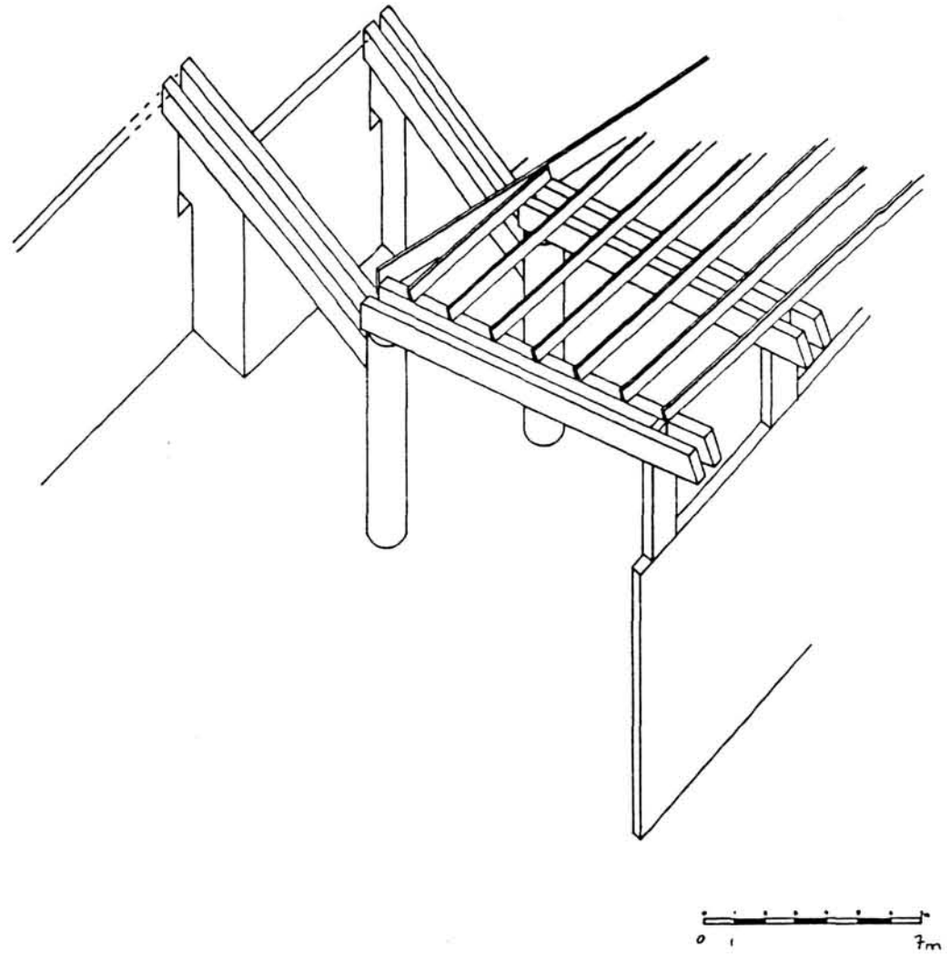


Figure 24 MAIN APPROACH VIEW

(Carmoor Block at bottom left)

Figure 25 STRUCTURE OVER GALLERIES



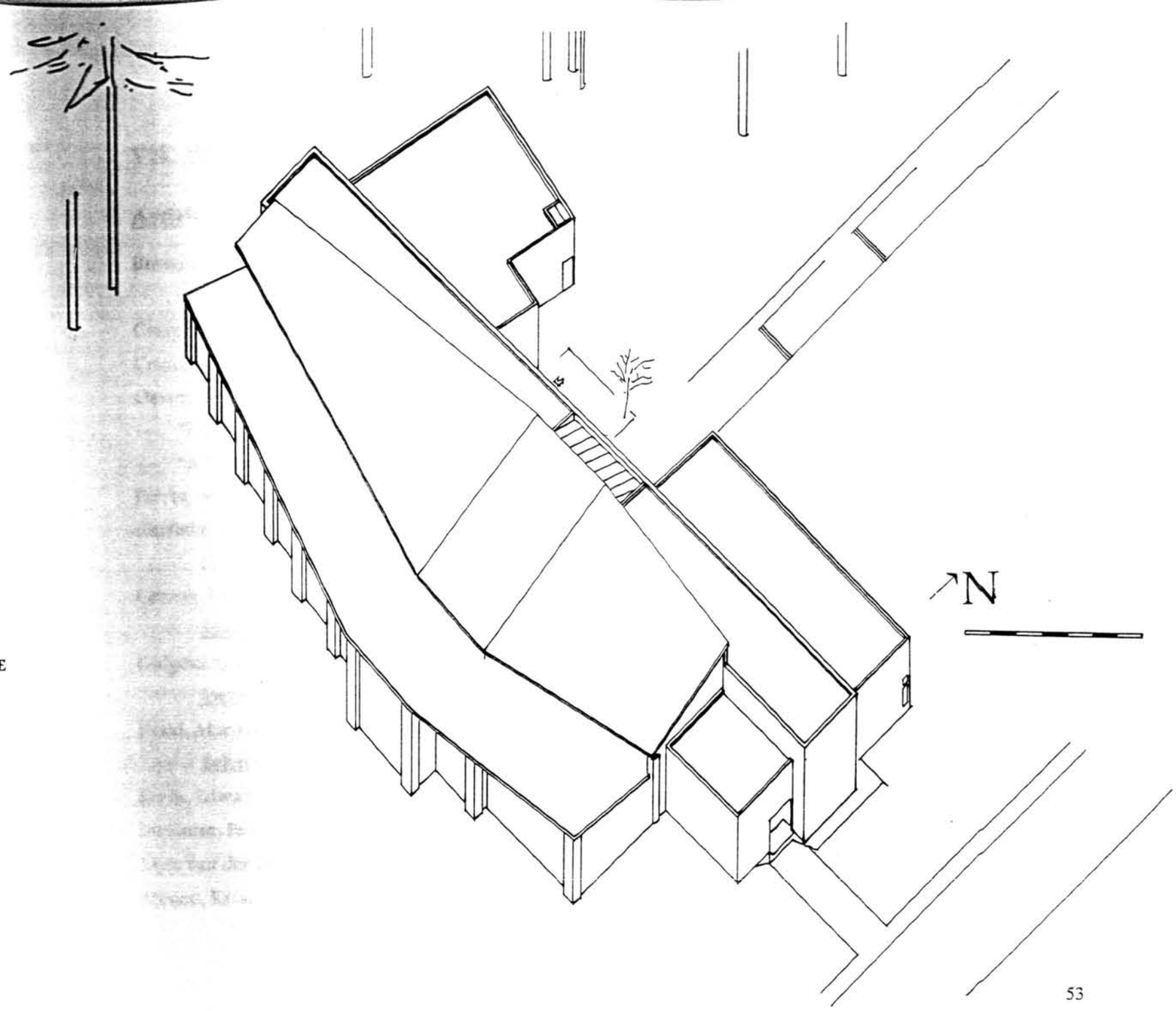


Figure 26 AXONOMETRIC SHOWING REAR FACADE

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