

The Central Artery Project in Boston: A Museum to Grow With

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Submitted to the Department of Urban Studies and Planning in Partial Fulfillment of the Requirements for the Degrees of
Master in City Planning
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Abstract

This thesis proposes a new museum concept which I have named the Living Museum. It aims to enhance the interaction of designers, planners and lay persons for the creation of better environments. It suggests that the exchange of ideas, interests and values between professionals and the lay persons affected by their decisions could be stimulated through the medium of exhibition design. Two studies led to the development of the museum concept; one is a study of exhibition design, with a focus on the Children's Museum of Boston, and the other an investigation of the discussions surrounding the Central Artery Project in Boston, including the consequent development of downtown Boston. The Living Museum will be evolving and transforming exhibitions, located in the actual construction site of the Central Artery Project, presenting pedestrian ramps and truncated sections of the elevated Artery as its main focus. The application of exhibition design principles at every scale in the Living Museum will provide designers, planners and lay persons with an environment conducive to the discussion of change in situ, while it occurs. As each phase of the museum becomes obsolete, for example as a communication device, it metamorphoses from implement into artifact, to be exhibited as part of a site for the discussion of future projects in Boston. The specific interventions presented herein respond to the historical and contemporary conditions specific to this site and the concerns of the adjacent community. If applied in another site, the product would be different, but the considerations and the process would be similar. I maintain that the experimental interdisciplinary spirit of the Living Museum to be appropriate for most conditions and its application of exhibition design principles as relevant to most projects.

Thesis Supervisor: Lawrence Vale
Title: Assistant Professor

*for my parents
Danny & Rose
who taught us the
love for discussion*

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Introduction

This thesis is about how exhibition and museum design can be used to enhance the role of urban designers to go beyond their own values to stimulate, clarify and orchestrate the interaction of ideas, interests, values and strategies to create better environments.

Urban design visions are usually visual depictions of future physical environments that can be used as vehicles to stimulate discussion. Urban design scenarios can guide decision making by translating alternative land use policies into physical form and illustrating their outcomes. They can help free planners from a status quo in political and technical assumptions by illustrating their outcomes, challenging them or ignoring them, and by creating new alternatives and options.

Urban designers face a choice between pragmatism and fantasy, between the grand sweep and more detailed design. How realistic they are, or decide to be, depends on whether they want to engage in an intellectual discussion that might create or change existing values or whether they want to present a pragmatic scenario directed toward immediate action.

In both cases, designers try to express values and translate them into physical form. Grand ideas have the power to stir peoples imagination, but, they can only be pursued to the point that their reality has a reasonably good appreciation of the technological and behavioral constraints they may not have forecasted. More detailed designs can express more values but can fall in the trap of being preoccupied with trying to satisfy immediate needs without creating or challenging existing

options.

Choosing between alternatives presented by urban designers or responding to them is not really the whole story.

Should urban designers merely translate values into physical form to be used as a tool for others ? What part should they take part in creating these values? Who's values ? How much should a vision reflect the desires of the users articulated through the hand and eye of the professional, and how much should the vision be a product of the professional expertise and discipline?

Ideally, planners and designers should not express their visions and ideas for a better environment in a vacuum, "from above" but through a living interplay of these ideas among themselves and other professionals and with those affected by them.

Many, perhaps most people involved and affected are lay persons. They may provide alternatives either as a complete concept, but more likely as a "naive" question or partially outlined idea whose merits and implications can be recognized by the professional. It is the professionals' task to appreciate their understanding of localized implications because one or two squares may shift the focus of the whole downtown. It is his or her obligation to see beyond the immediate and localized needs.

The key for creating a living interplay is effective communication -- understanding and speaking the other sides' language and listening to it. In 'language' I do not only mean terms used by professionals which may not be clear to others but the worlds they come from, their ideas and interests.

Understanding and listening enables persons communicating to transmit ideas and to predict how they will be perceived; when mistaken, to learn and adapt.

When talking among themselves, architects or planners might be satisfied with conventional methods of communication developed in their practice. But, when approaching persons out of their profession, conventional methods will not do. Architects and planners should throw off the shackles of conventional methods of communication and become more like experimental entrepreneurs. They should continually learn from past and future experiences and especially to use exhibit and museum design for this purpose.

To illustrate my ideas how this can be done, I chose to design a Living Museum on the construction site of the Boston Central Artery /Tunnel Project. Learning from past experiences of exhibition design and a critical view of the Central Artery Project I propose a new museum/exhibition concept. In this setting which I call The Living Museum everything is alive and evolving. Designers, planners and other professionals involved in the Central Artery Project and persons who might be affected by it will be able to talk directly about changes in the city, while they are taking place, on the site where they are taking place.

A brief look into the history of exhibition and museum design (Part I, Chapter 1) shows that designers have long used exhibition as a tool for developing and promoting their architectural ideas and social visions. There has been a growing interest in exhibition/museum design in understanding the experience of the user. Various design techniques have been experimented with to draw in uninformed visitors and help them understand. The examples I chose suggest that designers

planners of exhibitions and visitors can 'speak' through while stimulating all senses and making use of features like movement, layout, full size objects and their context. The Children's Museum of Boston develops this idea to an extreme as it treats its exhibitions as ever changing settings for interaction from the moment they are conceived, throughout the time they are exhibited.

The Central Artery Project (Part I, Chapter 2) is a major public works project in which the Central Artery, the interstate highway (I-93) will be depressed, its elevated structure that has been part of the cityscape for at least a half a century will be dismantled, and about 40 acres of land will be generated downtown. This project reflects a change in planning values from centralized planning to a commitment to equity, participation, environmental quality. At the same time it reflects the difficulties in fulfilling these overarching commitments in a time where the number of participants in the decision making process has grown. Participation for example, has become a necessity and a major consideration in implementing the project. In the process, design has been viewed as subsidiary to other disciplines and urban design visions for development have not been used to generate options and alternatives, or to free politicians from existing status quo. Other design efforts which did not seem useful have been postponed to later stages and perceived as separate from the efforts to implementing the project. As a result, the potential of exhibition design has not been exploited to enhance participation and to make the project more accessible to everyone, options are eliminated before they are even explored. Goals like enhancing the pedestrian experience downtown and public public participation are in danger of being neglected.

The Living Museum is an evolving setting in which any one can learn about changes taking place in Boston. Located on the major pedestrian cross way between the North End and Downtown Boston, before, during and after the construction of the Central Artery Project, the Living Museum will become part of everyday life. In its early stages, the museum will consist of real, life sized objects while they are being used for construction and communications, intermingled with exhibits on the urban history of Boston. When the exhibits are no longer in use they will become part of a permanent setting for future discussions on urban issues and projects in the Boston area.

I developed the concepts of Living Museum from the lessons from exhibition and museum design, a critical view of the Central Artery Project, and the site of the Living Museum. I start part II with a description of the site, and an outline the concepts of the museum including my point of view and strategy of using design to capture a broad audience and to educate people about changes taking place in Boston. Finally, I describe in more detail how I chose to interpret and to make use of these concepts in the design of the Living Museum.

Part I: Lessons from the Past and Present

Museum and Exhibition Design.....21

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Chapter 1:

Museum and Exhibition Design

In this chapter I attempt to show that designers have long used exhibitions as a tool for developing and promoting their own architectural, social or other ideas, and that they also had a crucial role in shaping the design of exhibition displays. I do not intend to give a comprehensive history of exhibition design, but rather a brief one, which emphasizes through some examples how interest in exhibitions and the focus on understanding and learning from the visitor's experience have for a variety of reasons been long standing themes for designers and architects. Exhibition design and experimentation have worked together (as in the expositions in the second half of the nineteenth and early twentieth centuries) and then diverged to a great degree, with most of the daring experimentation in exhibit design relegated to museums of science and for children. We need to rethink the museum experience, to use exhibits for applying new techniques, and think about exhibits as a tool for bold ideas.



1.1 Examples from the Past

Early Exhibitions and Museums

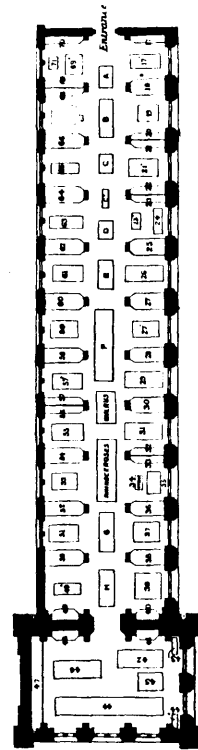
Exhibitions are a way of communicating. They have a wide range of purposes, like educating, providing pleasure, advertising, selling, or propaganda.

Museums are often thought of as places where works of artistic, historic, and scientific value are kept and shown. They have been in existence longer than is usually realized. The word itself can be traced to the Latin *museum*: library, study, museum building, and the Greek *mouseion*: place of the muses or nine daughters of Zeus, each of whom presided over a different art or science.¹ One of the most famous museums in the Greek and Roman world was founded in the third century BC. It was more of an academy of scholars than a museum as we think of today. Even though many statues, paintings and other valuable objects could be seen in the temples, baths, and forums, most collections of precious objects were in private hands.²

In the Middle Ages, the only possibility for ordinary people to experience any kind of art was in the church sculptures and reliefs usually depicting biblical stories and lessons. [Fig. 1.1] Collections by the church authorities of precious objects of gold, silver, and jewels of all kinds were not open to the general public.³ But the rooms housing these objects became a model for later gallery design. The great exhibitions at that time were fairs of merchants at centers like Frankfurt, where large displays of merchandise were accompanied by entertainment for the visitors and potential buyers.⁴

Fig 1.1: Opposite page: *Last Judgment* (detail), west tympanum, Autun Cathedral. c. 1130-35 B.C. Janson, page 273.

The idea of permanent collections continued to grow and by the late seventeenth century museums became accessible to a limited audience, for example, in the Tower of London. The British Museum was founded in London in 1753. The Louvre in Paris was originally a Middle Ages fortress and castle and replaced by a Renaissance and Baroque royal palace. It was opened to the masses in 1793, following the French Revolution. In the nineteenth century the concept of a special institution for precious objects for general view became prevalent. These usually had their origins in the private collections of wealthy men. And, it was at this time that public spaces were first designed for the sole purpose of their display. ⁵



The overall design of the early museums did not take into account what would be shown in them. The architectural concept was a reflection of prevailing styles and circulation was determined by the architecture rather than by the exhibits to be shown. They were like storage houses. The galleries were usually long, rectangular, symmetrical spaces in which many objects were crowded together in cases. Like the layout in the great exposition halls, which are discussed below, that of the display cases in the early museums was organized on a grid system. There was some interest in education and in disseminating information, but displays were labelled with little or no explanation, and no attempt was made to accommodate ordinary uninformed visitors. ⁶ [Fig 1. 2]

Fig 1.2: Plan of a 19th Century gallery showing an arrangement of cases that provides no simple circulation route. Miles, page 6.

The Great Expositions

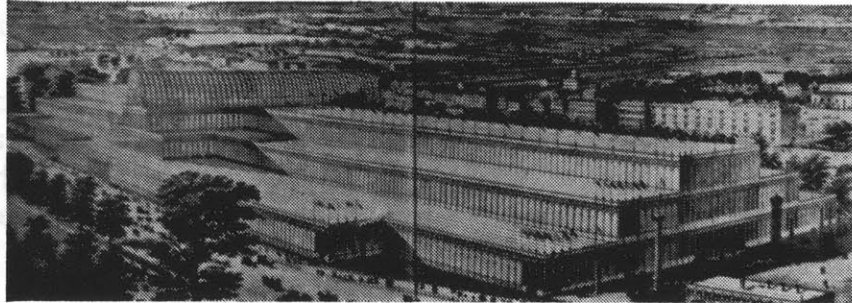


Fig 1.3: The Crystal Palace in Hyde Park, London 1851, Beaver , pages 32-33

At the same time, large temporary, structures were erected for the display and promotion of products and ideas, probably descending from the old fairs. Outstanding examples are the great expositions like the Crystal Palace in London 1851, and the World's Columbian Exposition in Chicago 1893. Because the expositions were not conceived as permanent, they were focal points for extending the imagination and trying out new engineering techniques and architectural ideas. They were international events and the advances made in them were influential long after the structures were dismantled. ⁷ [Fig 1. 3]

Exhibitions of the Early Twentieth Century :

After World War I artists of all disciplines attempted to merge their artistic and social ideals and the concept of exhibition display evolved. Exhibitions were seen as a way to spread the new ideas and as a result, they began to focus more and more on the average viewer. In this section I show how exhibition display was approached by different groups working at about the same time.

From 1917 until the early 1930s, a group of architects, sculptors, painters, and other artists in Holland, known as De-Stijl⁸, believed that integrating their work in an abstract expression would reflect both their artistic ideas and the new social condition they hoped would prevail in the postwar period. They used temporary settings as a microcosm of larger environments - the city in particular- and hoped that one day the whole urban environment would be transformed into an abstract, balanced composition.⁹

When designing exhibits, many De-Stijl artists and architects tried to consider what the reactions of the average viewer would be. In a review of a 1916 painting exhibition in Amsterdam, Theo van Doesburg, artist, editor of the De-Stijl journal and one of the principal advocates of De-Stijl ideas, wrote that he had tried to imagine himself as the ordinary spectator rather than exhibitor or critic when viewing the art works. As a result, he "recognised that the way objects are treated had a profound effect on the ability and willingness of the spectator to perceive their aesthetic value." ¹⁰

Piet Zwart, a designer associated with De-Stijl, tried out his new ideas on exhibit design in a commission for a stand in the 1921 Annual Industrial Fair in Holland. He emphasized the temporary nature of the exhibit space and its function as a background for the objects exhibited. In the final version of the design, he pulled the visitor into the exhibit space by using strong diagonals, integrating the shelves with the bands of color, which overlapped architectural boundaries in the far corner of the room, and eliminating the furniture which usually separated visitors from the exhibits. [Fig 1. 4]

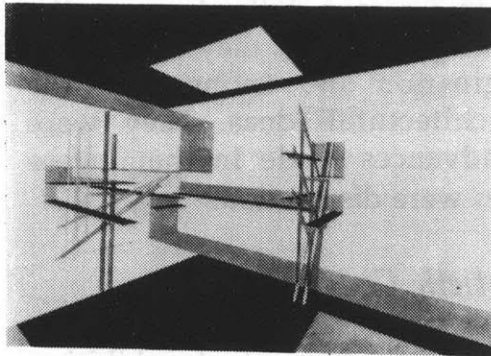


Fig 1.4 Piet Zwart, Definitive Design for Celluloid Manufacturer's Stand, Annual Industrial Fair, Utrecht. 1921. Troy, page 58.

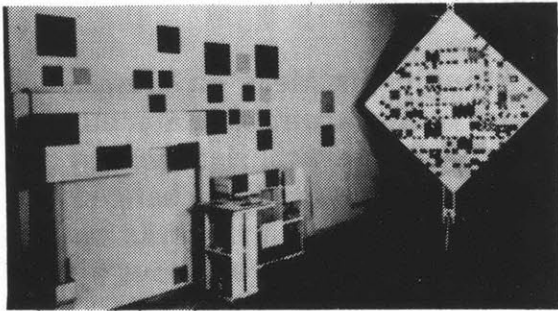


Fig 1.5: Piet Mondrian, Studio of the Artist, New York, 1944. Troy, page 190

The studio has often functioned as a place for creation and for the exhibition of an artist's work. Some De-Stijl artists carried this idea further by using the interior of the studio itself as an exploration ground for their abstract designs. For example, Piet Mondrian, probably the greatest artist associated with De-Stijl, arranged his New York studio as a changing abstract composition, which affected and was affected by his paintings. Mondrian made some of the furniture out of simple wooden packing crates. On the walls and furniture, painted white, he pinned rectangular pieces of colored cardboard which he intently studied and often rearranged.¹¹ [Fig 1.5]

In his paintings and studio design, Mondrian strove for the abstract harmony he hoped would change the world. Although many contemporary artists were influenced by his work, the general public was unable to accept its austere character, or the merging of moral and abstract aesthetic values.¹²

Coming from Russian and Jewish background and one of the Russian Avant-Garde, El Lissitzky continued the tradition that "art must not just be but do. Art must have some redeeming social purpose".¹³ After the Revolution in 1917, Russian art went out to the streets in exhibitions and pageants, enabling it to reach people of all kinds. The Avant-Garde believed that since the Revolution stressed labor, and the new art required work on the part of the viewer, it would be seen as something for the average individual and not just as a relaxation and pleasure for the well-to-do.¹⁴

Lissitzky involved the spectator in a personal way in his Proun¹⁵ drawings and in Proun Space, which was created as a demonstration of his abstract spatial concepts for an exhibition

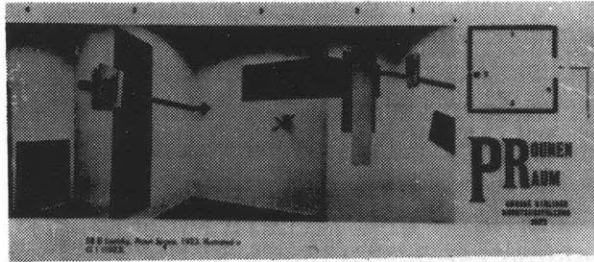


Fig 1.6: El lissitzky, Proun Space, 1923.
Troy, page 128

held in Germany in 1923.¹⁶ In Proun Space Lissitzky led the spectator around the room. A diagonal relief on wall one brought the spectator to a broad horizontal plane on wall two, in turn to a vertical plane on wall three, and finally to a square at the bottom of wall four near the exit. [Fig 1. 6].

Always experimenting, Lissitzky brought his ideas on viewer physical participation to a high point in the *Abstrakte Kabinett*, Hanover 1927. In his exhibit space he placed vertical slats next to the wall to create a play of light and dark shadows that changed with the movement of the visitor. He also placed art works on revolving stands and on supports that could be moved about by the viewer.¹⁷

At about the same time (in the 1920s and 1930s), architects of the Modern Movement were searching for a way to convince the broad public that their alternative architecture was better than the old, and included new concepts of living, town planning, and building production. They sought norms or standards that could be applied to inexpensive housing for working people.

Exhibitions gave them an opportunity for practical realization of new spatial concepts even if only temporarily, and a chance to demonstrate that the ideas really worked. They used any means of presentation that would be effective but preferred to show actual objects made for the industrial market and permanent buildings which could be used afterwards. ¹⁸

Advances in technology opened new possibilities. The use of reinforced concrete, made possible the removal of bearing walls and to create large flexible spaces. The load was transferred to a



Fig 1.7: Stuttgart, The Weissenhof, 1927, Benevolo, page 479

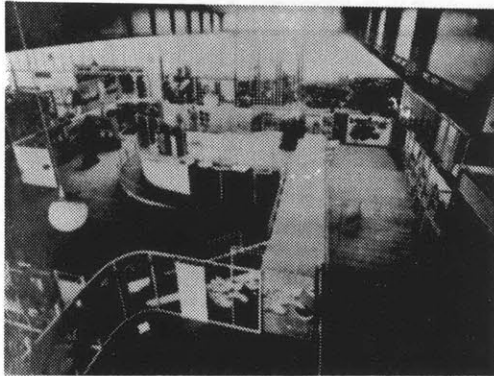


Fig 1.8: Walter Gropius, Exhibition of the Building Workers' Union, Berlin, 1931, Miles, page 7

steel and concrete framework and the walls became merely screens stretched between the columns.¹⁹

Two important examples are the German Werkbund exhibitions in Stuttgart 1927 and Berlin 1931. In Stuttgart, leading architects from all over Europe were commissioned to construct permanent houses in the Weissenhof Siedlung district, as part of an otherwise temporary exhibition. These houses were seen as prototypes for mass reproduction, and gave the public its first overview of architectural solutions of the Modern Movement. For example, in two detached houses Walter Gropius experimented with a system of prefabrication. Le Corbusier built detached houses on 'pilotis' using reinforced concrete and iron, which were particularly shocking to the public.²⁰ [Fig 1.7]

In the 1931 Berlin exhibition, Gropius tried to take into consideration how people would best comprehend the message of an exhibit. He dispensed with glass cases, and symmetrical layouts and introduced new graphic techniques like bold lettering, large posters, and photography. He broke up the conventional exhibition hall into small units related by topic, and enhanced circulation by introducing curved walls. But still, Gropius worked downward from a given space to be filled and subdivided for the purpose of the exhibit rather than from the message of the exhibit up to shape the overall space.²¹ [Fig 1.8]

Exhibit designers were also focusing on problems of communicating concepts and ideas with the lay visitor. Otto Neurath tried to make technical information, particularly relating to social change, more easily understood by making it both accurate and interesting. For example, his greatest contribution was with statistical charts. In his new method,

known as the Isotype System (International System of Typographic Picture Education) a greater number of quantities is represented by a greater number of familiar images, as seen in figure 1.9 22

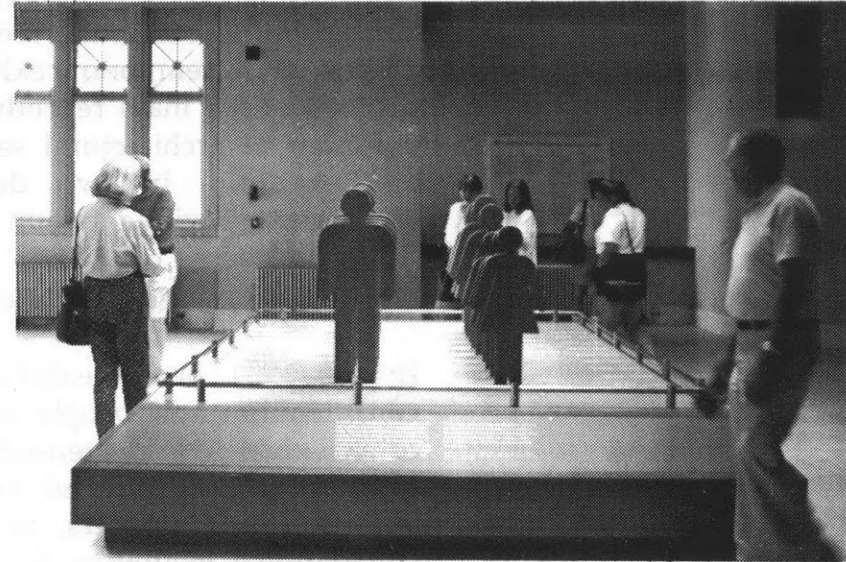
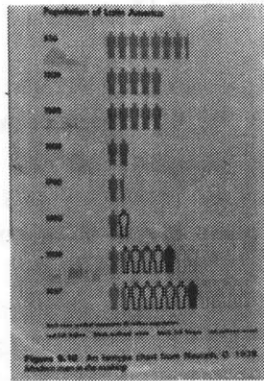


Fig 1.9: a. *above left* An isotype chart from Neurath O., 1939, *Modern Man in the Making*
b. *above right* A recent application of Neurath Charts, *Peopling of America* Exhibit, Ellis Island Museum, photograph by A. Shimshoni, June 1991

All of the approaches discussed above have continued to shape museum and exhibit design up to the present time. They reflect the change in attitude in exhibits and museums from merely showing to demonstrating and convincing. The new visual techniques that were developed in the early twentieth century have become an extremely common language.

Museums of the Last Decades of the Twentieth Century

As attitudes toward display changed, architects began to think more about the relationship between building and display, and the relationship of both of these to the spectator, with special emphasis on the viewers' movement. The focus became thinking of the building as a way of communication, and unlike the case of the Werkbund exhibition in Berlin designed by Gropius, principles were incorporated into the design building itself. Le-Corbusier in his spiral museum tried to meet the challenge of what he considered to be optimum viewpoint and sequence in which works should be seen through a well defined circulation system. But, as in the 18th and 19th century museum the design was rigid. It did not allow for alternative routes, or much choice about where could the visitor stand when viewing the works.

Mies Van de Rohe was also concerned with circulation. Contrary to Le Corbusier he provided a flexible undefined space under a single roof in Houston, which gave the viewer choice of movement and helped him orient himself relative to the large exhibit room. In National Gallery of Art in Berlin he extended this idea to an extreme and the whole ground storey became a large flexible space.

The question whether a museum should be a large flexible shell or a fixed setting has continued to concern museum designers throughout the last decades of the 20th century. As the audience became more diverse designers felt a greater need to give a clear organization, so the public could choose what it wanted to see and which services it wanted to use.

With the great surge in museum-going by the masses after World War-II , the museum as an institution evolved. In

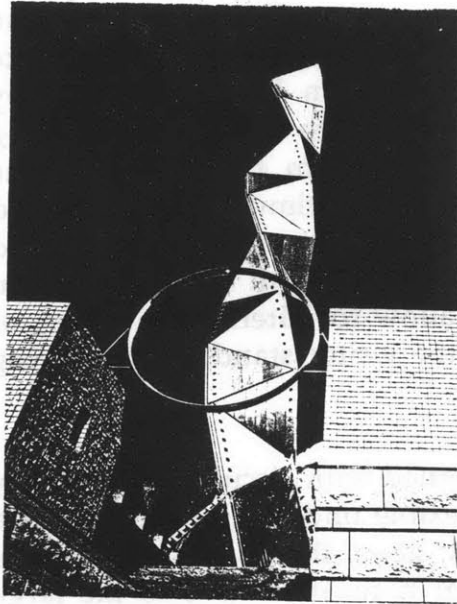


Fig 1.10: Art Tower Mito, Mito, Japan
photograph by A. Shimshoni, June 1990

addition to collecting and displaying, it often became a cultural center, including auditoriums for lectures, movies and concerts, spaces for art classes, libraries, facilities for research, conservation and restoration, gift shops and restaurants. Sometimes museums became part of a larger complex which in itself included libraries, theaters, and other entertainment facilities.

Museum design tended toward the extremes. In the late 20th century they either became huge edifices that could accommodate a broad range of themes and high technologies, like industry, aviation, technicolor, film, computers, and children museums or they became small and specialized often devoted to a single artist or topic.

Mito Art Tower completed in 1990 by Arata Isozaki is an example of a museum that was seen as a larger institution. Its aim was to help restore Mito (a town north of Tokyo) to its former status as an important cultural center. The museum complex is built around an open public lawn and includes a symbolic tower, theater, contemporary art gallery, concert hall storage, rehearsal and dressing rooms, restaurant and parking facilities. The different functions have a common entrance but can easily be identified by the separate volumes. [Fig 1.10]

In some cases museum design in the last decades of the 20th century has become reminiscent of early museum design. The concept of seeing the museum as a broader institution than just displaying works recalls the museums in Greek and Roman times. Isozaki's museum of contemporary art in LA, is an example of a museum in which the main concern was the expression of architectural ideas separate from display and curatorial issues. The museum is composed of simple rooms, with focus on natural light. The rooms are conventional and

neutral. In this way it is reminiscent of the 19th century museums.

What ever role it played, and what ever shape it took the museum building itself has become a cultural monument in itself which spectators come to see as well as the exhibits within.

1.2. The Design and the Visitor

Capturing and Maintaining the Visitors' Interest

One of the main challenges to exhibit designers has become how to attract the people to come in and once in to maintain their interest. Studies and surveys have been made to understand visitors' behavior and what the exhibit experience means to the visitor. More and more exhibit designers have tried to understand how people move and behave, and what cues they respond to.²³

James Gardner stated that the entrance to an exhibition should be like a book cover which invites you to open it.²⁴ This can be achieved with many of the techniques introduced by the Bauhaus like colored posters, or curved walls leading into the exhibition, with a hint of the exhibition on view.

The Visitors' attention seems easier to hold through variation and contrast. Examples of techniques that can achieve this are asymmetrical exhibit layout, division of a large hall into smaller areas, placing small rooms next to larger ones, and using a variation in heights of exhibit areas and in surface materials. Visitors need good lighting, easy flow from exhibit to exhibit, and a place to rest from time to time. One example of combatting visitors' fatigue can be seen in the Museum of Modern Art New

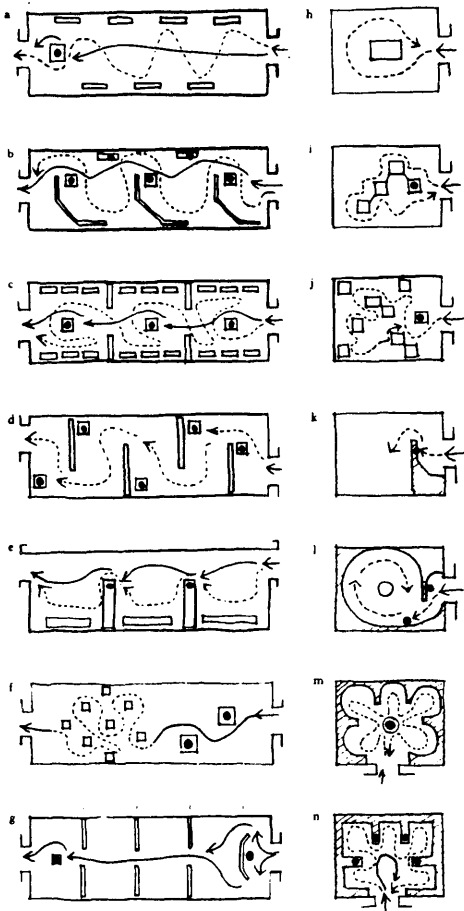


Fig 1.11: Manipulating and pacing the visitor by the arrangement of room plans, Gardner and Heller , page 131

York, where the visitor must always return to a broad, light hall with its view of the sculpture garden and parts of the city.

Using contrast in elements like lighting, heating and color can draw visitors to certain areas of an exhibition, or bring to their attention very simple objects which in a natural setting might be overlooked. Labels and graphics should be legible and explanations narrowed down to the most essential information.
25

Circulation and the division of spaces are two of the major ways of helping the viewer understand the information presented and of maintaining his interest and attention. At one extreme, circulation and flow can be completely controlled to determine the sequence in which the displays are seen, leaving the viewer no alternative other than to look or simply ignore the exhibit and walk on by. On the other hand, circulation can be controlled from unit to unit, but the sequence in which the displays are seen within each unit left to the viewer's choice. ²⁶

A third possibility is free circulation. The display can be arranged with an unobstructed view of related exhibits; they can be separated by screens which provide background for some of the exhibits; or exhibits can be placed in bays off of a main aisle.²⁷ In the first case the organization of the entire exhibit can be seen upon entering the room. In the second there is an element of surprise provided by the screens; and in the third the exhibits cannot be seen but their organization understood when looking down the aisle. [Fig 1. 11]

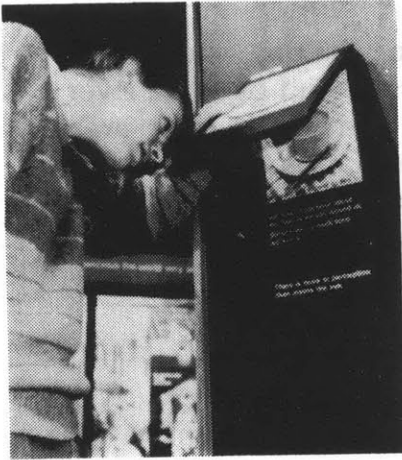


Fig 1.12: Interaction of visitor with the display: A flip panel in the Hall of Biology , British Museum (Natural History) 1986, Miles, page 92

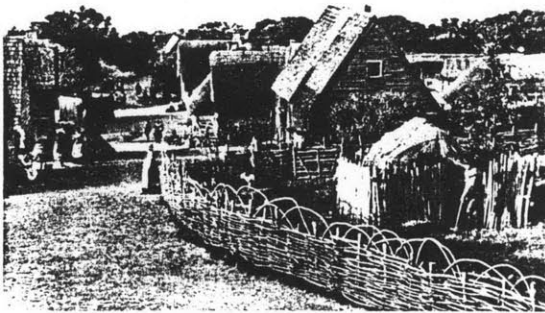


Fig 1.13: Plimoth Plantation, Briggs (eds) 1990, page 26

Coming As Closely As possible to Reality:

In museums that are consciously or deliberately devoted to education, curators and exhibit designers have discovered that people remember what they learn best under fun conditions and by experiencing the thing exhibited as closely as possible to reality.²⁸

In educational exhibits emphasis has been placed on interaction of the visitor with the display and in the utilization of different modes of presentation like, three dimensional models, push buttons, computers, replicas, and flip panels. [Fig 1. 12]

The attitude of curators and designers is to interpret for and to help people learn, but how much should be explained or interpreted by the designers? Should visitors be left to make their own choices and connections ?

In some history museums today there is an attempt to recreate the experience of the past. An example is Plimoth Plantation, in Plymouth Massachussets, which is a reconstruction of the original colony founded in 1627. Old rough-hewn and clapboarded houses have been reconstructed. Visitors can freely meander along its dirt road, entering where they will, and talking to interpreters who dress, speak and do tasks as though they were living when the village was originally founded. [Fig1.13]

Another example is the Fukagawa Edo Museum, in Japan, where a section of the town of Edo (Tokyo) in the 19th Century has been reproduced, life sized. To create the feeling of spending a day in the town, the lighting is altered as though from sunrise to sunset. This is accompanied by the kinds of sounds heard throughout the day, like a rooster's crowing in the morning,

street vendors calling out their wares during the day, and temple bells ringing in the evening. The sky colors extend over the river and onto the wall behind it, and draw visitors to river area which was the focal point of life in Edo during the 19th century. The buildings and the artifacts inside them look authentic but they are made of the simplest new materials. As a result visitors can freely enter and “play like” they were there in Edo²⁹. [Fig 1.14]

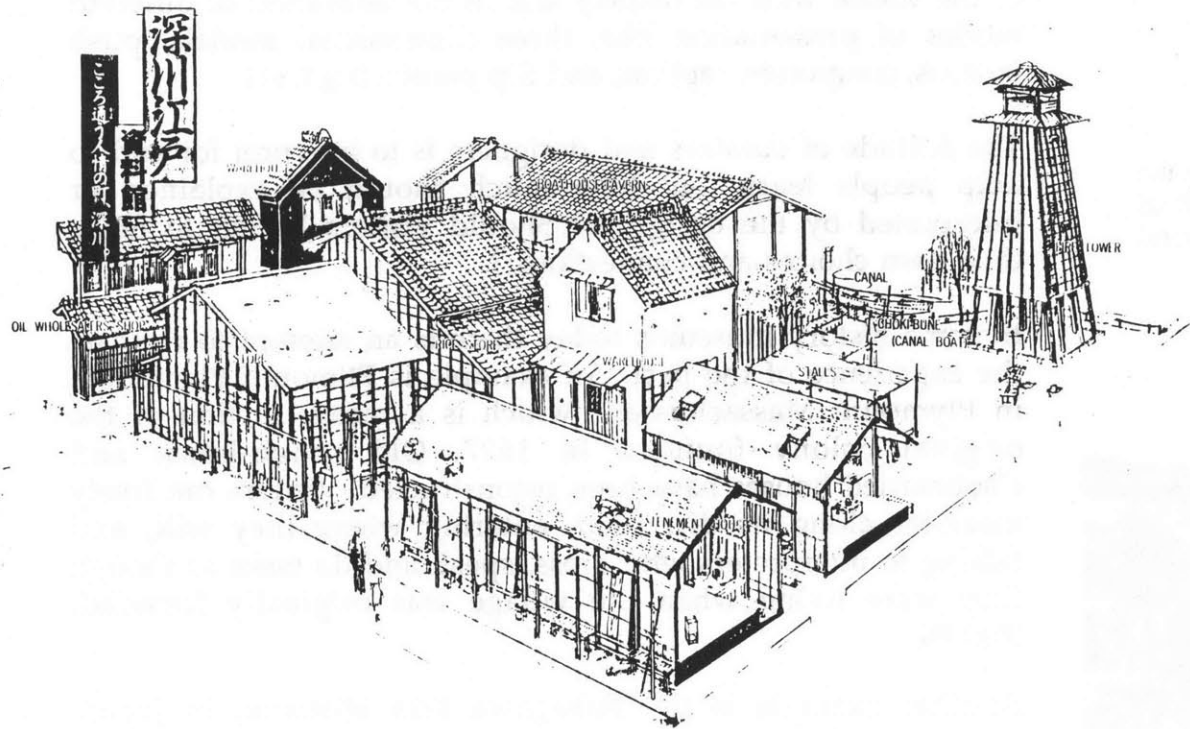


Fig 1.14: Fukagawa Edo Museum in Tokyo, Japan, Sumiko Enbutsu, 1987

1.3. The Children's Museum of Boston

"...where children grow up and grownups don't have to" 30

Another and most natural setting for learning has increasingly become the children's museums which have grown in popularity throughout the world since the late 1960s.³¹ There are almost as many Children's museums as there are types of them, from big institutions to ad-hoc facilities. While they may vary in the age group they target or building types, most share a focus on learning and teaching by doing, and on using the surrounding environment, especially their city, as a lab.

The Children's Museum of San Diego California, the Children's Museum of Houston, Texas, and the Children's Museum of Indianapolis, Indiana, have a tradition of working together with children by involving them in the creation of exhibits, especially through a Junior Board of Advisors.³² A hands-on exhibit entitled "Teens Speak Out" (1988), at the Children's Museum of Indianapolis, surveyed teenagers opinions about current issues. The teenagers helped seek out the issues of concern. The visitors who were the participants entered their answers on six computer terminals in separate kiosks, one for each issue, and through instant results could compare their answers with those of their peers.³³

"Amazing Chicago" an exhibit at Express Ways Children's Museum in Chicago recreated some of the city's famous buildings using 10' by 10' plywood boards painted to resemble the originals, and contained props like clothing and implements children could use. [Fig 1. 15]

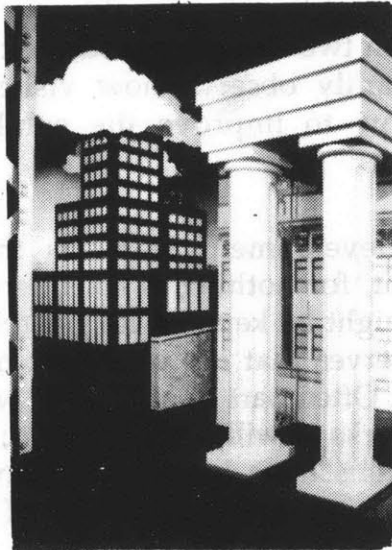


Fig 1.15: "Amazing Chicago"
Tigerman, page 322

The Children's Museum of Boston 34

Like other children's museums the Boston Children's Museum has discovered the secret of how to constantly involve its audience and to encourage it to explore and to learn.

One of the main premises on which its work is based is that the function of the museum is to teach, and learning is achieved by doing and touching. But this works in two directions because the staff is also learning. They constantly observe how visitors respond and learn from them how to improve the exhibit design.

The attitude of the design and development teams is that nothing need be fixed or permanent, for nothing is considered precious. If interesting, an exhibit might be kept for longer than originally planned. If the team observes that the exhibit is not well understood, they will change it. Often part of an exhibit will be experimentally mounted. If it works it will be developed; if not it will be scrapped. Some exhibits have been revised and remounted whenever the topic is again of interest. The staff is not afraid to take a risk.

The physical space is basically an old warehouse on what became known as Museum Wharf. It can be subdivided according to the needs of specific exhibits. Old exhibits which are usually made of simple materials, are often recycled. No barriers are placed between the visitors and the objects; everything can be touched.

The displays are designed to speak for themselves and to be understood without depending on labels or interpreters. Exhibits are usually on subjects the children are close to because they are more open to explore new concepts in familiar settings.[Fig 1.16] Many levels of learning and a variety of concepts are

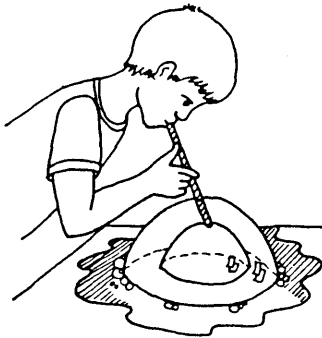
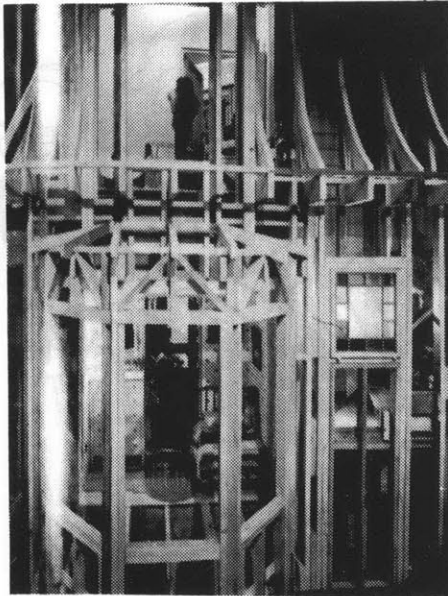


Fig 1.16: Learning through familiar topics: Bubble exhibit , Children's Museum, Boston



incorporated. Sometimes learning is indirect, to be stored away as impressions that will be recalled when the subject is approached again by the child at a later stage.

The city in which they live is one of the most important familiar subjects to children and from its very inception the Childrens' Museum has emphasized the relationship between the museum, the children, and the city. The story of the museum, as Mr. Spock, its director in early 1960s-1980s, recalled, "... is about the city, to help people understand it and learn how to manage it and use it for their own education".³⁵



There is almost always something about the city at the museum. For example, "City Slice" is a section through a typical lifesized Victorian house and street in Boston. Parts of the structure, usually hidden, are revealed. The children can see a halved toilet through to the sewer pipes. The framework is exposed, showing not only the way the house is built but also the evolution of materials used. Some of the rooms are complete and furnished. Costumes are available, to help children come as close as possible to feel what it was like living in grandmother's time.³⁶ [Fig 1. 17]

Fig 1.17: "City Slice" , Craig , 1979

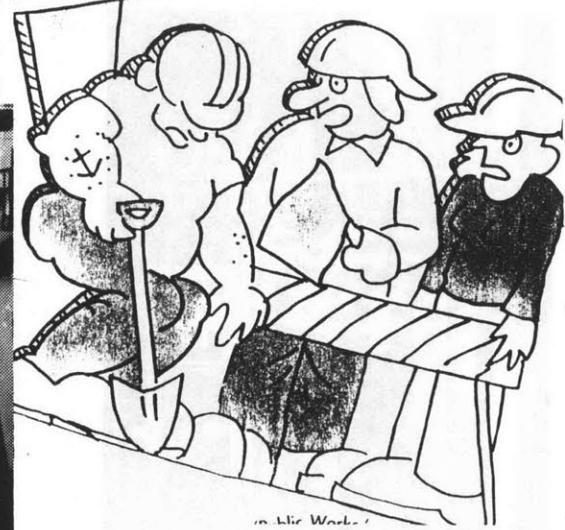


Fig 1.18: *opposite page*:: a. City Mini golf, What's News, The Children's Museum, 1991
b. City Mini Golf out door exhibit, photograph by A. Shimshoni, June 1991

An exhibit for the summer of 1991 was "the Big Dig mini-golf" which focused on themes related to changes in the city as a result of the Central Artery/Tunnel Project and the urban environment in which the Children's Museum is located. In this exhibit the principles of indirect learning, learning in a familiar setting, and learning through entertainment are applied. The familiar setting is a 12 hole miniature golf course. To shoot the ball into the holes, they will have to go through obstacles like bridges, a construction site, Scheme Z clover leaf exchange, a geological cut away, and vibration. ³⁵ [Fig 1. 18]

1.4. Lessons from Museum and Exhibition Design

Exhibitions have long been used as a tool for communication and education and have had a broad range of purposes. In their early stages, most permanent collections were in private hands and were opened to a limited, often informed, audience. The structures in which these collections were kept did not take into consideration the exhibits shown. When museums and collections were opened to a broad public and exhibitions were seen as way of convincing and selling ideas, the focus shifted to understanding the experience of the uninformed visitors. Architects and artists of the 20th century, who used the temporary settings of exhibitions to sell and to experiment with their social and artistic ideals, played a major role in shaping the thinking about exhibition design. They developed techniques to pull in visitors and help them understand the exhibitions that have become a common language in exhibition design.

Artists and architects of the De-Stijl tried to pull in the average viewers through incorporating directional and diagonal elements in the design of their exhibitions settings. Gropius lead the visitor through with curving walls and tried to help the spectators understand by subdividing the exhibition space

according to the topics presented. In history museums an attempt was made to recreate the real experience of the past. Today, the Children's Museum's staff has taken experimentation in exhibition design and interaction of visitors with the displays much further. The museum's staff sees the planning design and mounting of exhibits as an ongoing dialogue with the visitors of the museum.

All of the examples I cited above indicate that the context in which that objects and drawings are shown is a crucial ingredient of exhibition experience of the visitors. By manipulating the setting a large audience with varied backgrounds can be captured and a message can be articulated through the total experience and alerting all senses. In my design museum presented in part II, I will show in more detail how the total experience can be considered. But, first I will present issues that are raised from a major city project in Boston in which I feel that while the exhibitions has been attempted but have not been exploited to their full extent.

¹The American Heritage Dictionary of the English Language, American Heritage Publishing Company, New York 1973 page 864 and page 1530

²Hall Margaret, On Display, Lund Humphries, London, 1987, page 13

³Hall Margaret, On Display, Lund Humphries, London, 1987, page 14

⁴Luckhurst Kenneth, The Story of Exhibitions, The Studio Publications, London, 1951, page 13

⁵Hall Margaret, On Display, Lund Humphries, London, 1987, Janson H.W. A History of Art, Thames and Hudson, London, 1985, pages 478-480, 525

⁶Miles, R.S. The Design of Educational Exhibits, British Museum, London, 1988, pages 3-7

⁷Hall Margaret, On Display, Lund Humphries, London, 1987, page 15

⁸The group was named after the journal De-Stijl founded in 1917 by Theo Van Doesburg.

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- ¹⁰Troy Nancy, The De-Stijl Environment, MIT press, 1983, page 12
- ¹¹Troy Nancy, The De-Stijl Environment, MIT press, 1983, page 191
- ¹²Troy Nancy, The De-Stijl Environment, MIT press, 1983, page 186
- ¹³John Bowlt, Russian Art 1875-1975: A Collection of Essays, NY 1976, p 174, quoted in Alan C. Birnhotz "El Lissitzky & the Spectator: From Passivity to Participation" , in Stephanie Barron & Maurice Tuchmar (eds) The Russian Avant-Garde 1910-1930: New perspectives, MIT Press, Cambridge, MA, 1980, page 98
- ¹⁴Stephanie Barron & Maurice Tuchmar (eds) The Russian Avant-Garde, MIT Press, Cambridge, MA, page 100
- ¹⁵Proun was a word used by Lissitzky to describe his art.
- ¹⁶Troy Nancy, The De-Stijl Environment, MIT press, 1983, page 124
- ¹⁷ Stephanie Barron & Maurice Tuchmar (eds) The Russian Avant-Garde 1910-1930: New perspectives, MIT Press, Cambridge, MA, 1980
- ¹⁸Benevolo Leonardo, History of Architecture, Volume Two, The M.I.T. Cambridge, Massachusetts,1985
- ¹⁹Walter Gropius, the new architecture and the bauhaus, The M.I.T. Press, Cambridge, MA,1989, page 25, 26
- ²⁰Benevolo Leornado, History of modern architecture, Volume two, The M.I.T. Press, Cambridge, MA, 1985, page 486
- ²¹Miles, R.S. The Design of Educational Exhibits, British Museum, London, 1988, page 7
- ²²Miles, R.S. The Design of Educational Exhibits, British Museum, London, 1988, page 7
- ²³Gardner, Exhibition and Display, F.W. Dodge Corporation, New York, 1960
- ²⁴Gardner, Exhibition and Display, F.W. Dodge Corporation, New York, 1960
- ²⁵Gardner, Exhibition and Display, F.W. Dodge Corporation, New York, 1960
- ²⁶Gardner, Exhibition and Display, F.W. Dodge Corporation, New York, 1960
- ²⁷Gardner, Exhibition and Display, F.W. Dodge Corporation, New York, 1960
- ²⁸Sumiko Enbutsu, Fukagawa Edo Museum, Fukagawa Edo Museum, 1987 and Visit to Edo Fukagawa Museum, Summer 1990
- ²⁹Miles, R.S. The Design of Educational Exhibits, British Museum, London, 1988, page 95
- ³⁰The Children's museum in Indianapolis.....
- ³¹Andrea A Garcia i Sastre Museums (Unesco papers) volume XII, 1989
- ³²"Not for Adults Only" Museum News, July-August 1988
- ³³The Children's Museum of Indianapolis, report number 317.925.5431, National Endowment for the Arts

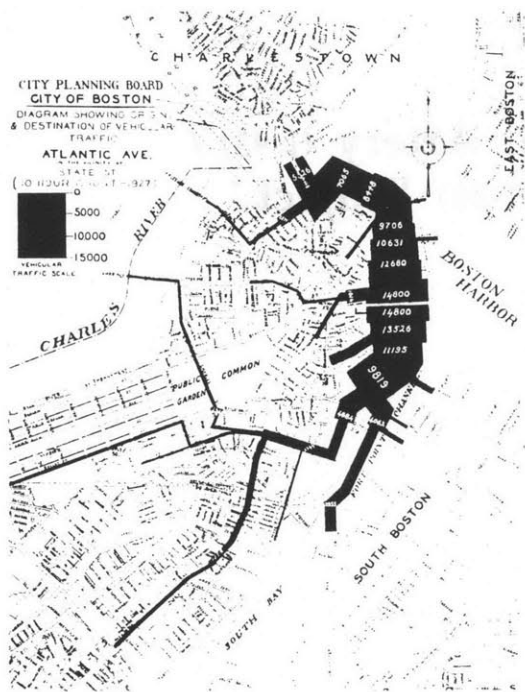
³⁴This section is mostly based on Interviews with members of design and development teams of the Children's Museum of Boston, 1990.



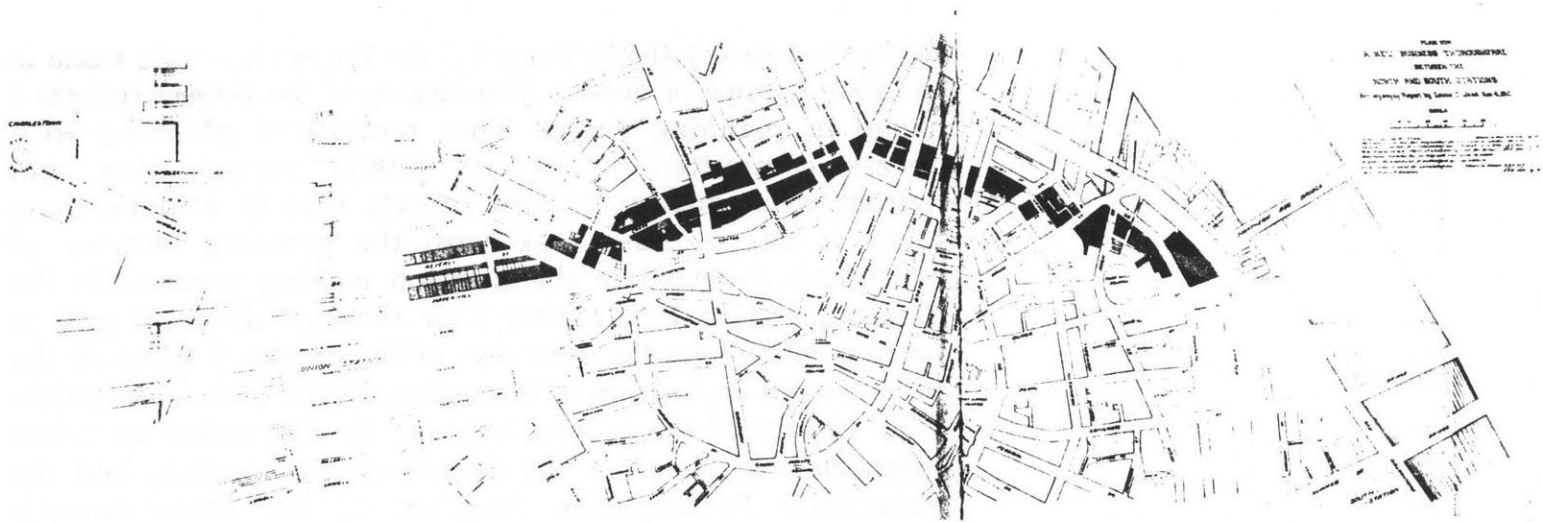
Chapter 2:

The Central Artery (I-93) / Tunnel (I-90) Project

The Central Artery (I-93)/Tunnel (I-90) Project is a mile stone in the urban history of Boston. The history of the project reflects a change in planning values from centralized planning to a process committed to equity, public participation and environmental quality. It also reflects that to achieve these values is not an easy task with the growing number of participants involved in the decision making process. In the following section I illustrate how ideas of different groups interplay and shape the outcomes of the project. I focus on the role of design and nature of discussion. I start with an overview of the history of the project followed by discussion on urban design visions, plans for the decade of construction, and the Community Participation Program of the Massachusetts Department of public Works.



a



b

2.1 The Setting :

Hopes for a 'New Boston'

Boston has a long tradition of bold topographical transformations. [Fig. 2.1] At the dawn of the 21st century a new piece of land will emerge in Boston once again, when the construction of the Central Artery (I-93)/Tunnel(I-90) project will be completed. What might seem to appear in one day will be the result of efforts and thought for almost a whole century.

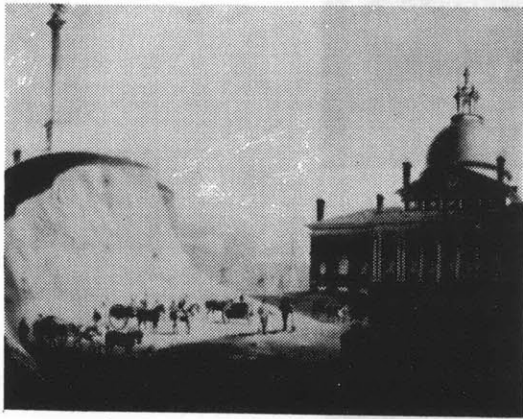


Fig 2.1 "Shaping the City",
Holtz , page 106

Already in 1910, a business thoroughfare was envisioned between North and South stations as part of a larger transportation plan. By the middle of the 1920s the alignment of the elevated Central Artery as part of an arterial web was established in an official transportation policy. Extensive statistical data gathering and projection were used for the first time in 1930 to support road building recommendations that would have paved the whole city. Finally, in the 1940s the essential role that the Artery would play as part of an inter Belt Highway was established in a comprehensive metropolitan highway plan.¹ [Fig 2.2]

The artery was needed to carry daily traffic in and out of Boston, to relieve surface traffic and "to break the worst traffic bottleneck in New England"². The idea for an elevated artery resembled the familiar scene of elevated train tracks along Atlantic Avenue. From the time the thoroughfare was first conceived until the time it was actually constructed in the 1950s traffic demands expanded and a larger number of lanes was needed. The decaying city around it added hopes for a rebirth of the downtown area.³ "Sweeping through 'the artificially swollen city

Fig 2.2 opposite page a. Diagram Showing Vehicular Traffic on Atlantic Avenue, 1930 Thorough Plan, Krieger and Green 1985, page 65. b. A New Business Thoroughfare Between North and South Stations, Metropolitan Improvements Commission, 1910, Krieger and Green 1985, pages 64-65

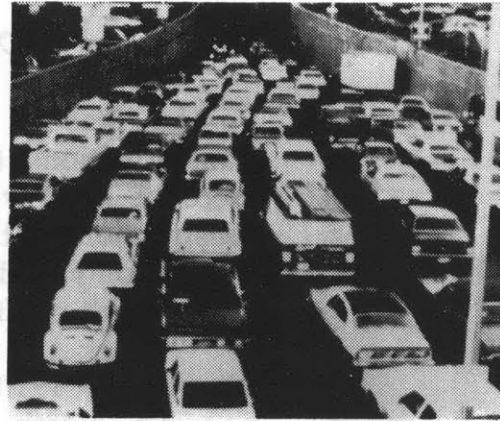
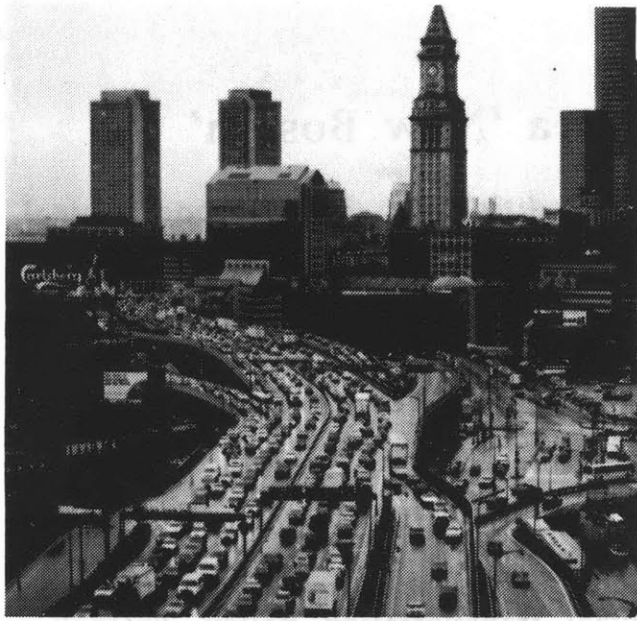


Fig 2.5 *below* Sketch for the Central Artery ,1930 Thoroughfare Plan, Krieger and Green , 1985, page 64

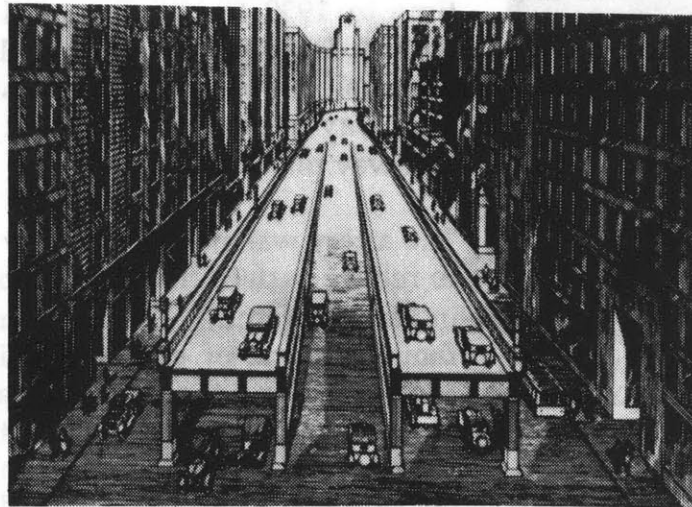


Fig. 2.4 a. (top right) Heavy traffic on the Central Artery, EIS Report, 1990.
 b. (top left) Aerial view of the artery looking toward the block between the North End, Haymarket and Downtown Boston, Public Information Report, photograph by Peter Vanderwalker.

as it does a landscape', the highway would allow the city to become modern."⁴

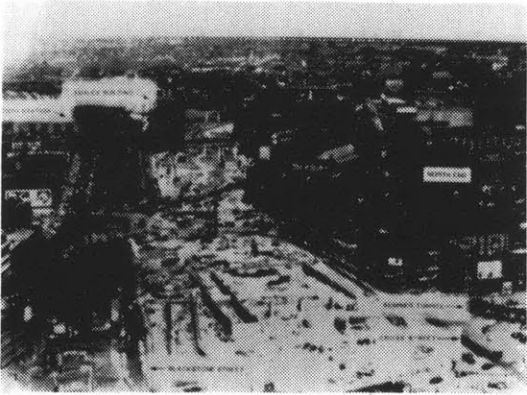


Fig. 2.3 Block between the North End and Haymarket during the construction of the elevated artery, Elia, Landon, Seasholes, 1989.

The construction of the elevated artery coincided with growing interest in urban renewal with the aid of federal funds (made possible by the Federal Housing Act of 1949), as a way to rebuild and revitalize Boston. In the late 1950s the West End Project removed more than 3000 residents of a working class neighborhood to make way for high-rise luxury apartments, and homes in other locations were eliminated to allow construction of the Central Artery. During the 1960s, urban renewal was accelerated and large areas of downtown Boston including Government Center, Faneuil Hall and the waterfront area were developed. All of these projects reflected the willingness at that time to dislocate populations in order to achieve the goal of a "New Boston".⁵ [Fig 2. 3]

Much has changed in Boston since the elevated Artery was constructed. The downtown area has grown and thrived. The restoration of the waterfront in the 1960s attempted to make way for thousands of workers, residents, and tourists to walk to the sea.⁶ But, the traffic problems remained the same. Traffic volumes on the Central Artery are more than double the intended capacity. The accident rate is approximately twice the nationwide average.⁷ In the 1990s the Central Artery has been referred to as the "...busiest and most congested highway in all America...".⁸ [Fig. 2. 4]

Unsolved traffic problems and bitter memories of homes taken during the construction of the Central Artery and urban renewal projects associated with it changed the image of the structure. The elevated artery that was once at the center of hopes, as reflected in the way it was rendered [Fig 2.5], became by the 1990s

a “scar”, a “tear”, a “visual intrusion” and a “monument to governmental insensitivity to urban neighborhoods”.⁹

Contrary to the centralized planning of the elevated artery and urban renewal projects in the sixties, transportation planning in the early seventies, in the words of Alan Alsthuler, the Chairman of Boston Transportation Public Review at that time, became committed “...to develop transportation plans for the region by means ‘participatory’, yet ‘decisive’ ” and “...to equity, and linking transportation problems with non-transportation issues such as jobs, housing, environment and community life.”¹⁰

Representatives of a wide range of concerned citizens' groups, including, construction and environment, the city, and neighborhoods, were brought to one table to discuss the future of various projects of the region, and it was in this setting that the depression of the artery was first conceived. It symbolized the possibility of reaching a common ground between pro and anti highway interest groups and it “...served as the possibility for an image of the rise of a new, human era of transportation development over an old, mechanistic one”. ¹¹

The depression of the Central Artery meant years of planning ahead, and about a decade of construction through the heart of Boston. The project would yield about 40 acres of freed land stretching from Charlestown in the north to just south of Southhampton Street and from Harrison Avenue in the west to Logan Airport and route 1A in the east in addition to 3.7 miles of tunnel and 2.3 miles of bridges.¹² The project could affect almost every one living or working in or near Boston.

At the time of the conception of depressing the Central Artery it was evident that to achieve the overarching commitments to participation, equity, and to link transportation problems with non-transportation problems would not be an easy task. The increasing number of players and the potentially affected groups brought with them worlds of memories, expertise, personal and professional values and aspirations. The idea of depressing the artery was first raised in the Boston Public Transportation Review advisory committee but was left for further study after pro highway groups and anti highway groups could not reach a common agreement.¹³

Ten years passed before the idea of depressing the artery gained momentum and its necessity to meet traffic demands was established in 1983.¹⁴ By the early 1980s any physical change in the environment had to comply with extensive environmental requirements and neighborhoods increasingly were empowered in decision making. The participatory process has become not only a value but a necessity as well.

The challenges, as they have been publicly expressed throughout the 80s, were manifold. For engineers it is a challenge to design the underground artery in the landfill soil of Boston. For traffic planners it is a challenge to finally provide a solution for the ongoing traffic problems. For the Boston Redevelopment Authority (BRA) representing the city, the project is "a challenge to design a large piece of the city in a comprehensive and comprehensible way"¹⁵, it is a chance to correct "brutal highway and urban renewal mistakes"¹⁶, to re-knit the city¹⁷ and a chance to redirect growth.¹⁸ For designers, according to Central Artery Task Force of the Boston Society of Architects (BSA) it is a challenge to create a vision of the future of the cityscape "so that highway designers of today can provide for the allowance of that

city scape vision of tomorrow.”¹⁹ For neighborhoods along the artery it is a chance to expand boundaries and provide ongoing needs and facilities.

In the following sections I look at how ideas of different groups interplay focusing on the nature of discussions and the role of design. I will concentrate on three different aspects of the project the urban design visions, the attitudes towards the decade of construction of the Central Artery Project, and the community participation program of the Massachusetts Department of public Works (MDPW).

“The future isn't what it used to be”

Arthur C. Clarke

2.2 The "27 Acre Opportunity"

What is the Vision ?

The development of the surface land that will be created by the depression of the Central Artery will only begin in the first decade of the 21 century. This might seem far down the road, but decisions made in this century are shaping the nature of development.

One of the main factors that can shape the nature of development is its close relationship to the design of the tunnel box of the depressed artery. The strength of the box determines how many stories can go on the surface and the location of the ramps leading to and from it will influence the shape and size of the parcel made available for development. The two major players in implementing the project are the Massachusetts Department of Public Works (MDPW) focusing on the design of the depressed artery, and Boston Redevelopment Authority (BRA), focusing on the rezoning of the downtown area. Even though the major focus of each is different their actions are closely tied together.

Many ideas have been suggested for the development of the surface land, but only those schemes which confined to the technological constraints were publicly acknowledged as poles for discussion. This section is concerned with four main ones that as I will show below were narrowed down to one plan the Boston 2000 Plan prepared by the BRA. The four schemes are plan created by the BRA, Ricardo Bofill, and Alex Krieger consultant for the BRA, and a scheme developed voluntarily by the Central Artery Task Force of Boston Society of Architects.

I start with describing the four schemes as they have tried to capture the imagination of the public, and then I compare them and go into more detail on the process in which they were made to reflect on the nature of discussion.

The BRA 1987 Plan:

“The 21st Century Emerald Necklace”

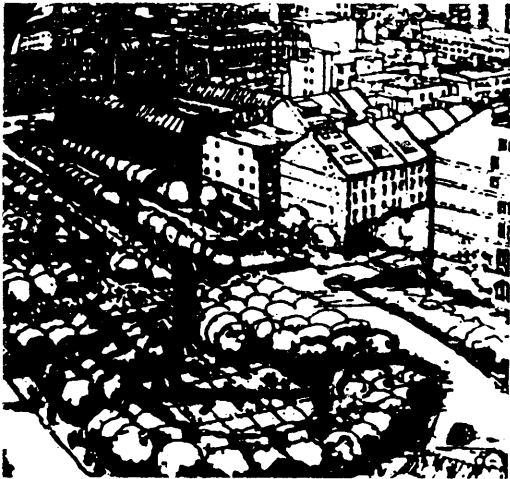


Fig 2.6 BRA 1987 Plan for development, image taken from the BRA plan *Boston 2000*

The plan builds on the 19th century theories and work of Frederick Law Olmsted who believed in the civilizing virtues of urban open space, and advocated an integrated metropolitan wide park network to insure that a rapidly expanding city remains liveable. The plan is comprised of a unified system of interconnected parks, together with a development program emphasizing new housing. For the BRA, the goal of the West End days to restore the Boston's economy through development of downtown has been completed successfully. Now the BRA's goal is to redirect growth to less developed locations and its larger vision is "...to redefine people's experience of the downtown."²⁰ A system of interconnected parks will create a link between the diverse neighborhoods both visually and socially. A park system will enhance the unique character of each district and at the same time will provide a setting for Bostonians from different neighborhoods to meet and interact. The BRA plan envisioned a Floor Area Ratio of 1.0 and a ratio of total development to each square foot of open space. More than 70 percent of the total land area would be preserved for open space purposes. [Fig 2. 6]

Ricardo Bofill :

“A Vertebral Spine”

The plan by R. Bofill was inspired by the 19th century principle of identifying public space with geometric order. The scheme gives priority to common spaces, public buildings, and facades of buildings so they compose streets and places inside a geometric envelope. The idea for the artery, like a spinal column, is divided into several parts. The major feature is a boulevard with major public uses, including gateway towers at North Station, South Station, and Central Wharf, and public use elements including an elliptical plaza in the North End, a formal downtown park, a winter garden pavilion, the extension of waterfront park, a public athletic and recreational facility, and a new Haymarket pavilion. The intent of the Boulevard is to establish a balanced relationship between a coherent unified idea and each of the separate parts. The Boulevard will unite neighborhoods, and it strives to find a balance between the local communities and the larger whole of public buildings. More than 50 percent would be preserved for open space purposes, with one square foot of open space proposed for each 4.5 square feet of development - a density comparable to the Beacon Hill area. [Fig 2. 7]

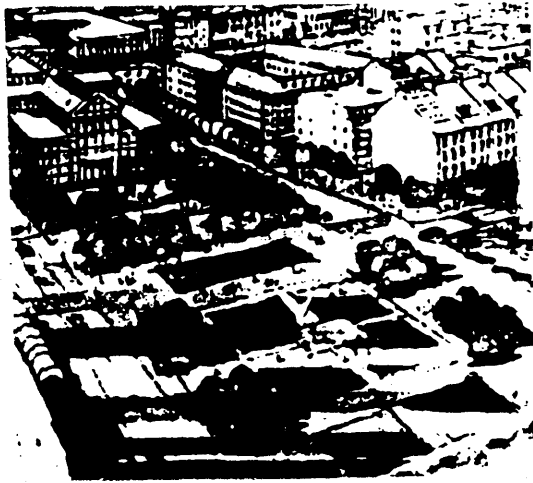


Fig 2.7 Ricardo Bofill's proposal for development, image taken from the BRA plan *Boston 2000*

Alex Krieger :

“Fabric, Streets, and Squares...”

The scheme developed by Alex Krieger proposes alternating squares and development schemes flanked by two independent major surface avenues between North and South stations. The scheme will have a magnitude that will leave an imprint on Boston like the historic topographical transformations. As a result it will contribute to the city a discernable district that will lend order to the districts adjacent to it. The shape, land use, and physical character of the squares will reflect the needs of the each neighborhood. A. Krieger is primarily interested in the physical dimension of squares and uses precedents from Boston to determine the character of specific squares. The development program proposed in the Krieger plan called for an approximate FAR of 1.85, with 50 percent of the land area preserved as open space. One square of open space planed for each 3.7 square feet of total development, a density characteristic of the Back Bay between Boylston Street and the Charles River. [Fig 2. 8]

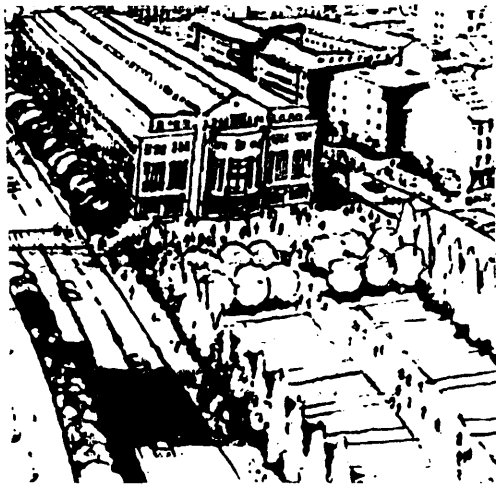


Fig 2.8 Alex Krieger's proposal for development, image taken from the BRA plan *Boston 2000*

Boston Society of Architects (BSA) :

“The Seamless Web”

The BSA plan is an attempt to heal the scar created by the construction of the artery. The main aim is to “re-knit the city” with traditionally scaled streets and building massing and design, and blocks filled with mixed use of dwellings, offices, shops, parking garages and open spaces. By “knitting districts” and using traditional massing and architectural design, the BSA tries to erase the memory of the elevated artery. The plan calls for eliminating the elevated structure altogether then gently “knitting” the city back together as if the structure had never existed. The scheme suggests maintaining views and orientation to the key landmarks, and key open space locations. It also suggests that parcels should be developed along with the new buildings. The BSA Plan proposed the development of essentially the entire length of the Artery as commercial and residential buildings in order to reintegrate completely the Artery corridor into the downtown context. Recommendations for development included four to five million square feet of new buildings, a total development program resulting in approximate floor area ratio (FAR) of 4.5 within the corridor. Small parks totaling 2 to 3 acres, or 10 percent of the total area. [Fig 2. 9]



Fig 2.9 BSA's proposal for development, image taken from the BRA plan *Boston 2000*

To reflect on the nature of discussion I will highlight some of the similarities and differences between these plans. The 1987 plan of the BRA, as well as the plans of the BSA and Alex Krieger share many attributes. They all advocate enhancing the quality of the pedestrian environment downtown. Through the articulation of space and form they try to enhance visual and physical connections to the sea, provide open space in a way that would enhance the city's public amenity, reconnect the street network that was disrupted by the introduction of the elevated structure, and blend segments of the pathway with the architectural qualities of its adjacent neighborhood.

The specific ways each plan chose to articulate these goals by borrowing from the heritage of the past seem to reflect "significant disagreements, which reflect basic differences in approach and philosophy". They seem to raise questions relating to the role of open space, the legacy of the past, and the importance of a grand scheme. ²¹

The proposals consistently accepted some conditions and constraints from the traffic and technical realms. Except for the 400' tower near Dewey square in Bofill's scheme, there are no structures taller than six stories high, (created by conditions by the design of box). Surface arteries were considered as a given by all schemes and the traffic needs determined by transportation planners were not questioned at all. For example, in the study Krieger prepared for the BRA , the need for two broad avenues connecting North and South Stations is accepted, and it is shown that the Boulevard (two avenues separated by parcels) is preferred over one broad avenue.

At the same time some technical issues were ignored. The schemes do not take into account the variation in strength of the

box. They do not take into account wind tunnel tests that have indicated that the area between Quincy Market and Dewey Square would be very prone to high velocity winds. This is especially striking in the case of the BRA scheme which claims to improve environmental conditions downtown. Financing of the development is not clear. For example it is not clear how Bofill's public buildings and the costs of maintenance and operation of the BRA stretch of park would be financed.

The two key players in implementing the Central Artery/Tunnel project have been the state, represented by the Massachusetts Department of Public Works (MDPW) and the City of Boston, represented by the Boston Redevelopment Authority (BRA). The MDPW has primarily focused on the design and construction of the depressed artery and has geared its efforts towards obtaining the necessary approvals for construction. The BRA, which has the power to set zoning regulations and approve land use plans, has focused on the rezoning of downtown and setting the stage for development of the land generated by the depression of the Central Artery.

The nature of development of the land could influence the design of the depressed artery. At the same time the design of the tunnel box of the depressed artery determines what can be developed on land above it.

Tensions between the city and state regarding the nature of development on the land generated by the artery have been a long standing issue.²² Because the state (and the federal government) are funding and building the project they have a say on the nature of development. Both hope to stipulate from revenues gained from development. The city on the other hand is interested in maintaining control over the land.

The 1985 Draft of the Environmental Impact Statement prepared by the MDPW called for about 2.75 million square feet of commercial development, one million square feet of parking facilities and minimal open space along the corridor. During this time the Boston Redevelopment Authority (BRA) initiated a process to re-zone the entire downtown. Like the MDPW, the BRA worked together with affected communities and in 1987 yielded "A Plan to Manage Growth". Within this plan, the stretch of land which the depression of the Central Artery was identified as a district and a specific planning goal was set to provide at least 50% of open space along the artery corridor. In the same year the BRA countered the development option proposed by the MDPW with a plan proposing a continuous system of parks, open spaces and boulevards along the air rights corridor.²³

Once this process has taken its course the city opened the grounds for further discussion. In 1987 it hired Ricardo Bofill and Alex Krieger to assess the BRA's original plan and to "test this [the park] approach".²⁴

Feeling that the discussion on the future vision of the "artery corridor" was limited the Boston Society of Architects (BSA) initiated a task force to work on a plan for the Central Artery. The task force felt that if more discussion did not take place as soon as possible, many options would be eliminated by engineering decisions before they were even explored. The task force culminated its efforts in a series of three all-day design workshops, and submitted the unsolicited plan for the Central Artery as "the voice to good cityscape design".²⁵

The BSA task force was convinced that the only way to be a part of the discussion and to be heard in meetings was to accept the "realities of the project". As a result, the plan prepared by the BSA Task Force was based on the same traffic and engineering constraints as did the plans prepared by Alex Krieger Assoc., and BRA. 26

Other scenarios have been proposed but none of them were powerful enough to become part of the discussion. Several winning entries submitted to the Boston Visions National Competition in 1988 focused on the Central Artery. The BSA organized this competition to stimulate discussion on unfulfilled opportunities of Boston. Persons from the design and planning profession, artists and interested citizens were encouraged to submit their images of the future of Boston. Public forums, exhibitions and events were held.

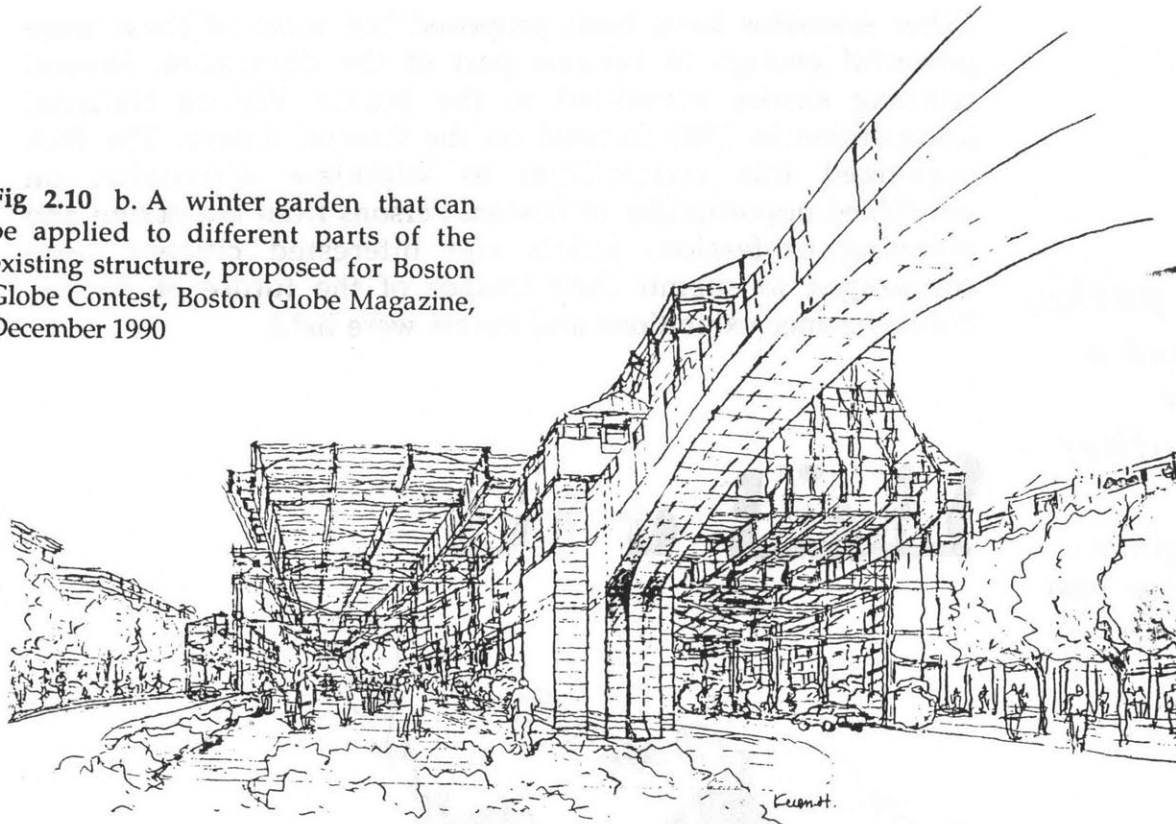
*Three skateboard parks,
two golf courses, and a
quick snack in a pear tree
plus hundreds of other
brilliant ideas
in response to a Boston globe
magazine contest, December 1990*



Fig 2.10 a. A skate board park proposed for a Boston Globe Contest, Boston Globe Magazine, December 1990

Among the proposals submitted to the Boston Visions Competition were plans for landscaped open space and continually changing public uses along the path-way, landscaped urban boulevard, and plans to retain fragments of the elevated artery and to adapt these parts to new uses, such as housing and retail arcades.²⁷ [Fig 2.10]

Fig 2.10 b. A winter garden that can be applied to different parts of the existing structure, proposed for Boston Globe Contest, Boston Globe Magazine, December 1990



Contrary to the BSA intentions, the submissions did not seem to become a "working document" and the entries related to the Central Artery have not been publicly acknowledged as part of the discussion on the development of surface land that will be generated by the Central Artery project. In particular, the entry proposing the reuse of the elevated structure has not been powerful enough to create a new image for the artery and the intent to dismantle it completely remains unquestioned.

Recently, attempts have been made within academia to revive the debate on the future of land that will be generated by Central Artery project. In fall 1990, a studio centering on the "making places" on the land of the artery was held in the Department of Architecture at MIT. Key persons involved in the Central Artery project attended the MIT studio reviews. But, since the ideas explored defied the traffic and engineering constraints observed by the other, schemes remained in the domain of "refreshing academic ideas....which would never happen".²⁸ The drawings were filed in private portfolios; the models left behind.

Only the schemes, by Bofill, Krieger, the BSA and the BRA have been accepted as the poles of discussion; they have been described as "competing schemes". According to the 1991 BRA, Boston 2000 Plan: "many ideas have been proposed for the reuse of the Artery, ranging from filling the pathway with buildings [BSA plan] to constructing a linear park [BRA plan] ...with dozens of plans in between"²⁹ The original BRA plan was changed as a result of the three accepted schemes and comments of community groups and political and business leaders. As the BSA feared the schemes were narrowed down to one scheme. In fall of 1990, one plan, known as the Boulevard Scheme emerged, an amalgam of previous plans.³⁰

The Boulevard Scheme

Contrary to the schemes by the BSA, Alex Krieger, Ricardo Bofill and 1987 park scheme of the BRA, the Boulevard Scheme, (also referred to as *Boston 2000*,) is intended to be closer to an action plan. In the Boulevard Scheme, the development potential of each parcel generated by the project is evaluated and a zoning classification is made. The plan proposes a system of parks, gardens and other public amenities between North and South Stations, flanked by two boulevards. [Fig2. 11]

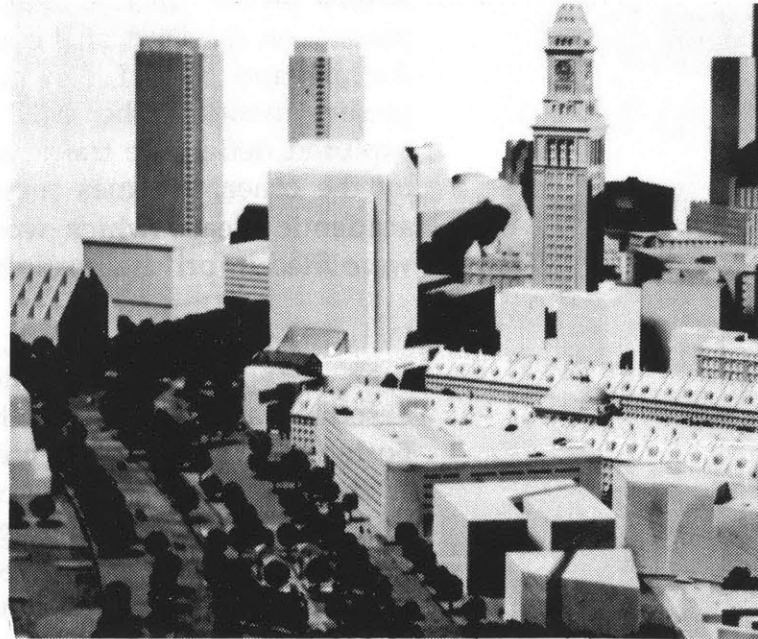


Fig 2.11 View of model of the BRA's Boulevard Scheme, looking toward the block between the North End and Haymarket and downtown Boston, public information document , 1991

The Boulevard Scheme attempts to merge the large with the small; the result is a conglomerate of ideas and a segmented plan. The plan calls for a system of parks that will be distinct from other downtown park systems and at the same time will respond to the characteristics of each neighborhood. In addition, the plan tries to address broad goals like enhancing the environmental quality and "livability of Boston" and directing commercial development away from the downtown area while addressing the needs of each neighborhood. 31

The planning goals, to design the corridor in a comprehensive and comprehensible way, to reflect the neighborhoods needs, to enhance the pedestrian's experience downtown and to redirect growth, remained basically the same in the Boulevard Scheme. Several elements of the Boulevard Scheme have been developed previously in the plans prepared by Bofill, Krieger and the BSA. For example, the use of boulevards was established in the study by A. Krieger. The design guide lines incorporated in Boston 2000 were first developed in Alex Krieger's plan.

The BRA explained in the 1987 plan in physical and formal terms as follows:

From the BSA we learned that "knitting" districts together with new buildings is indeed a needed crucial goal where historic districts have been severed by the expressway and where the original urban form on both sides is sufficiently intact to be rebuilt...From Ricardo Bofill we gained appreciation for the public nature of the land and the civic importance of open space and public buildings. ...This concept reinforced the City's segmentation of this corridor into five distinct open space environments, each linked together by a grand boulevard. His notions of a formal or classical ordering of spaces inspired a boldness of expression in the design of the parkland along the corridor ...From Alex Krieger we learned that the two new surface streets created in the corridor can change their character as they travel from one end of the corridor to the other...We learned the value of squares and their role in the neighborhood or district as

community focal points. We learned that parkland system should take its character from the district which it passes.Finally, Alex reminded the City of Boston's local historic character and the need to respect the existing context.³²

Today, this unified scheme is neatly and professionally portrayed in the City of Boston model located in the BRA. Building blocks are found under the model table allowing only the decision makers to play. Possibly this reflects the BRA's intention of narrowing down design options and limiting discussion. (see Fig 2.11, page 64)

The message to the professional community of architects and designers was clear. The discussion was controlled by the BRA. The BRA "... working with hundreds of citizens and community groups and political and business leaders, [it] has reviewed and analyzed the range of proposals, setting goals for the reuse of this land".³³ The appointment of Ricardo Bofill as consultant for the Central Artery, in Tony Casendino (CBT - Childs Bertman Tseckares & Casendino Inc) words, "...sends a disturbing message to the professional community, one most disliked and felt unwarranted".³⁴ In addition, the professional community saw Bofill's appointment as a political move, to corner the discussion on open space by hiring a world renowned architect who would stand behind it.

The visions of the BRA, Ricardo Bofill, Alex Krieger, and the BSA express forces and elements of process that are stronger than themselves. It seems that their designs were shaped before they even got to the architects' drawing boards. And the designs were used as a justification for preset goals. Options for goals or designs were not explored and existing ones were not challenged.

A a result, one of the "unique opportunities of the Central Artery to redefine the pedestrian experience" (as Stephen Coyle the director of the BRA calls it) might be overlooked. The schemes are generic at best, and finer details are lost. The future looks bright in the drawings but it is impossible to tell what the pedestrian environment will actually be like. By providing "too much park" the city might create a new barrier contrary to its intentions. According to the BSA task force "... people will be afraid to walk through [the park] at night" ³⁵ In addition, merely by placing the two broad boulevards from North to South stations the city might create a barrier as well.



"For five years the contractors kept a big pile of sand near our home. When the work ended, I lost the best play ground in the world"

(Joe Sgarano as a young boy growing up in the North End during construction of the elevated structure)

2. 3 The Decade of Construction:

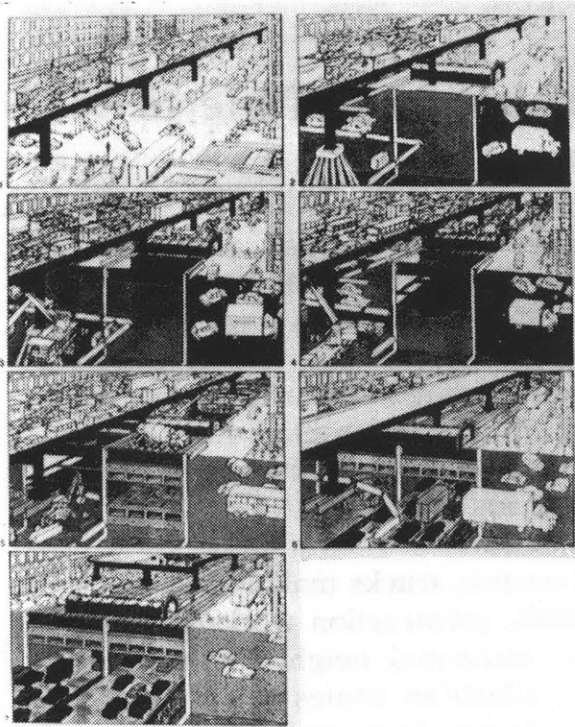
A Time to Remember or a Time to Forget?

In the mid 90s construction of the depressed artery will commence. Over a period of ten years 13.5 million cubic feet of landfill will be excavated and transported across town possibly revealing in the process hazardous materials and releasing rodents. Pedestrian routes leading from downtown to the sea will be constrained, and downtown traffic re-routed. In addition thousands of workers will come to the construction sites each day. There is a real potential for chaos.

If something goes wrong, for instance, trucks making their way through residential neighborhoods, construction workers taking over scarce parking places in residential neighborhoods and downtown, and if traffic and pedestrian routes are not clear, residents and businesses might relocate. As a result, the future of these districts might be quite different than the one urban designers have been planning for. It is surprising, however, that none of the urban design scenarios we have discussed above have addressed the decade of construction. As Tony Casendino from CBT explains "...no one is thinking about what is happening during construction...from the urban design point of view...the area of semi design is tricky and no one wants to deal with it..." 36

Fig. 2.12 Block between the North End and Haymarket during the construction of the elevated artery, 1950's, Elia, Landon, Seasholes,1989.

The decade of construction has occupied the attention of businesses and residents along the artery. For them the construction is very close to home. [Fig 2.12] Residents living near



Depressing An Artery, Step by Step

These drawings, by noted illustrator David Macaulay, show how the new underground highway will be built while keeping the existing elevated Central Artery (1) and surface city streets open. First, two 4-foot-wide "slurry walls" will be made by pouring concrete as deep as 80 feet into the ground (2) on either side of the highway section to be constructed. Beams between the walls (3) will support the elevated highway. The highway section is then covered with decks to allow car and pedestrian traffic while construction proceeds, and workers excavate the dirt from under the deck and between the walls (4) to build the new underground highway (5). The northbound lanes of the new underground Central Artery (6) are scheduled to open first, then the southbound lanes, after which workers will begin dismantling the existing elevated highway (7).

THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
CENTRAL ARTERY (I-93)/TUNNEL (I-90) PROJECT
SUPPLEMENTAL EIS/R



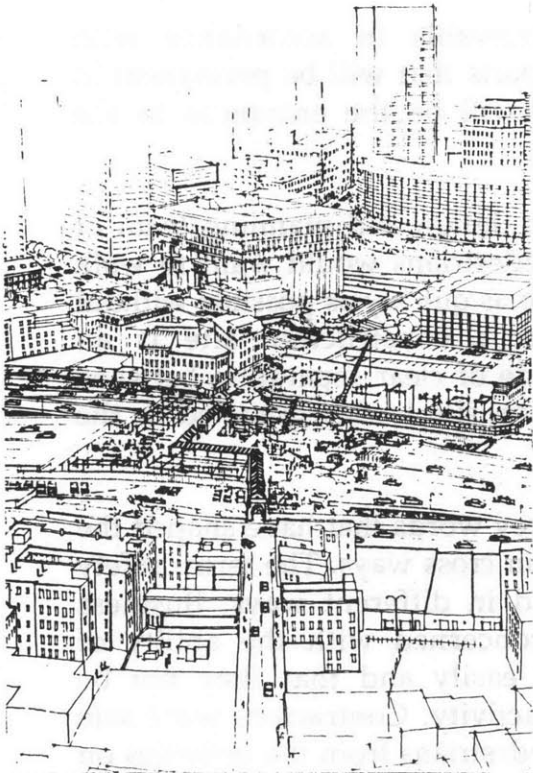
Our thanks to David Macaulay
for his participation in this project

Fig 2.13 Depressed Central Artery Construction Sequence, Environmental Impact Statement,

the elevated artery, like these in the North End, can still remember the days when the elevated Artery was constructed and houses were torn down. Many residents ask themselves, will we survive the decade of construction? and "fear the construction will cause disastrous effects on the community. ..."
37 While the particular focus of concerns has varied among different groups, the need to maintain clear and safe pedestrian access across the construction site of the Artery has been a central concern for every one.

Many innovative construction methods have been designed to lessen the impacts of construction. For example, most of the digging to under decking and the lanes of elevated structure will remain open until the depressed artery will open. [Fig2.13] In addition, the MDPW, together with affected communities, has been developing further mitigation measures and construction procedures in the course of an extensive participation program it initiated (this participation program will be discussed in greater detail in the following section).

Members of the public information, community liaisons of the construction mitigation group of the project find them selves in a tricky position. Like the affected communities along the artery the MDPW staff see the time of construction as a time to survive. K. Diggans, states that "there is nothing you can do about it, construction time will be unpleasant". In order to move the project along the MDPW needs the support and tolerance of the public. If anything should go wrong, it fears the media might sensationalize it, and opposing groups might capitalize on it for their own causes. Residents know their neighborhood best. Actively seeking close communication with the residents is crucial to identify problems ahead of time. But, by doing so the project will be running the risk of confirming the



neighborhoods' and local businesses fears. How should the decade of construction be represented to the public ? How realistic should its description be?

The public information group chose to draw the prettiest picture it could. It hopes that by dispelling misconceptions of affected communities, and constantly reminding them of the long term economic and traffic benefits it would gain the support and tolerance the MDPW needs. 38

The 'Kit of Parts'

The 'Kit of Parts' is a modular system for pedestrian protection and information. It has been designed "to help mitigate pedestrian passage". The 'kit of parts' is a set of manufactured parts which has been developed for use by the individual contractors of each section of the artery. [Fig 2.14] In the guide lines essential elements were identified to ensure easy flow and safe crossing. (i.e. minimum width and height, even surface). A set of panels and components were incorporated to provide easily understood directions for pedestrian. The 'Kit of Parts' is

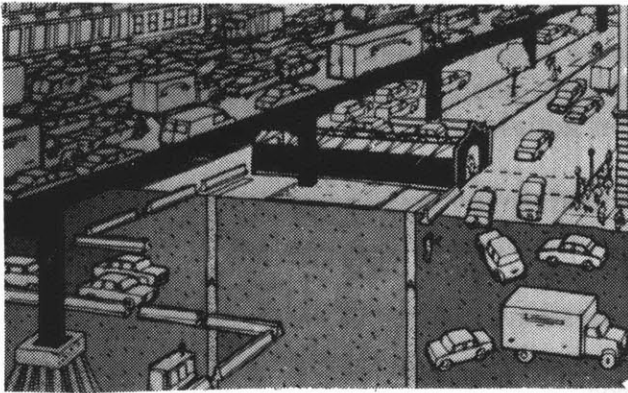


Fig 2.14 View of construction site between North End and Haymarket, Environmental Impact Statement,

designed to be flexible and movable in accordance with construction activities. The only parts that will be permanent in location throughout the project will be the entrances to the pedestrian crossings.

The prevailing assumption of the design and planning team of the 'Kit of Parts' has been that pedestrians would want to walk directly across the construction site as quickly as possible without stopping because walking near a construction site is an unpleasant experience. The attitude of clear separation between the pedestrian and the construction site is clearly stated in the guide lines for the 'Kit of Parts'.

Safety and Access have been the key words that have shaped the design guide lines of the pedestrian cross ways. The terms safety and access have been interpreted in different ways. Business people in the North End are concerned with the ability of pedestrians to find their stores easily and that they not be intimidated by the construction activity. Contractors want safe temporary structures to protect pedestrians from the activities on the site and themselves from liabilities. North End residents are also concerned with protection from violence and have expressed this concern on many occasions [Fig 2.15] Even so, the terms 'safety' and 'access' have been translated in the guide lines into the minimum requirements needed to provide shelter and separation from construction activities.

Design features, that could provide for exhibiting art, archaeology exhibit are though of as separate efforts. For Joe Sgarano,community liaison working for the MDPW and a resident of the North End, these are "extras". " My concern is to make it happen".³⁹ They will be developed later on and probably incorporated in the entrances.

The final location of the crossings will be determined by a survey on business needs -- "because to the degree you can accommodate business needs you can avoid costly construction delays." ⁴⁰ The passage ways will incorporate signs that will guide pedestrians to various shops.

Concepts and ideas generated by designers and two architects from the North End relating to the pedestrians crossings have been put aside. Ideas like placing videos below ground seemed impractical, towers would delay construction. The Kit of Parts was reduced to the minimum. They will be attractive and especially safe.⁴¹

The name 'Kit of Parts' has a playful tone and implies flexibility. But in fact it has been designed for stability and permanence. Pedestrians will have a prettier walkway than is commonly found on construction sites that would last for ten years. Contractors will not be able to use ugly walkways made of rented scaffolding.⁴²

For good reasons, the 'Kit of Parts' has not been designed for change. Temporary structures on construction sites are the concern of everyone, the designer, contractor, building official and insurer, as well as the general public. Yet, temporary systems have been neglected and at times disclaimed by both designers and contractors, and almost totally neglected by researchers and educators."⁴³

By outlining guide lines, the design and planning team of the Kit of Parts hopes to make sure that pedestrian passageways will provide access, safety, separation from the construction activities, and ascetics shelter throughout the decade of

construction. The main difficulty the team is faced was that they have been designing for unknown conditions. The Kit of Parts would have to be flexible enough to be moved according to the conditions on the construction sites at any given time.

The challenges are far greater. How within these constraints can we find ways to consider the decade of construction as an opportunity to learn and to teach about the city and to enhance discussions about the future of the city ? How can the Kit of Parts be modified and expanded to enrich the pedestrian experience ? Is safety merely protection from construction activities ? Will a narrow, abandoned hall across the site be safe ? Do people really want to walk across the construction site as fast as possible ? Can modular pieces be extended or added to yield room for activities like exhibits and look out points?

2.4 Community Participation:

Presentation or Interaction?

Visions are never discussed without talking about the people. They are designed for people, as Stephen Coyle, director of the BRA, said "the Central Artery is a unique opportunity to redefine people's experience downtown..."⁴⁴ And they are designed with people -- "Any one and every one" is encouraged to participate in the open public process the MDPW has committed to. But to what extent people actually participate in redefining its experience downtown is questionable. Do people take part in creating options for the downtown? Do they merely respond to predefined alternatives? Are they well informed to about the alternatives? In the following sections I will outline the public participation program of the MDPW focusing on the forces that seemed to shape it and the methods of presentations used.

The Public Participation Program of the Massachusetts Department Public Works

The Massachusetts Department Public Works (MDPW) initiated the public participation program as part of an extensive effort to gain public support. The MDPW which primarily focused on designing the tunnel, needed to prepare the Environmental Impact Statement Report to show the project's compliance with environmental requirements and to provide technical data needed for permit applications. The approval procedure for both constructing the tunnel and developing the land generated by the project is long and complex. Permits are interdependent, require close coordination, delays caused by opposing groups will

hamper the process. Public support for this process is crucial for this purpose.

One of the most important groups that the MDPW needed to gain support from have been communities neighboring the Central Artery like the North End. The role and power of neighborhoods in decision making has increased since the West End days so much that it has been said that in order to move ahead both the the city and state need the support of the neighborhood.⁴⁵ The support of the North End neighborhood has been especially crucial. As Alex Krieger stated, "North End residents 'will get whatever they want' They are well organized and enjoy strong political leverage. Their consent to various aspects of the plan will bolster public support for the project."⁴⁶

Threatened by continuing opposition on the part of neighborhood organizations like the Haymarket Pushcart Association and the tendency of the media to sensationalize news, the MDPW has actively sought public support, and tried to portray a positive, optimistic posture.⁴⁷ By 1986, during the preliminary design phases of the project, the MDPW initiated an extensive public participation program. The program included a Community Planning Program to focus on a two-way exchange with neighborhoods in the immediate project area supported by Community Outreach and Media and Public Information Programs to provide information about the project, to foster informed participation and to assure effective relation with the media.⁴⁸

Through the two-way communication with affected communities, the MDPW intended to identify and address concerns of specific groups ahead of time. It hoped that by educating the public about the project, emphasizing the long

term traffic and economic benefits and making people feel part of the planning process it would gain broad support and tolerance especially during the coming construction period.⁴⁹

Neighborhoods like the North End looked at the participation process with a cynical attitude. Learning from past experiences they became more cautious and organized. Through the participation process North End community members tried to make sure that promises are kept. Some residents have used the meetings to voice on going concerns that were not necessarily created by the project, other residents have used the meetings as a grounds for opposition, some do not bother to come at all. ⁵⁰

It seems that the public information group did not assume a leading role but tried to respond to these expextations and misconceptions. While the value of educating the public about the urban history, this was seen as a seperate effort than mitigation and effort to gain support. as Angela Irvine said to me in our first meeting... “ you have to choose either to design about the urban history of Boston or mitigation....” ⁵¹

Educating the public about the project by the public information seemed to take the shape of feeding the public with facts and figures that respond to misconceptions of the public that relate to inconveniences to the construction period.. “We discovered there are a lot of basic misconceptions still out there” states Martha Bailey, the MDPW manager for planning and environmental Design, “For example, many people don’t know that all lanes of the elevated Central Artery will remain open until the underground replacements are ready”⁵²

While the MDPW information group focused on responding to misconceptions and concerns, members of communities were

offered according to Mr. Coogan ⁵³“...a chance to review the design work in progress”. ⁵⁴ But, even under this role many--even from within felt that the representatives of the MDPW were not listening to opinions, merely trying to keep an appearance of participation. ⁵⁵

Minor changes have been made as a result of community participation. The construction site will be decked at all times; the construction hours have been limited; the use of the building on parcel 7 was altered from a hotel to a parking structure; the heights of buildings adjacent to the North End were limited to five stories.

As in the case of the Visions for Development of the surface land generated by the project, the basic premises of the project like the location of the tunnel, and existence of the surface roads on top have not been questioned. In the meetings these premises have been presented as a given and the discussion focused on developing mitigation measures for the time of construction.

The lack of opportunity for community members to make choices and especially to question the premises mentioned above is reflected by the methods of presentation of the Project. Models of the Central Artery are presentation models commonly used in the design profession. The boulevards are fixed and glued. As Keith Diggans from construction mitigation said “why make flexible, interactive models. Community members cannot change them [the existence of the two Boulevards] anyway..”⁵⁶

Methods of communication and Exhibitions for the Central Artery

What Keith Diggans and the Public information staff members have overlooked is that "flexible, interactive models" are not just a method to choose between alternatives but rather a way to capture people's interest and to communicate more effectively. To reach a broad public and to gain its support it is not enough to just "disseminate" facts and figures about the project. Information needs to be presented in a way that will move people inside. To achieve this, "flexible, interactive models" as well as other techniques discussed in chapter I can be a very useful tool.

Project information has mostly been disseminated to the neighborhoods through meetings, direct mailings, newsletters and media coverage. Both, the MDPW staff and neighborhood leaders have been concerned with the lack of effectiveness and efficiency of the communication and have been looking for ways to improve it.

Community leaders expressed their concern regarding effectiveness of communication with the project and the state authority and the nature of communication once construction of the Central Artery Project begins. For example, in meetings they feel that they are not given enough time to digest information in order to respond. Because they felt that slide shows on the project are redundant they suggested to have separate informational meetings for new views. Community leaders also pointed out the need for continuing dated communication of the status of unresolved issues, the need for 7 day week information centers that can be established in the neighborhoods to answer questions about the project, including a 24 hour hot line starting as soon as possible and continuing throughout

line starting as soon as possible and continuing throughout construction, and requested that contact persons answer questions directly and immediately.

Meetings alone have not been sufficient to reach out to all persons from the North End who are concerned regarding how they might be impacted by the project. In all meetings there is the danger of the more vocal people masking other persons' opinions. This has been especially difficult to control in large meetings. In addition, some people can not attend at the scheduled times, and others avoid coming to meetings all together. Mr. Joe Sgarano, felt that it is crucial to get to know people from the neighborhood personally, to discuss issues privately and to hold as many informal meetings as possible. "...but, if people do not want to listen, nothing will help, no matter how hard you try...." 57

One of the major tools the project has used to enhance communication is exhibitions and related events. But as I will show bellow, many of exhibition design potentials have been overlooked. An exhibition was first mounted on the fifth floor at One South Station, the project's headquarters, during the public review period of the Environmental Impact Statement (EIS) in 1990. Its intent was to "humanize the Environmental Statement" and encourage the broad public to comment on the report.⁵⁸ Ironically, the exhibition is difficult to find and the exhibits used were merely enlargements of the technical charts and plans incorporated in the EIS.

Searching for better means to communicate about the project, and feeling that there is still a lack of understanding and knowledge, Joe Sgarano, extended the idea of the exhibition to the idea of a neighborhood exhibition. "The intent of the exhibit

is not to disseminate new project information, but to better communicate existing information, and hopefully dispel a number of popular misconceptions about the Central Project." Locating the exhibition in the neighborhood would make the information more accessible to people in the neighborhood. Families probably would not make it to the exhibition on the fifth floor of One South Station. In the summer time it would be more fun to visit a neighborhood exhibition than to attend a meeting. [Fig 2.15]



Fig 2.15 Entrance to One South Station headquarters office of the Central Artery Project. At the entrance there is no indication of the location of the office or the exhibit within. Photograph by A. Shimshoni, November 1991.

Two exhibitions have been held so far in the North End, for a duration of two weeks each. The exhibitions were held in the buildings of different neighborhood organizations. They included general project wide information, but concentrated on issues concerning the neighborhood. The topics were focused around giving people assurances... and they included:

“-All Six lanes of the Central Artery remain open

-No homes or North End businesses are taken

-There will be replacement parking for North End merchants”⁵⁹

The exhibit mostly included components available from the Central Artery project: historic photos, Parcel 7 graphics and models, artists rendering of the future, project video, fact sheets etc.

The exhibitions, especially the local neighborhood exhibitions mark an important move toward reaching residents who might not normally come to public participation meetings. But, these exhibition are still far from achieving the goal of reaching out to the broad public and explaining the project to the visitors. Talking to visitors, J. Sgarano identified that level of knowledge varies and a large number of them do not understand the visuals presented.

Below is a summary of my observations, why exhibits of the Central Artery have not been effective:

- Exhibits are not accessible and their location is not clear to uninformed passerby. For example, there is no sign on the street or in South Station itself indicating the existence of the exhibition.
- Locating the exhibit in One South Station, the Office of the Central Artery project, may be rejecting people who have cynical attitudes and biases towards the participation program.
- Exhibits in the neighborhoods do not have a home of their own. If they had, people could return at their leisure when they felt there are issues to discuss or verify or as they can visit just for fun.
- Visuals used in the exhibitions are conventional two dimensional drawings, and models commonly used by professionals in the design and planning profession. The same kind of visuals seemed to be used for all types of audiences and there is no attempt to bridge the gap of understanding between people from the planning and design profession and lay persons.
- By excluding urban history from the effort to gain public support through exhibitions the public information staff is missing the opportunity to capture a broader audience and talk about the project in a more fun and vivid way

¹Chan Krieger Levi Architects, Inc. Urban Design Studies for the Central Artery Corridor. Prepared for the Boston Redevelopment Authority, September 1990, pages 67-71

²Chan Krieger Levi Architects, Inc. Urban Design Studies for the Central Artery Corridor. Prepared for the Boston Redevelopment Authority, September 1990, page 70

³Boston Society of Architects- Central Artery Task Force, Plan for the Central Artery, 1988, page 9

⁴Krieger Alex, "Space, Time and Arteries", Harvard University Graduate School of Design Professional Development Courses, Spring 1990

⁵Kellerhouse S. Karen, Case Study: Redevelopment of Boston Waterfront, 1978, page 5-8; City of Boston, Boston Redevelopment Authority, Plan to Manage Growth, Government Center, page 14

⁶The rebuilding of the waterfront area and its connections to the adjacent downtown area was made a priority project in Mayor Collins "build a new Boston" program, 1960 Kellerhouse S. Karen, Case Study: Redevelopment of Boston Waterfront, page 5-8, 1978

⁷Central Artery/Tunnel Fact Sheet, Central Artery/Tunnel, Massachusetts Department of Public Works, 1990

⁸The Commonwealth of Massachusetts, Executive of Transportation, Construction Office of the secretary

⁹The terms, scar, tear, visual intrusion, and ugly barrier were used in any document I read about the history of the Central Artery. Especially I quote from the Boston Society of Architects- Central Artery Task Force, Plan for the Central Artery, 1988, page 9; City of Boston, Boston Redevelopment Authority, Plan to Manage Growth, Government Center, page 14

¹⁰The Boston Planning Review Alan Altshuler chaired was created in the 70's and together with the Governor's Task Force on Transportation that preceded it was a reaction to the centralized planning process that characterized highway planning and urban renewal in the 60's.

Roy Avik, Compromise and Consensus, Masters Thesis in Urban Planning and Design, 1989, page 52

¹¹Roy Avik, Compromise and Consensus, Masters Thesis in Urban Planning and Design, 1989, page 53

¹²Central Artery/Tunnel Fact Sheet, Central Artery/Tunnel, Massachusetts Department of Public Works, 1990

¹³Roy Avik, Compromise and Consensus, Masters Thesis in Urban Planning and Design, 1989, page 53

¹⁴Studies were carried out in the 1970s to establish guidelines to redesign the Central Artery and to evaluate proposals to depress, widen or re-deck it. By 1974, a study funded by the Massachusetts Department of Public Works and conducted by the Boston Redevelopment Authority confirmed the feasibility of depressing the Central Artery (Central Artery Depression Preliminary Feasibility Study). By 1983 it was established that the depression was necessary to meet current and future traffic demands.

¹⁵Boston Redevelopment Authority, Boston 2000, page 4

¹⁶Boston Society of Architects- Central Artery Task Force, Plan for the Central Artery, 1988, letter to the Citizens of Boston

¹⁷Chan Krieger Levi architects, Inc. Urban Design Studies for the Central Artery Corridor, prepared for the Boston Redevelopment Authority, 1990, pages 1-3

¹⁸Boston Redevelopment Authority, Boston 2000

¹⁹Boston Society of Architects- Central Artery Task Force, Plan for the Central Artery, 1988, letter to the Citizens of Boston

²⁰Stephen Coyle, the Director of the BRA, "The 27-Acre Opportunity" Sunday Boston Globe, 1990,

²¹"The 27-Acre Opportunity" Sunday Boston Globe, 1990, page 43

²²Roy Avik, Compromise and Consensus, Masters Thesis in Urban Planning and Design, 1989, page 104

²³Boston Redevelopment Authority, Boston 2000

²⁴Boston Redevelopment Authority, Boston 2000

²⁵ Personal Interview with Martha Lampkin, Co-Chair of the Boston Society of Architects - Central Artery Task Force , December 1990; Boston Society of Architects- Central Artery Task Force, Plan for the Central Artery, 1988

²⁶Personal Interview with Martha Lampkin, Co-Chair of the Boston Society of Architects - Central Artery Task Force , December 1990; Boston Society of Architects- Central Artery Task Force, Plan for the Central Artery, 1988

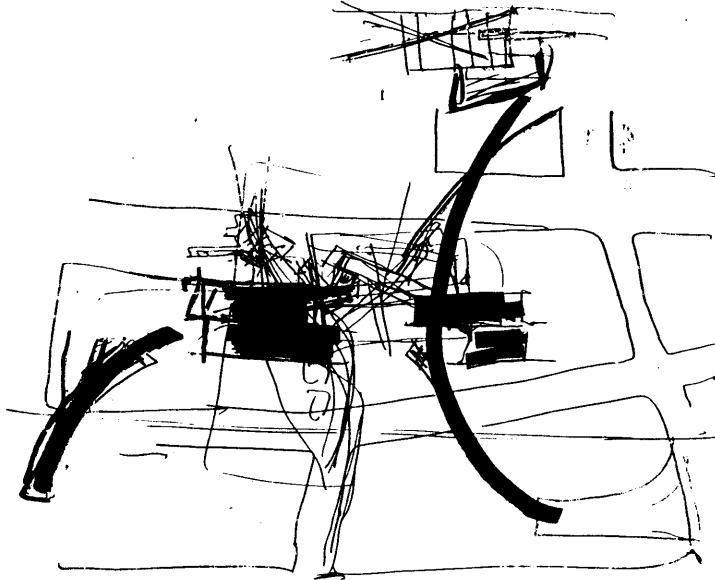
²⁷Boston Visions, A National Design Competition, catalogue. Editors Fitzgerald Richard and Alexandra Lee, 1988, pages 1, 14 & 18

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- 28 Personal Interview with Martha Lampkin, Co-Chair of the Boston Society of Architects - Central Artery Task Force , December 1990;
- 29 Boston Redevelopment Authority, Boston 2000
- 30 Akerman, Jerry, The Boston Sunday Globe, October 21 1990
- 31 Boston Redevelopment Authority, Boston 2000
- 32 Boston Redevelopment Authority, Plan of 1987
- 33 Boston Redevelopment Authority, Boston 2000
- 34 Roy Avik, Compromise and Consensus, Masters Thesis in Urban Planning and Design, 1989, page A1-51
- 35 "The 27 Acres Opportunity" Boston Globe, 1990
- 36 Roy Avik, Compromise and Consensus, Masters Thesis in Urban Planning and Design, 1989, page A1-51
- 37 Mr. Stephen R. Capodilupo, Massachusetts, Massachusetts Department of Public Works, Final Supplemental Environmental Impact Report, Central Artery - Boston, Part IV 5.6-17, November 1990
- 38 Community Participation Program, Unpublished document, Massachusetts Department of Public Works, 1986
- 39 Personal interview with Joe Sgarano, Community Liaison for the North End, Central Artery Project, March 1991
- 40 Access-volume 5 number 2, spring 1991,
- 41 Personal interview with Gale Boyajian, architecture, Central Artery Project, 1991
- 42 Personal interview with Gale Boyajian, architecture, Central Artery Project, 1991
- 43 American Society of Civil Engineers, Temporary Structures in Construction Operations. Ed. Robert T. Ratay, page 1
- 44 "The 27 Acres Opportunity" Boston Globe, 1990
- 45 William Ferullo, Chairman, Land use Committee-North End/Waterfront Neighborhood Council, March 1989
- 46 Roy Avik, Compromise and Consensus, Masters Thesis in Urban Planning and Design, 1989, page A1-3
- 47 Personal Interview with, Angela Irvine, public information specialist, the Central Artery Project; Jeanette L. Harrison, Director of Media Relations, CA/THT project, 1989, Avik's thesis A1-32

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- ⁴⁸Massachusetts Department of Public Works, Community Participation Program, draft, CA/THT CPP-DOC.0933G. 1986
- ⁴⁹Massachusetts Department of Public Works, Community Participation Program, draft, CA/THT CPP-DOC.0933G. 1986
- ⁵⁰Personal interview with J. Sgarano, Community Liaison for the North End, March 1991
- ⁵¹Personal interview with Angela Irvine, Public Information Specialist, Central Artery Project, December 1990
- ⁵²Martha Bailey, MDPW Manager for Planning and Environmental Design, ACCESS, Volume 5, Number 2, Spring 1991
- ⁵³Opening remarks at the Parcel 7 Workshop, February 1988
- ⁵⁴The purpose of the working sessions was explained by Matt Coogan, state project director, in the Parcel 7 Workshop in which the design of ventilation and parking building on parcel adjacent to the North End. Feb 1988.
- ⁵⁵Roy Avik, Compromise and Consensus, Masters Thesis in Urban Planning and Design, 1989, page.103
- ⁵⁶Personal interview with K. Diggans, Mitigation, Central Artery Project, December 1990
- ⁵⁷Personal interview with J. Sgarano, Community Liaison for the North End, 1991
- ⁵⁸Personal interview with Angela Irvine, Public Information Specialist, Central Artery Project, December 1990
- ⁵⁹J. Sgarano, Community Liaison for the North End, Massachusetts Department for Public Works; The Commonwealth of Massachusetts, "North End Neighborhood Project Exhibit", June 29 1988

Part II : Lessons for the Future:

**A Living Museum
on the Construction Site of the
Central Artery Project**



“... the primary value of the museum experience lies in the opportunities it makes available for visitors to increase their knowledge and/or to change their beliefs and attitudes...”

The Living Museum on the Construction Site of the Central Artery Project

The Living Museum is an evolving setting in which any one can learn about changes taking place in Boston. Located on the major pedestrian crossway between the North End and Downtown Boston, before, during and after the construction of the Central Artery Project, the Living Museum will become part of everyday life. In its early stages, the museum will consist of real, life sized objects while they are being used for construction and communications, intermingled with exhibits on the urban history of Boston. When the exhibits are no longer in use they will become part of a permanent setting for future discussions on urban issues and projects in the Boston area.

I developed the concepts of the Living Museum and its design out of the lessons from exhibition design (Chapter 1), the issues I raised in the discussion on the Central Artery Project (Chapter 2) and the site (described below). Because the concepts come into play in different scales of the design and at different points of time in the evolution of the Living Museum, I will first present them in general with only some references to my proposal of the Living Museum and to the previous chapters. In the section following this part, I will describe the Living Museum in greater detail and indicate how the concepts I describe in the first part come into play and the specific ways in which I chose to interpret them.

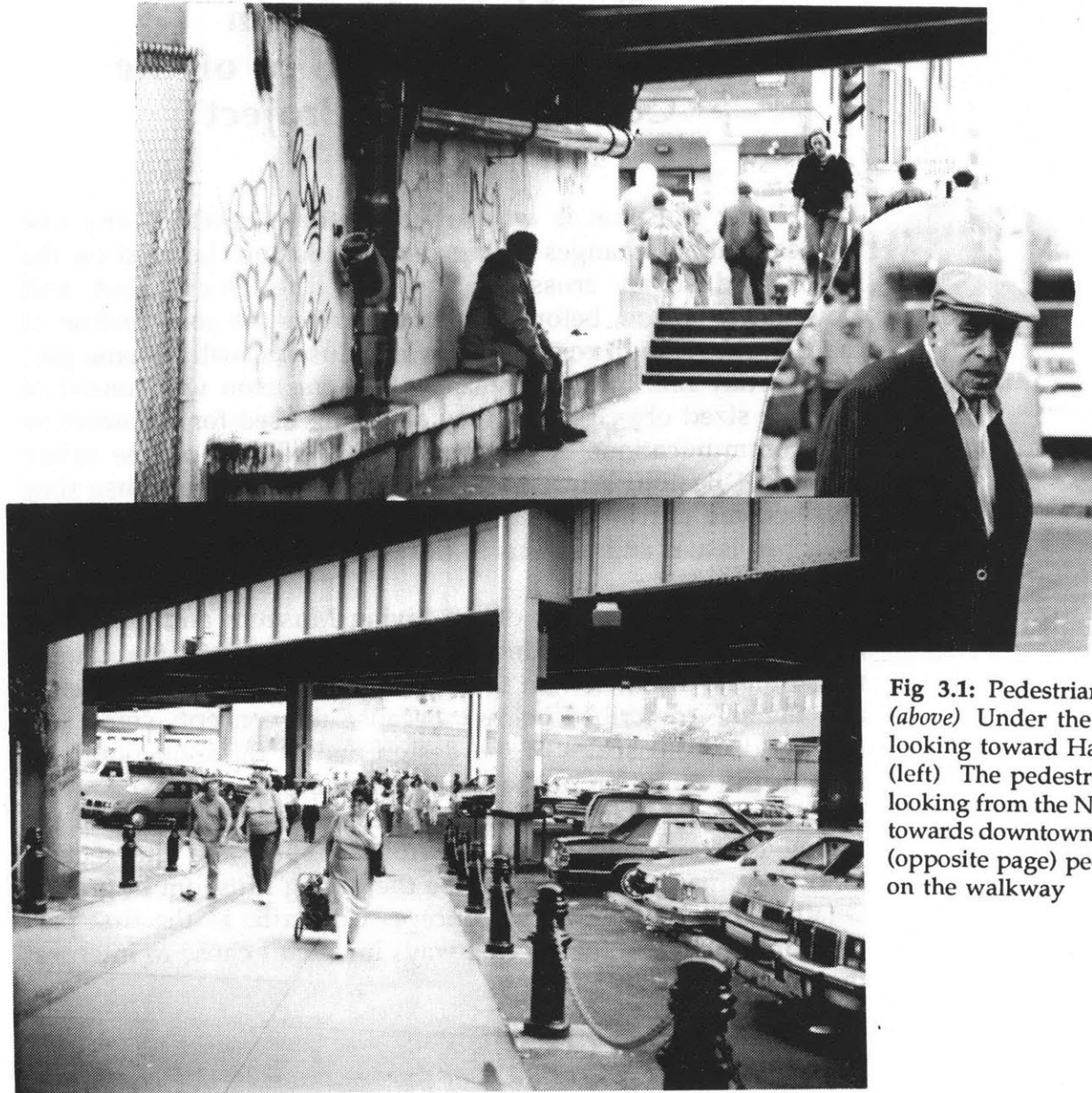
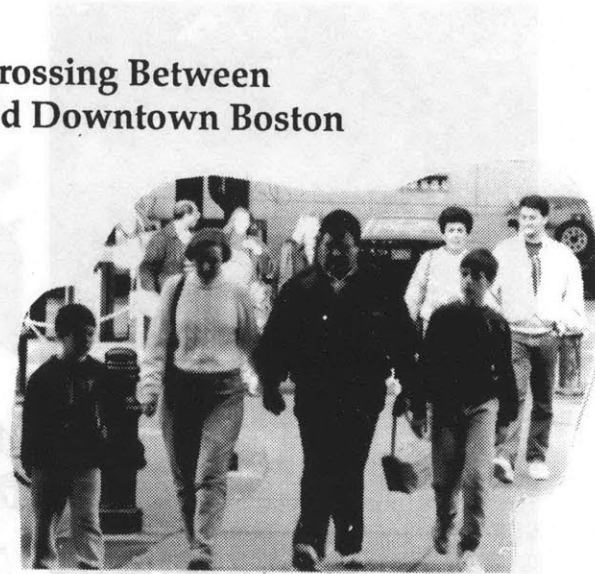


Fig 3.1: Pedestrians at the site
(*above*) Under the off-ramp,
looking toward Haymarket
(left) The pedestrian walkway,
looking from the North End
towards downtown,
(opposite page) pedestrians
on the walkway

Chapter 3:

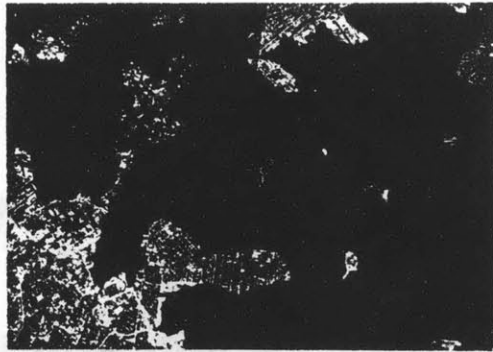
The Site:

The Pedestrian Crossing Between the North End and Downtown Boston



The Living Museum will be located on the pedestrian link between the North End and downtown Boston. This is one of the major pedestrian connections running under the elevated artery today and it crosses through one of the most significant historical sites along the Central Artery project. [Fig 3.1]

Today, persons of all ages and backgrounds make their way across the site. The main clearly defined walkway they use runs under the Central Artery between Salem street on the North End side to Hanover Street on the downtown end. The walkway bisects a large parking lot spread over the city block bordered by Cross, Blackstone and North streets. The nature of this crossing has been an ongoing concern for the North End community. Most groups in the North End share the concern to maintain safe pedestrian access to the North End.



A



B

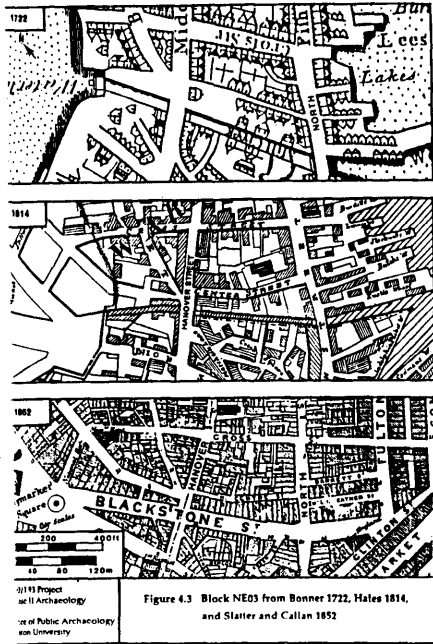


Fig 3.2: The city fabric of the site in 1722, 1814 and 1852

Fig 3.3: a. Man-made transformation of the City of Boston, Krieger, page 24
 b. The site is located on the original land of the Shawmut Peninsula (following page)
 c. The old fabric of the site was destroyed for the construction of the elevated artery in the 1950's

Evidence of the continual man made modifications in the natural environment on the site and in Boston are hidden below the plain asphalt surface. Building activities of the 19th century that included buildings with basements and utility lines altered and destroyed many potential historically significant sites. Even so, some archaeological sites from which we could enhance our understanding about the early history of Boston were identified on the site of the museum and comprise evidence for dynamic process of the transforming Boston.[Fig 3.2]

The position of the site as a major link of the North End to the rest of the city began as early as the days of the Shawmut peninsula. The site sits on original land of the peninsula and is crossed by its original shore line. [Fig 3.3] It was probably occupied before the European Colonization in the 17th century. With the development of the North End in the second half of the 17th century the site was built up, mostly with residential buildings. Later these buildings were transformed into blocks of mostly commercial buildings. In the early 19th century topographical changes occurred. Mill Pond, Mill Creek and the wharfs east of North street were filled and new streets were laid out. In the 1950's when the elevated artery was constructed the site was further transformed as the historic blocks were leveled into what we see today as one city block.

While this block between the North End and downtown remained basically unchanged the city around was reshaped. And since the 70's the North End has become an attractive place for young professionals to live in. Probably the experience of the North End residents throughout the construction of the elevated artery, the projects that followed it along the waterfront, and the changes taking place in their neighborhood today shaped the suspicious attitude of many residents of the North End toward

Fig 3.4: Use of the elevated structure: (below) a. art (opposite page) c. and b. pedestrians climb the vehicular off ramp near Haymarket d. and e. The elevated structure used as storage space

a



change planned from above, and constructed their image of the structure of the artery as an “ugly barrier” to dispose.

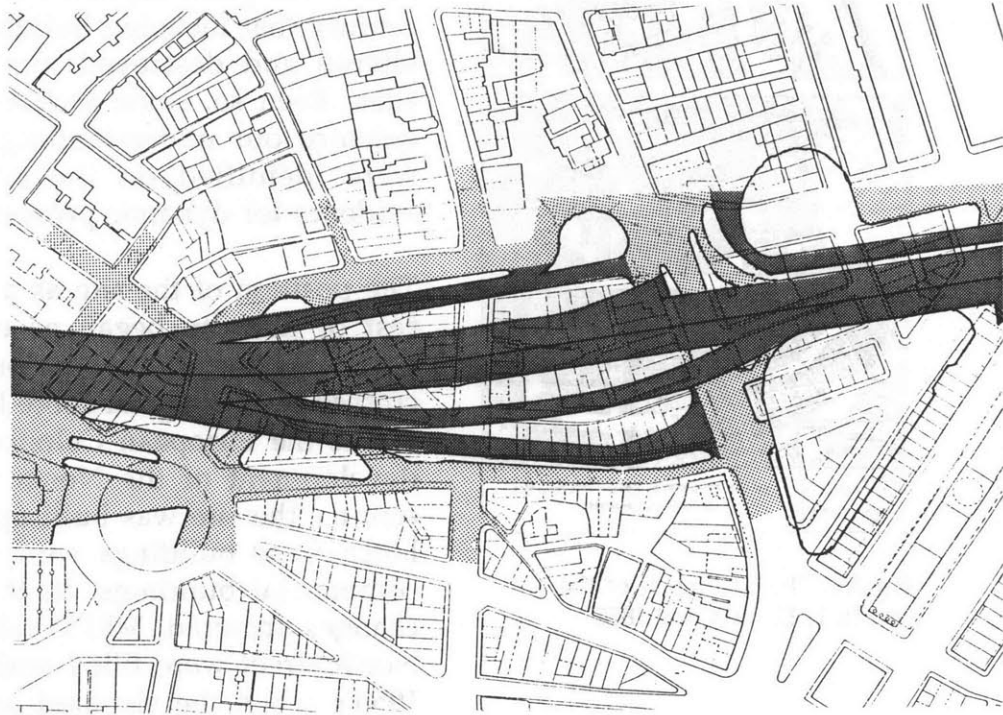


Fig 3.3c

In spite of the negative images of the elevated artery many areas underneath it are well used, especially the block between the North End and Haymarket. Contrary to what the design team of the ‘Kit of Parts’ assumed, I observed that people stroll back and forth along the walkway, rest against the columns of the artery or stand in the middle of the flow of pedestrians. The structure itself is used for storage of the pushcarts used in Haymarket, lighting and art, and signs by anonymous authors. On weekends pedestrians coming to shop in Haymarket take over the vehicular down ramp even though clearly prohibited. [Fig 3.4]

b



c



d



e



The site will continue to change through out the different construction phases. It will become according to the BRA in the Boston 2000 plan, open space and community facilities.[Fig 3.5]

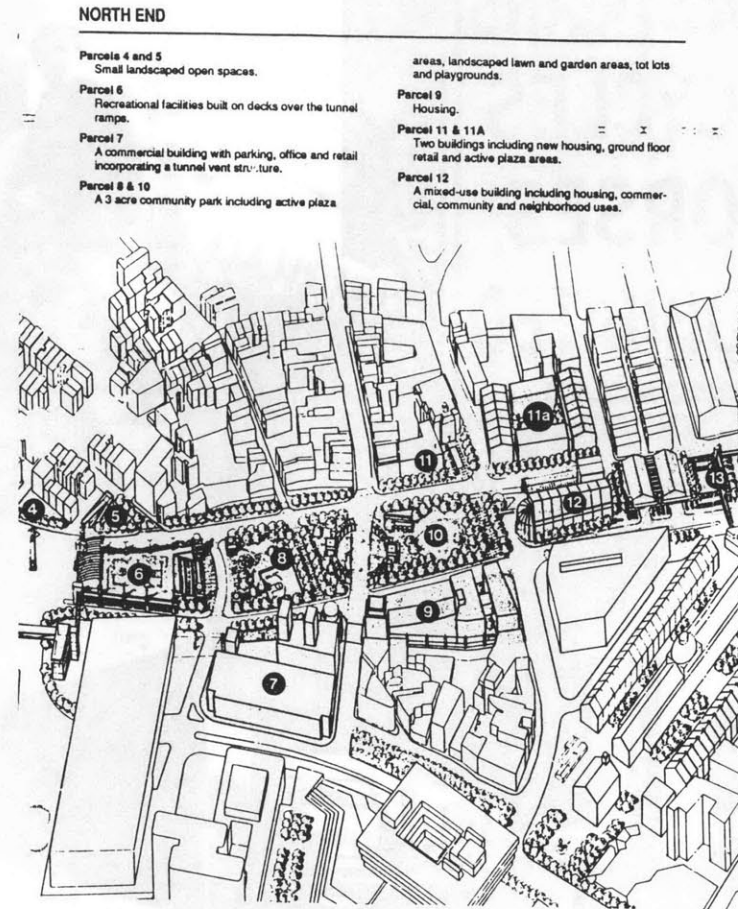


Fig 3.5: BRA plan for the site, Boston 2000

In the design of the Living Museum the main site features I take into consideration are North End neighborhood concerns, pedestrian movement and land marks. I have accepted similar assumptions to those of the MDPW or the BRA but suggest how the definitions of each can be broadened and enhanced.

- **Neighborhood concerns:** In compliance with the concern shared by most residents and business persons of the North End I attempt in the design of the Living Museum to maintain safe pedestrian access between the North End and Downtown Boston. In addition, I assume that the street patterns and land uses recommended in the Boston 2000 Plan [Fig 3.5] will be implemented on the site after construction. But, I propose to enhance the definitions of both safe access and open space for the North End. I suggest that an active pedestrian crossing can protect pedestrians from harassment as well as heavy construction equipment and it can protect the construction site from vandalism. An evolving museum on the site will provide a far richer environment than the green open park suggested by the BRA.

- **Pedestrian Movement:** In the Living Museum I assume the same existing pedestrian movement patterns as suggested by the MDPW. But, I propose that understanding the points of departure and destination are most important and that providing a direct access does not exclude diverting from it. Altering the flow can help to enhance the pedestrian experience.

- **Landmarks on and around the site:** The site reveals layers of the city from its earliest days. In the Living Museum I suggest keeping or recreating memories of each historically significant element on the site, like the archaeological site and the old fabric and the elevated artery structure. These elements incorporate

views of landmarks of the surrounding area and help reveal the urban history of the city of Boston. [Fig 3.6]

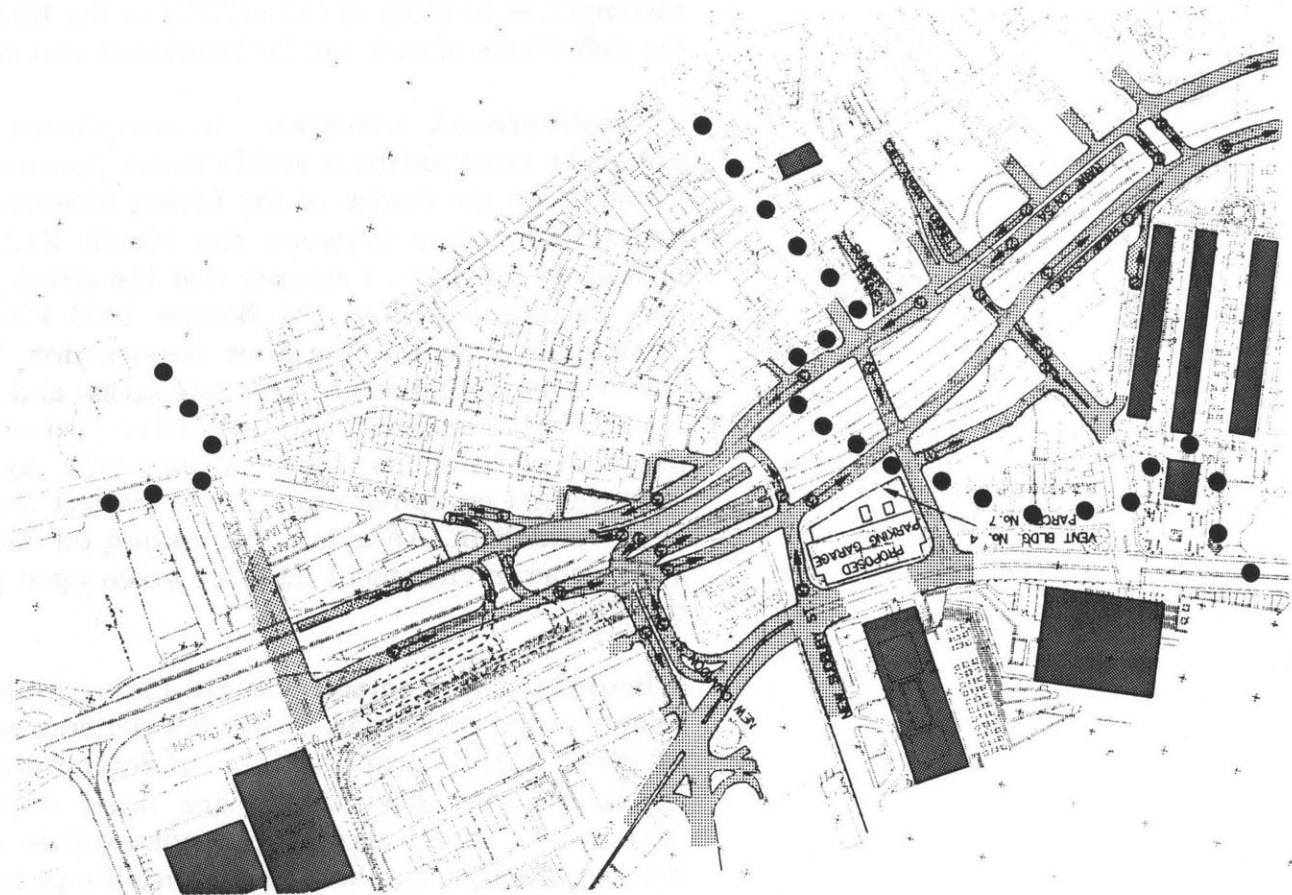


Fig 3.6: Landmarks near the site

Chapter 4:

The Concepts

4.1 The Story:

celebrating change

The Central Artery is not just a story of building a road but a story of the building Boston. It reflects that city-making is encounters over a long period of time. Buildings and places that might seem complete are a result of complex and ongoing interactions between many individuals pooling together their skills and know-how. Their efforts begin long before the buildings are actually conceived and continue throughout their construction and long after the buildings have been completed.

The changes taking place in Boston today will start to become most apparent during the decade of construction of the Central Artery that will begin in the early 90's. During the decade of construction almost everything will be exposed, like utility lines, dirt and remains of old fabric, as the structure that was part of the city landscape for half a century will be dismantled. At this time, the construction of development on the land above the depressed artery will become more real and vivid in people's imagination.

While the construction has possibility of creating chaos in the city it has a far greater potential to be a lively setting for everyone to learn about the urban history of the city, technologies used to construct it and the process in which it is built.

4.2 Point of View:

The Story of City-Making is a Story for Everyone

The experience of the making the city is not only for those who take part in it but for those who live, work and play in it every day. Almost every one will be affected by the Central Artery project. There is a story for every one. Every one has something to learn from and to be enriched by the story of the Central Artery project. The exposed parts of the city during construction can be of interest to persons from many fields. Their interest maybe pure curiosity, interest in technology or history. Through familiar topics and personal interests people can learn about implication of changes and decisions taking place in their city.

Professional backgrounds, memories, and personal knowledge, are vital ingredients that shape individuals' interests in and perception of the changes that will take place in Boston during and after the decade of construction. Many people might have a cynical attitude towards the participation process, as we have seen in the case of the North End and might not make any special effort to take part in it. Many may not have the background necessary to understand documents commonly used by designers, engineers and planners or may not be aware how long and complex the process of making the city is. The varied backgrounds and interest should be considered, and prior knowledge or interests cannot be assumed if one wants to tell the story of the city to a broad audience. In the following section I explain how I address the issue of varied backgrounds, and how the story of change can be told through design.

4.3 The Strategy:

to capture and to tell with design

As we have seen in the part I, exhibition and museum design offer a range ways to capture a broad audience, and to help visitors of varied backgrounds understand new concepts, that the Central Artery staff failed to apply. In this section I explain how I attempt through design to capture a broad audience and to tell the story of city making in a way tha people will enjoy and remember. My main interest is to suggest ways to create a setting for live interplay between professional and pedestrians who will be affected by the project. Any of the techniques used to capture an audience can be used to get people to enter and once in, to continue to maintain their interest.

To capture an audience with...

...en-route location

Activities and exhibits that are located en-route or visible and accessible from major passage ways, will become a part of peoples everyday life. Anyone passing by will be exposed to any thing taking place and may choose to participate. Locating the Living Museum on the pedestrian crossing between the North End and Downtown will expose families with children, teenagers, elderly, young professionals working downtown and tourists to anything happening on the site every day. In spite of the fact that the Central Artery project staff has identified the need to reach out to a broad audience the main exhibit of the Central Artery Project is located in the project's office in One South Station that is off the pedestrians' beaten track.

To capture an audience with...

...contrast, variation and anything out of the ordinary

Contrast, variation and any thing out of the ordinary will catch the eye. Contrast and variation in qualities like light, color, room sizes and surface material, can hint to people that something is going on beyond, draw them in, and help maintain their interest. These can be pre-conditioned in the design of the museum or made possible through flexible fixtures and movable partitions. Any object, structure, or detail of a structure can be highlighted by presenting it in a way that is unusual to its natural setting.

...clear and diverse options

Since exhibits relating to the Central Artery project may not be pedestrians' original destination, options should be inviting, clear and diverse. Diverse options will capture a make up of visitors of different backgrounds, age groups and professions. Making options clear will enhance the possibility that passersby will participate. In the Living Museum I propose to provide a choice of topics and places for people to spend time in. Once they become engaged in topics of their interest they can be exposed to activities and exhibits that relate directly to the Central Artery project and the future development of the surface area once the construction is completed. These are provided by clear circulation routes, points of orientation, entrance and departure which lead people through the site, allow them to obtain an overview of what is available, to join the activities or escape when they please. Interpretations and explanations of exhibits should be directed toward a broad range of prior knowledge and

understanding. Different levels of complexity and detail that are clearly distinguished with colors or type sizes will allow for a broad range of visitors to engage and to choose how long they want to spend reading the explanations.

To tell the story with...

...a personal touch

To tell a story with a personal touch will help people feel closer and more engaged with the story told. It can help them understand better unfamiliar concepts and it will leave the strongest impressions. A personal touch can be created through quotes and personal stories of anyone who had been involved in urban changes of Boston; Interactions between pedestrians and persons from the design and planning profession working on the project; creating avenues for people to reach and explore areas that are usually out of sight or touch. In the Living Museum probably the most powerful impact will probably be the encounter of pedestrians with professionals like designers, planners, and engineers on the site itself. Another kind of personal touch is engaging people through body movement and the possibility of touching the objects.

... borrowed cityscape

In the Living Museum, since city-making is its main topic, views surrounding it should be treated as part of the exhibits and carefully chosen. Views of the city can be borrowed by framing them for example in a window or structure, by placing an object between the visitor and the more distant view and directing visitors to look in certain directions.

To tell the story with...

... comprehensive views

Any one passing by will become aware of changes taking place on the site. Visitors will be able to watch and hear construction activities as they takes place, observe discussions about the future or see objects or markings that are used through out construction will have viewing spots in the Kit of Parts, ramps built over time. And through out there will be clues of what is coming up next.

... inverted meanings

Presenting objects, and creating experiences that are opposite than people expect can either highlight the normal characteristics of the object or the experience, or it can draw people's attention to the fact that the situation has changed. In the Living Museum ramps and pieces of the artery become the domain of the pedestrians to emphasize that traffic considerations overtaking the world of the pedestrians.

... reference to the real thing and coming as close as possible to reality

Referring to the real thing or creating an experience as close as possible to reality makes new concepts more vivid and clear and helps imagine what a place might have been like in the past or might become in the future. In the Living Museum I apply this concept by making it possible for visitors to see the real objects and activities as they take place, and for discussions about the future.

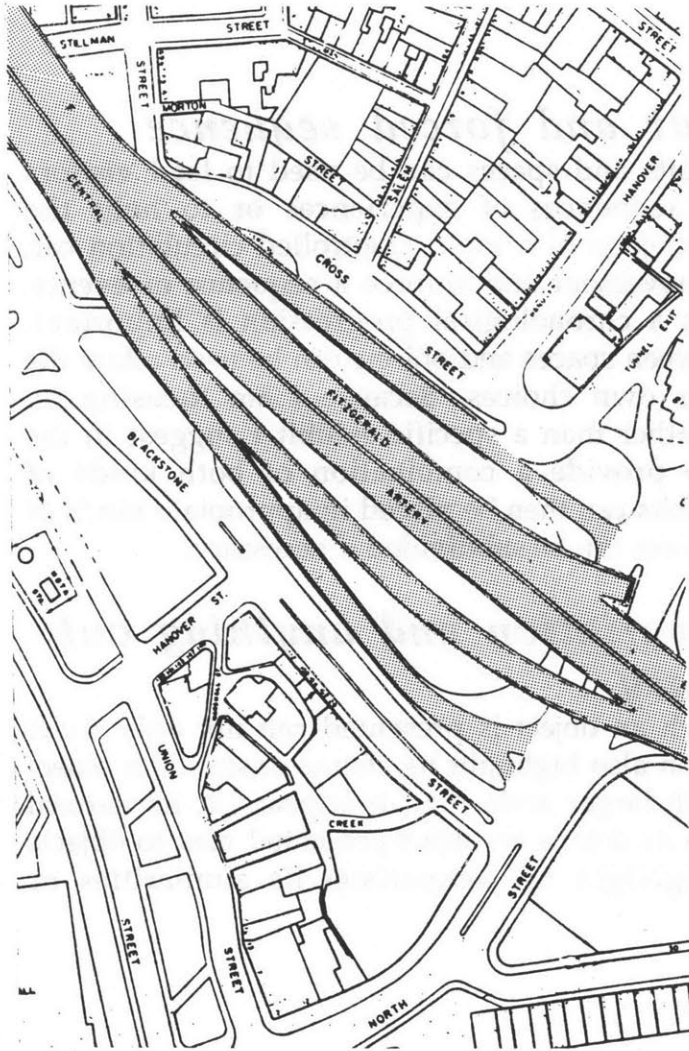
To tell the story with...

... free layout and forced sequence

The layout of exhibits and spaces can be used to lead visitors through intended sequences of experiences or to help the visitors grasp sub-subjects of a topic. Controlled circulation can be used to direct movement and enforce a sequence of events. For example, when a chronological progression is important. Free circulation between spaces and objects can be used allow the visitor to make his own choices. Because I am focusing on creating a setting rather than a specific exhibit I suggest in the Living Museum to provide a combination of both kinds of spaces. Specific exhibits can then be placed in appropriate kinds of spaces and larger spaces can be subdivided if necessary.

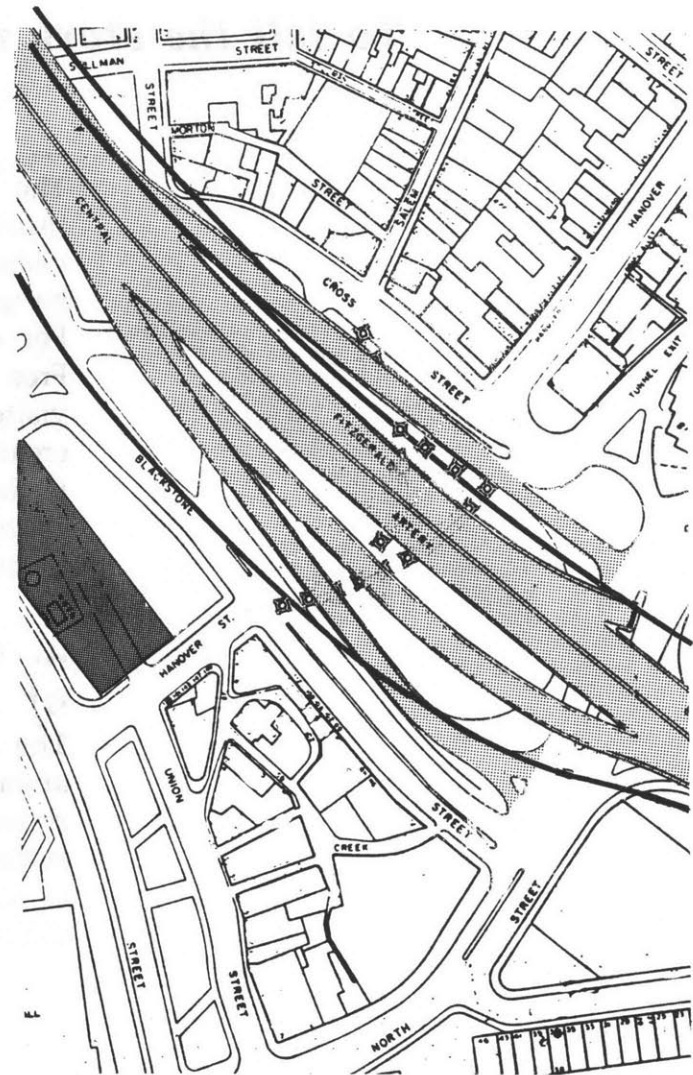
... contrast, variation and anything out of the ordinary

The context in which an object is presented can not only draw attention to but it can also highlight its characteristics. An object presented in a much larger scale than it appears in its natural setting can illustrate its details an object presented next to objects of its kind can highlight by comparison its similarities or differences.



Stage I:

Existing state before depression of the Artery.



Stage II.1:

During the demolition of the Artery.

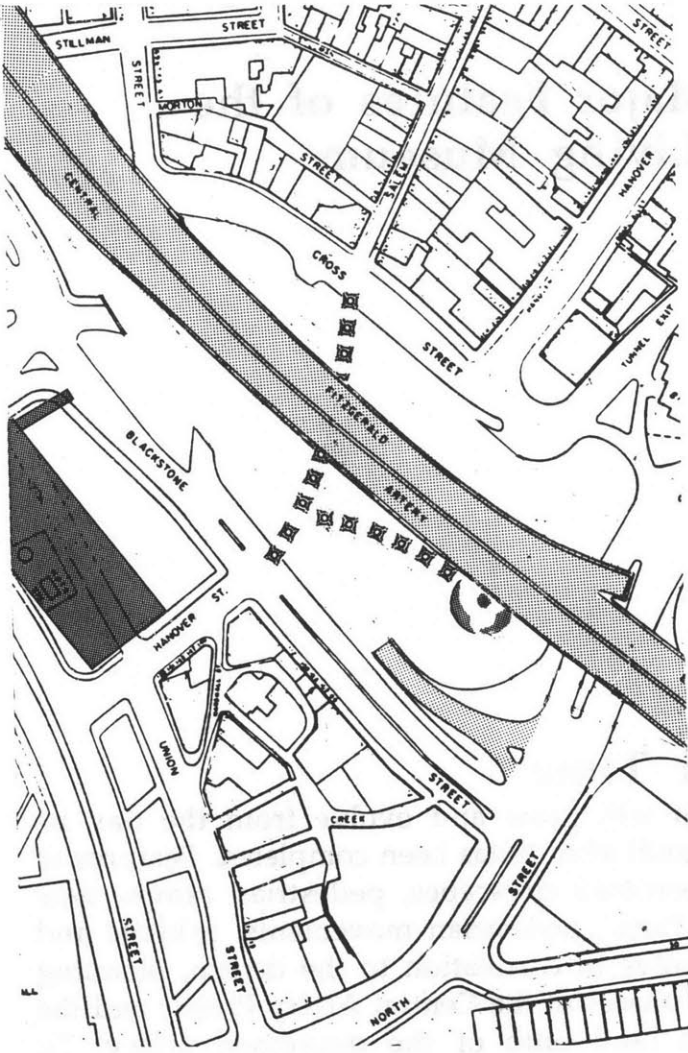
Chapter 5:

The Major Features of the Living Museum

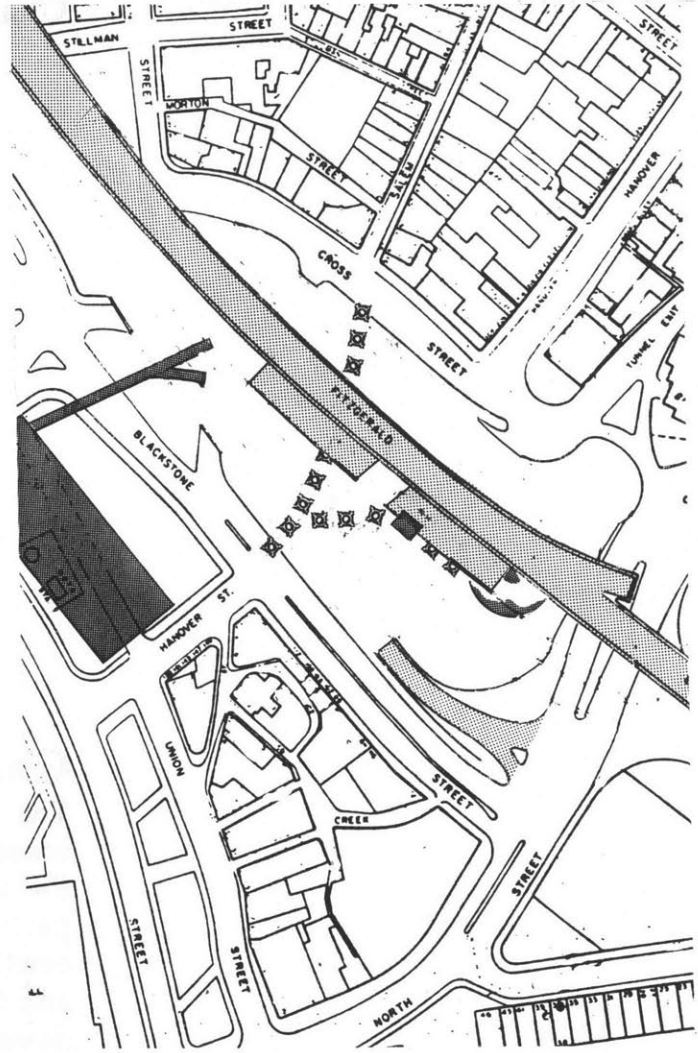
Change Over Time

The Living Museum will grow and evolve from the day its construction begins until after it has been completed. Features of the museum like borrowed cityscapes, pedestrian ramps, new parts of the 'Kit of Parts', pedestrian movements, exhibits and events, grow and evolve in correlation to the design, planning and the construction phases of the Central Artery Project and the development of the land onto of the depressed artery. To describe the Living Museum I defined four stages of its construction. [Fig 5.1] I start with an outline of the major features of the Living Museum and an overview of how each would evolve and be enhanced. Finally, I go into more detailed description of each construction stage of the museum.

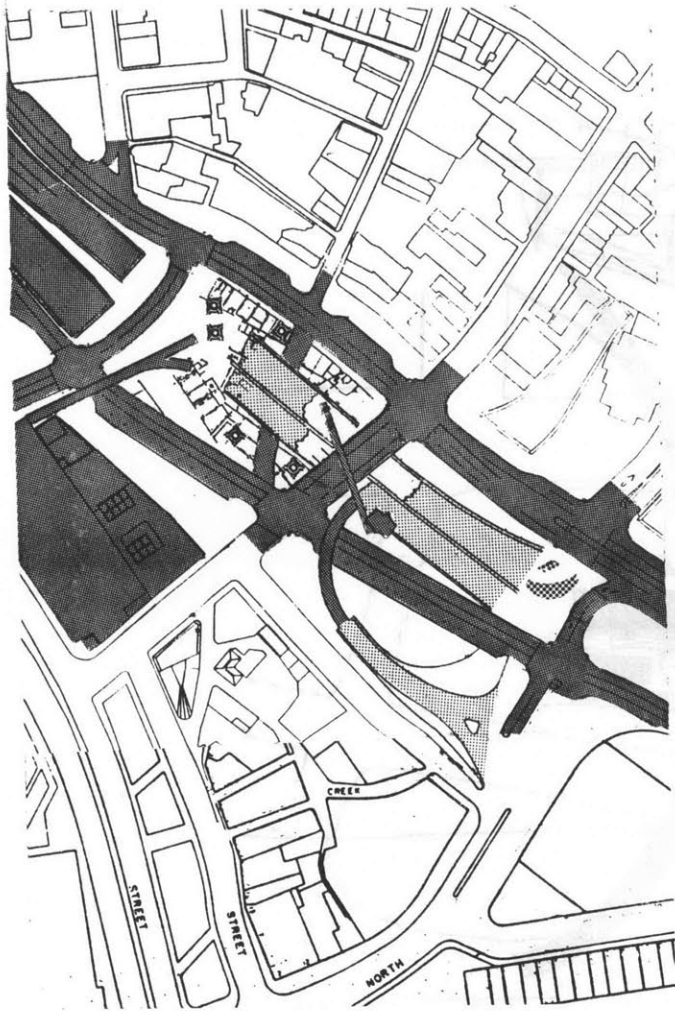
Fig. 5.1: *(opposite and following pages)*
Construction stages of the Living Museum.



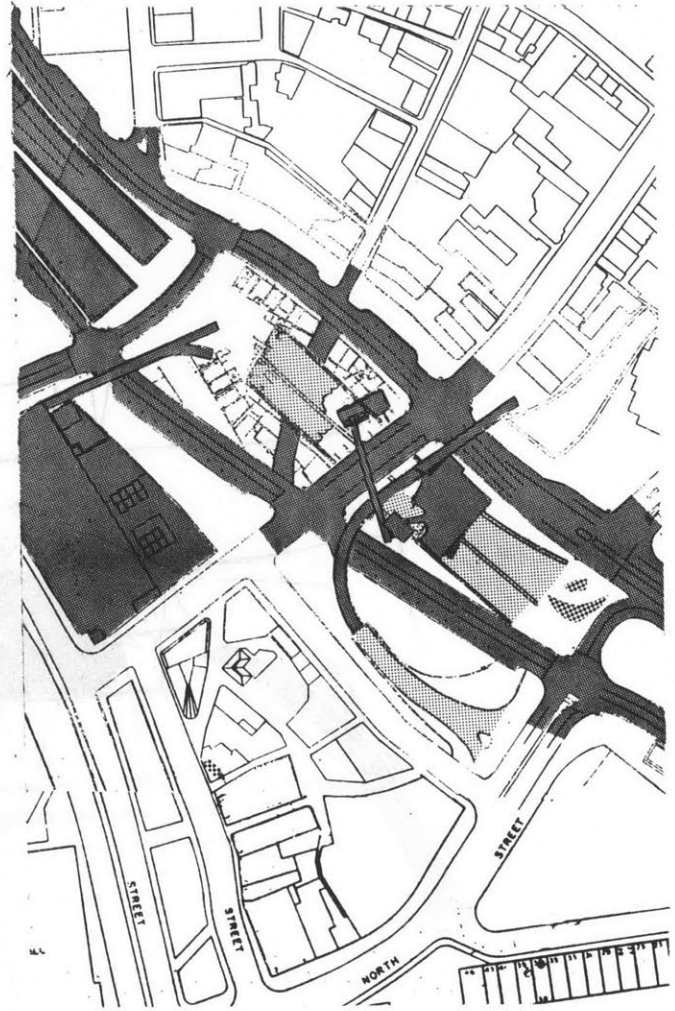
Stage II.2



Stage II.3



Stage III: Beginning of the construction
the development above the depressed artery



Stage IV:

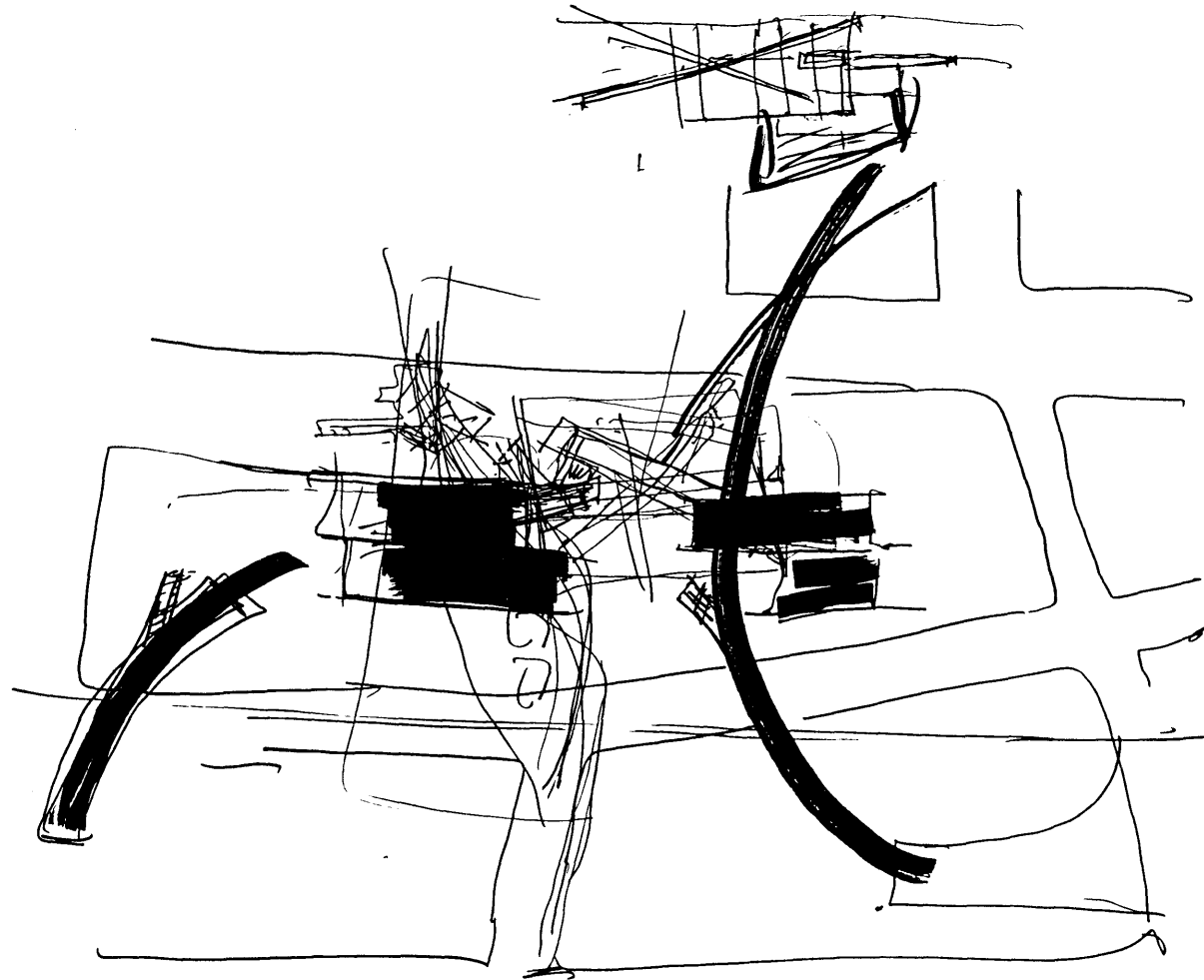


Fig 5.2 : Sketch of pedestrian ramp system and remaining pieces of the elevated artery

A Pedestrian Ramp System and Remaining Pieces of the Elevated Structure of the Central Artery

A pedestrian ramp system, and remaining pieces of the elevated structure of the Central Artery will offer pedestrians the chance to take over a world that has been a world of cars, and to experience the site, the elevated artery and the city around it in a new way. While before construction of the Central Artery project, pedestrians are provided with only one fairly safe walk way, by the end of construction pedestrians will be able reach almost everywhere and vehicles will be confined to the boulevards. The construction of the ramps will begin with the construction of the artery and will be completed with the completion of the construction of the buildings on the site.

[Fig 5.2] From the ramps pedestrians will be able to watch the site as it changes throughout construction activities on the site. After construction of the artery and the museum building has been completed pedestrians will gain views of the North End and Downtown they could not see before construction began. From the ramps pedestrians will be able to reach the elevated structure from below and above, and cross its broken section of it.

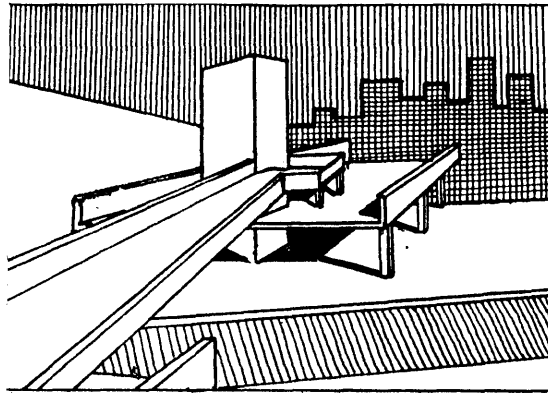


Fig. 5.3:

Borrowed Cityscapes

Today pedestrians are restricted to movement on ground level only below the artery. As a result the pedestrians can get only few glimpse of the city around it. Through out the construction of the Living Museum the pedestrians will gradually gain more views of the site and the city around it. [Fig 5.3]

Pedestrian Movement

Pedestrian paths will evolve from a system with one defined walkway on ground, to a system with many safe options and enriching experiences. The basic elements of the museum have been located along possible pedestrian routes. or made clearly visible from main routes to expose pedestrians to anything that is happening on the site. [Fig 5.4]

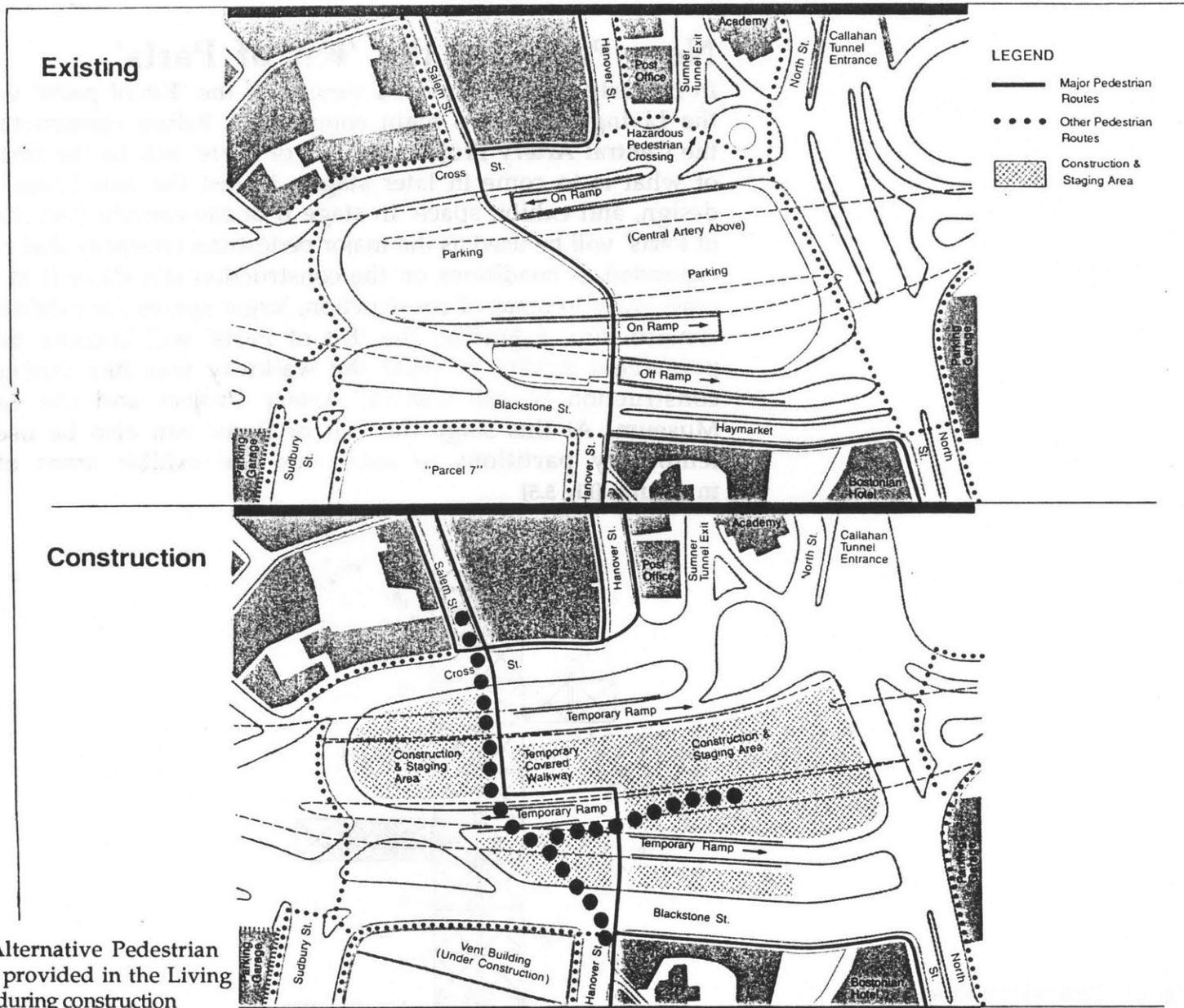


Fig 5.4: Alternative Pedestrian paths are provided in the Living Museum during construction

New Parts for the 'Kit of Parts'

In its early stages, a revised version of the 'Kit of parts' will be the Living Museum's main component. Before construction of the Central Artery Project, the 'Kit of Parts' will be the first sign of what is to come in later stages, to test the new ideas of its design, and exhibit space. In stage II of the construction the 'Kit of Parts' will be used as the major pedestrian crossway that can be expanded as conditions on the construction site allow it to yield cross ways to areas of construction, larger spaces for exhibits and construction. a Finally, the 'Kit of Parts' will become part of permanent exhibit of what the walkway was like during the construction of the Central Artery Project and the Living Museum. At this stage the 'Kit of Parts' can also be used as temporary partitions to subdivide the exhibit areas of the museum. [Fig 5.5]

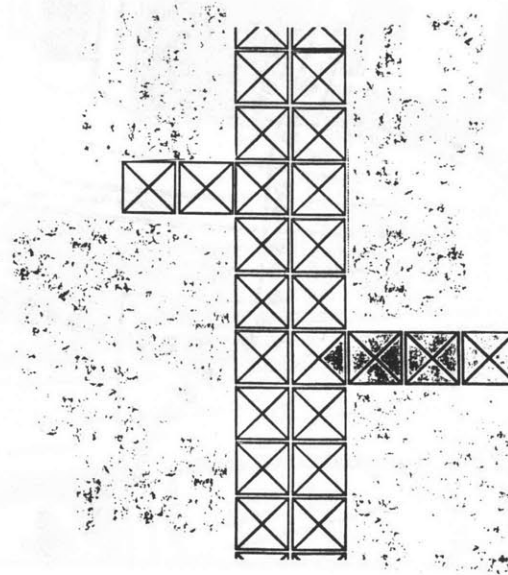


Fig. 5.5: Pedestrian walkway during construction.

*to capture an audience with...
...clear and diverse options*

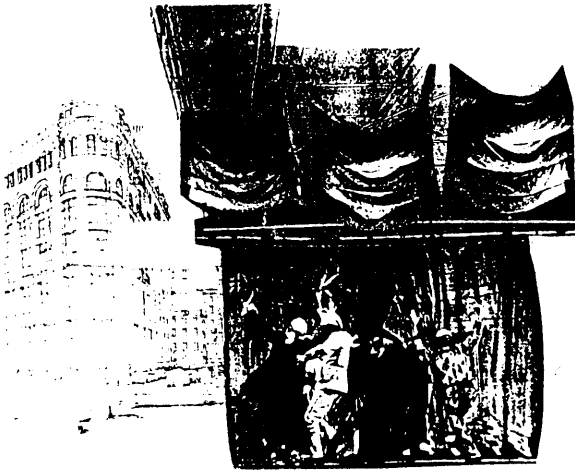


Fig. 5.6: Events under the elevated artery structure during construction.

Exhibits and Events

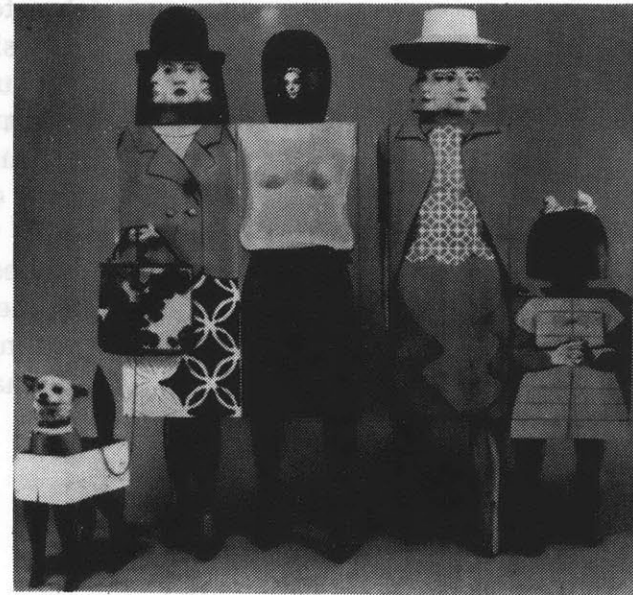
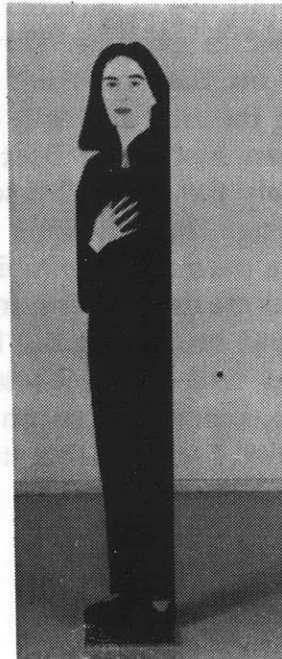
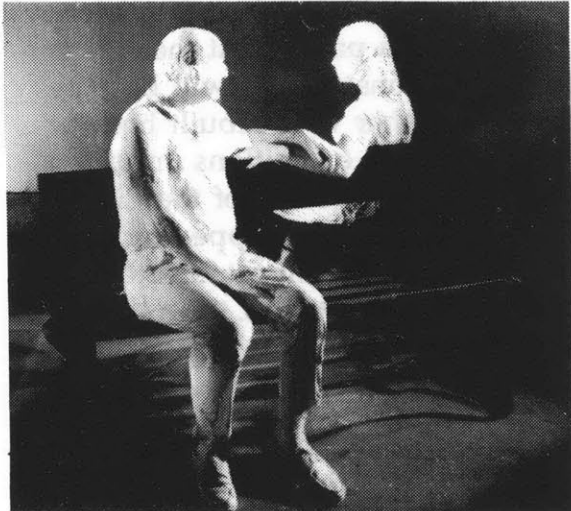
The exhibits of the Living Museum are real objects while they are in use and activities on the site while they take place. Four main topics relating to the past and present urban history of Boston are proposed as a setting for any other exhibits on site; urban history of Boston; structure of the elevated artery; methods of depression of the artery, discussions relating to the design of the project. In its early stages of the Living Museum archaeology and historic fabric, will be uncovered. The museum will include functions that will enhance communications between the Central Artery Project and BRA staff with the local community and the general public, and discussions regarding design and use of the surface on top of the depressed artery will be treated as exhibits. These functions will be concentrated and located on the construction site, accessible to all pedestrians crossing the site, and will be intermingled with other exhibits on the urban history of Boston and the methods of construction. Ultimately the Living Museum will yield a park about the city in its making. The functions used during construction will become part of a permanent exhibition and together with rebuilt historic sites will create a setting for discussion and exhibitions on urban issues and projects in the Boston area. Every stage of the Living Museum will be celebrated with an event or happening. For example, before the south bound lane of the elevated artery is dismantled I suggest that it be opened to pedestrians. [Fig 5.6]

*to tell the story with...
...a personal touch*

Urban Figures

Statues of urban figures will be used throughout construction of the artery tunnel and after it has been completed to instruct visitors and explain the exhibits to them. Urban figures will include images of persons from all backgrounds and ages as well famous people from the urban history of Boston. They can draw visitors attention by pointing or looking at certain directions. Visitors will not have to read long instructions or explanations but simply follow the figures actions or listen to them speak. Urban figures can be made by various artists from the Boston area in their collaboration with school children. [Fig 5.7]

Fig. 5.7: Examples of urban figure sculpture exhibited at the Whitney Museum, N.Y., 1989.



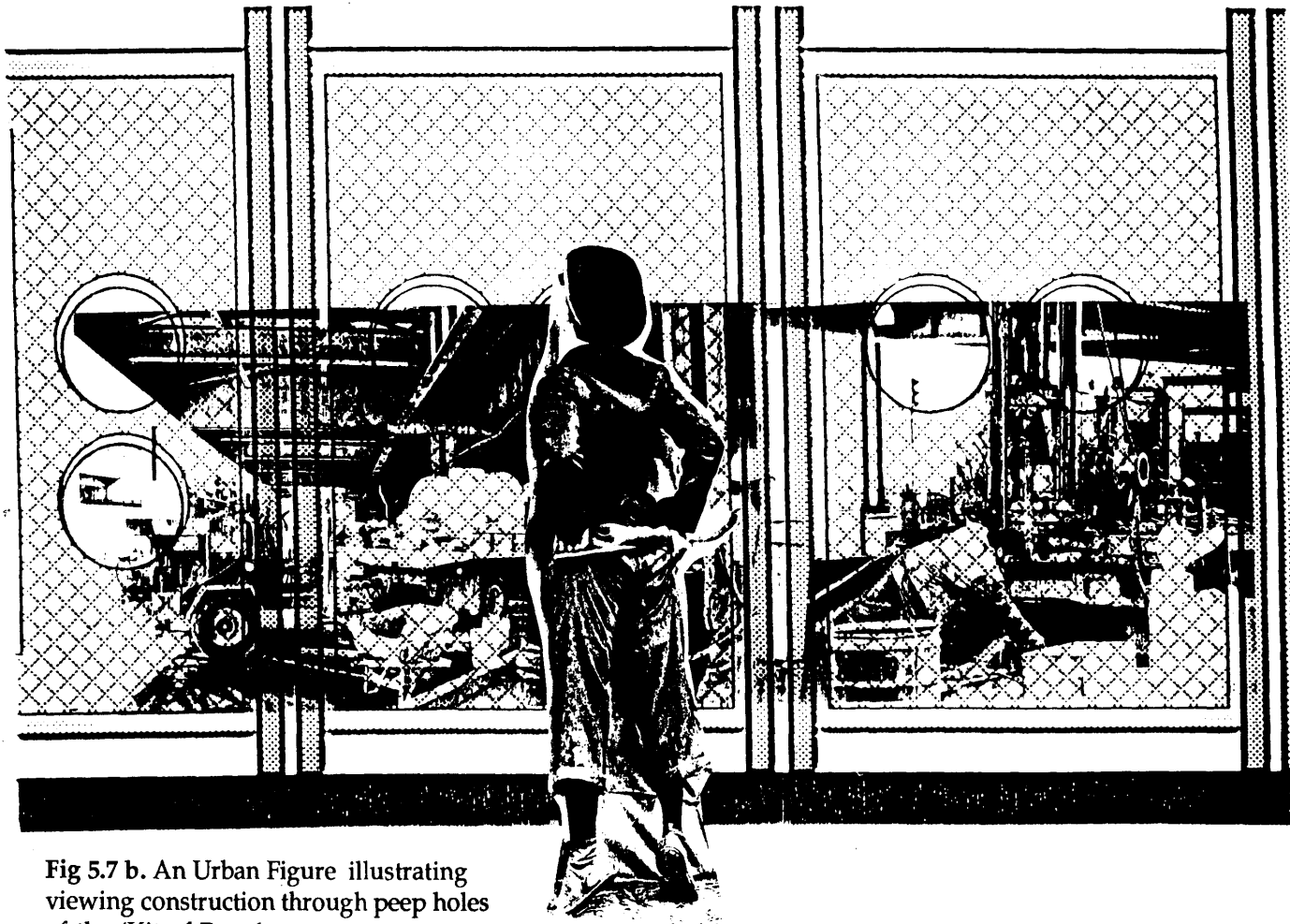
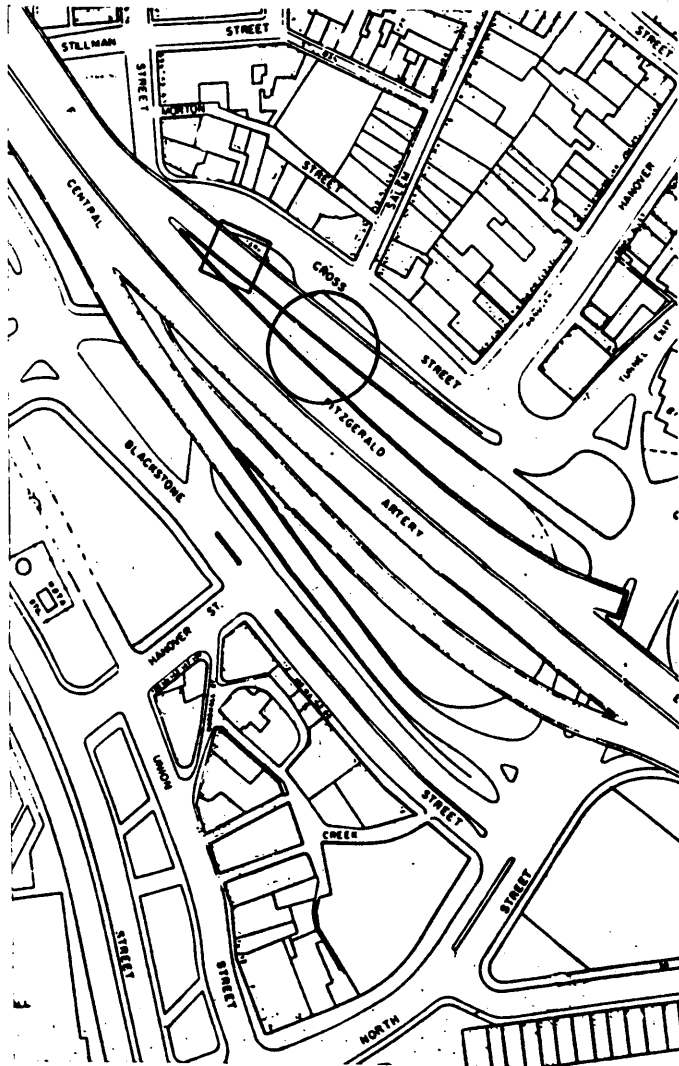




Fig 5.7 b. An Urban Figure illustrating viewing construction through peep holes of the 'Kit of Parts'.



 Temporary Exhibit area (Fig 6.1)

 Archaeological Digs

Stage I: Before the Construction of the Depressed Artery

Chapter 6:

Stages of construction of the Living Museum

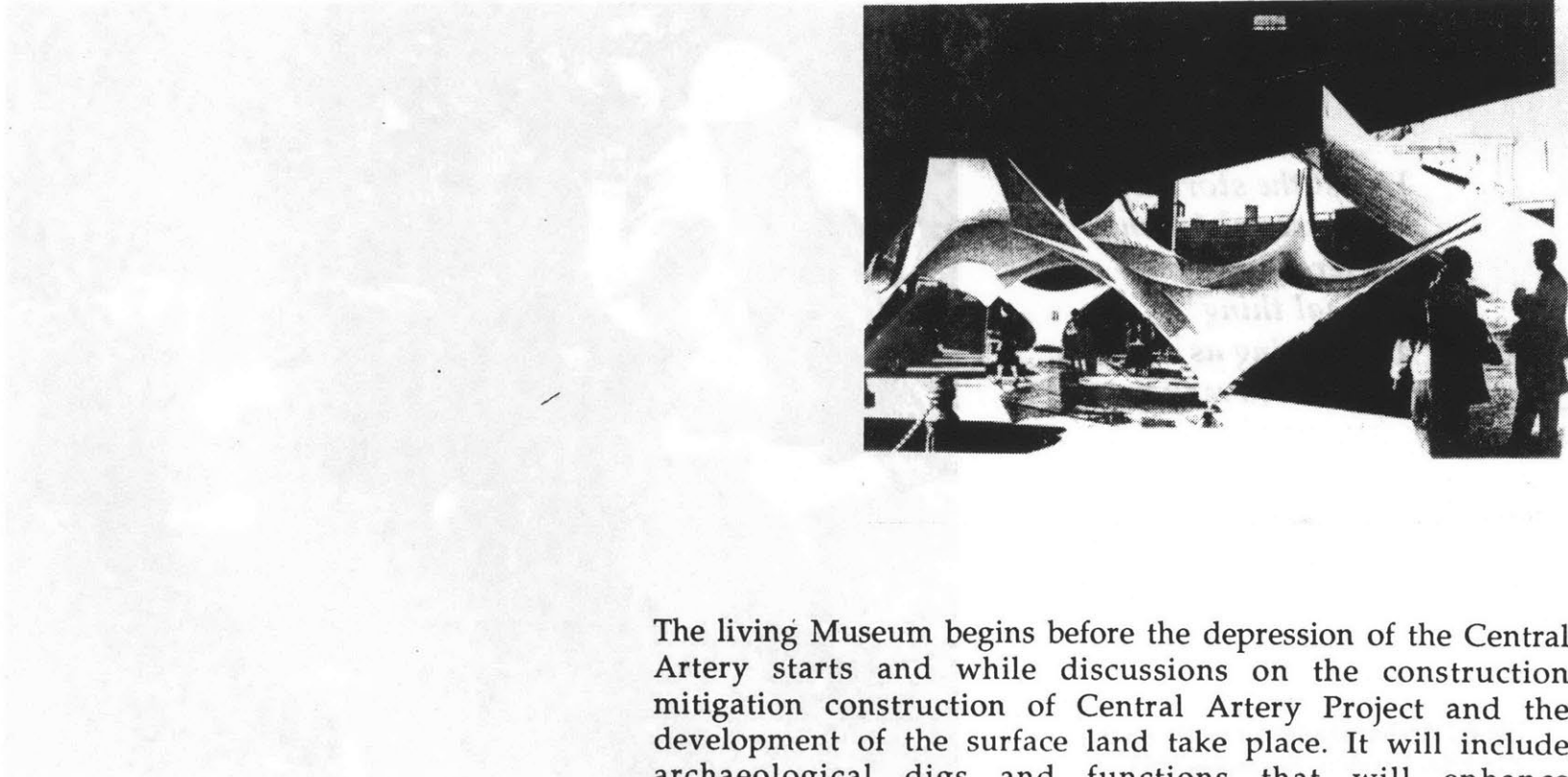


Fig. 6.1: Temporary exhibitions under the elevated structure.

The living Museum begins before the depression of the Central Artery starts and while discussions on the construction mitigation construction of Central Artery Project and the development of the surface land take place. It will include archaeological digs and functions that will enhance communication between the residents and persons working on the CA project, including site stations, on site modelling, hot lines, mock up of the 'Kit of Parts'. [Fig 6.1]

The First Memory of the Past:

Archaeological Digs

*To tell the story with ...
...a personal touch
...reference to
the real thing
and coming as close as
possible to reality*



Fig 6.2 Archaeologists at work on the site Elia, Landon, Seasholes, 1989.

Pedestrians will be able to learn about the historical significance of the site while watching archaeologists at work, talking with them directly or with interpreters. [Fig 6.2]

*to tell the story with...
... reference to the real thing and
coming as close as possible to reality*

The first signs of the future:

On Site Modelling

One of the main advantages of locating the museum on the site is that changes can be discussed where they will take place. Planners and designers can discuss with community members projected schemes working with models and referring to the actual site, or marking real sizes on the ground. At night projected schemes can be illustrated with lighting. Any necessary equipment for this purpose maps, or models used as well as hot lines can be located and exhibited in site stations.

A mock Up of the 'Kit of Parts'

The first sign of the future is a full size mock up of the Kit of Parts on the site where it will be used during construction. The mock up will inform pedestrians passing through what might be used during the coming construction period. The mock up can also be used as a setting for exhibits on the coming construction period and direct discussions on the future use of the surface.

The full size mock-up on the site will make it possible for the anonymous pedestrians, the ultimate users of the kit of Parts, to vote with their feet. Their behavior and patterns of use of the Kit of Parts, if closely observed, may invoke changes in its design.

Evaluating while designing would make it possible for designers and planners involved to incorporate any necessary changes before the pieces are fabricated and placed on sites. Once the kit of Parts is fabricated it might be too difficult and too expensive to change.

The design team of the Kit of Parts will be able to verify if the conditions defined in the guide lines ,like width of the passageway, are adequate; they will be able to confirm whether or not signs leading toward businesses are clear and effective. And they will be able to see if people are using the Kit of Parts as expected. Through the evaluation while designing disagreements can be settled, uncertainties clarified, and ideas reinforced. This would be especially crucial in the case of the revised Kit of Parts where I suggested functions which have been identified necessary by the project but locating them on the construction site might be controversial.

For example, the design and planning team members might ask themselves, if performances are held do people participate ? Do people use lunch spots? Do pedestrians walk across as fast as possible ? Will they stop and look at exhibits ? Is there enough lighting at night ? If lunch spots , and events provided will persons working down town participate ?

“Drive Through” Theater

A screen placed over the southbound lane of elevated artery will inform drivers on the project and project changes taking place on the site below. [Fig 6.3]

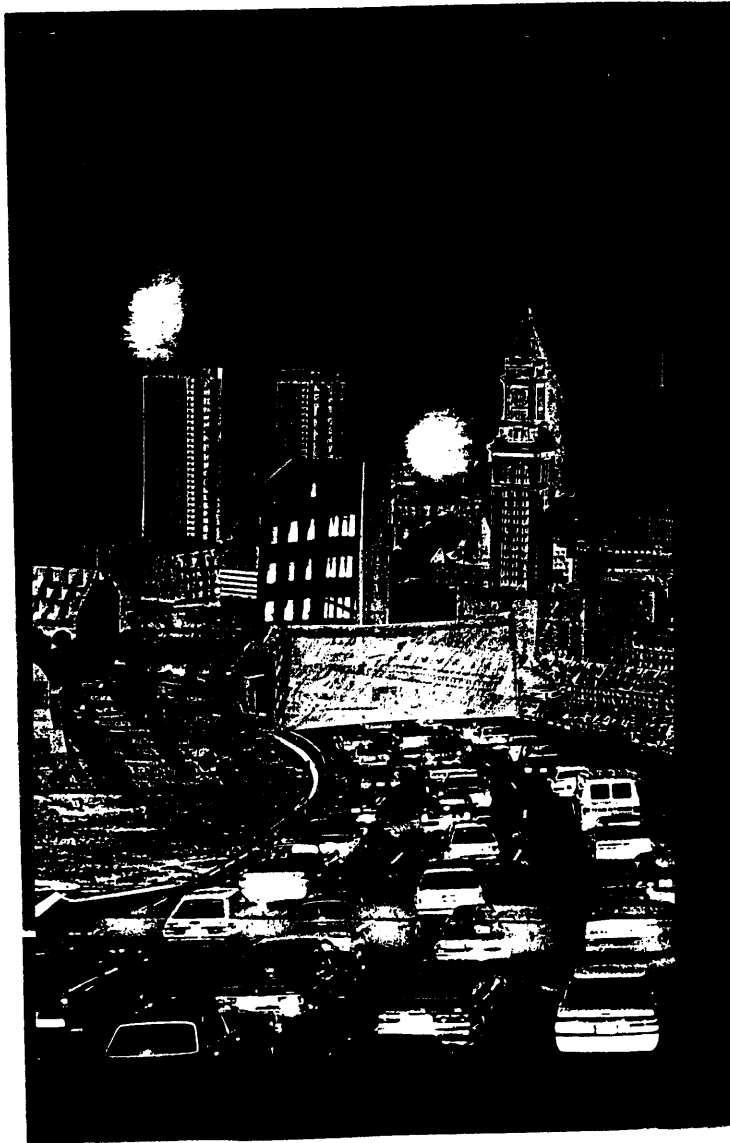


Fig 6.3: "Drive Through" Theater

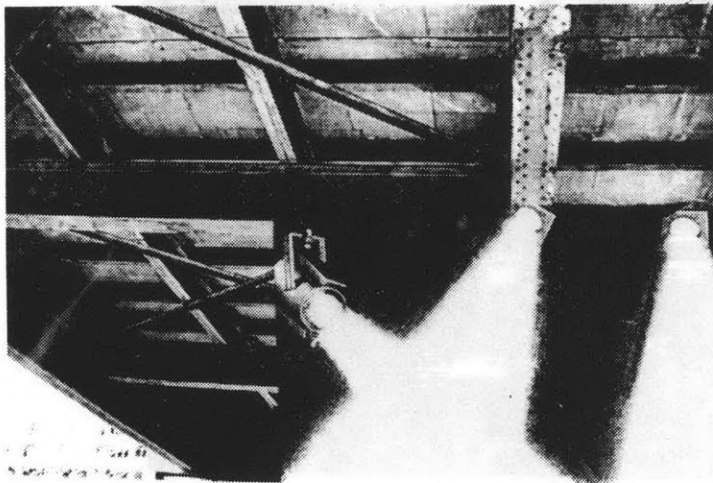


Fig 6.4: The structure of the elevated artery can be used for lighting during construction of the depressed artery

*To tell the story with...
...borrowed cityscape*

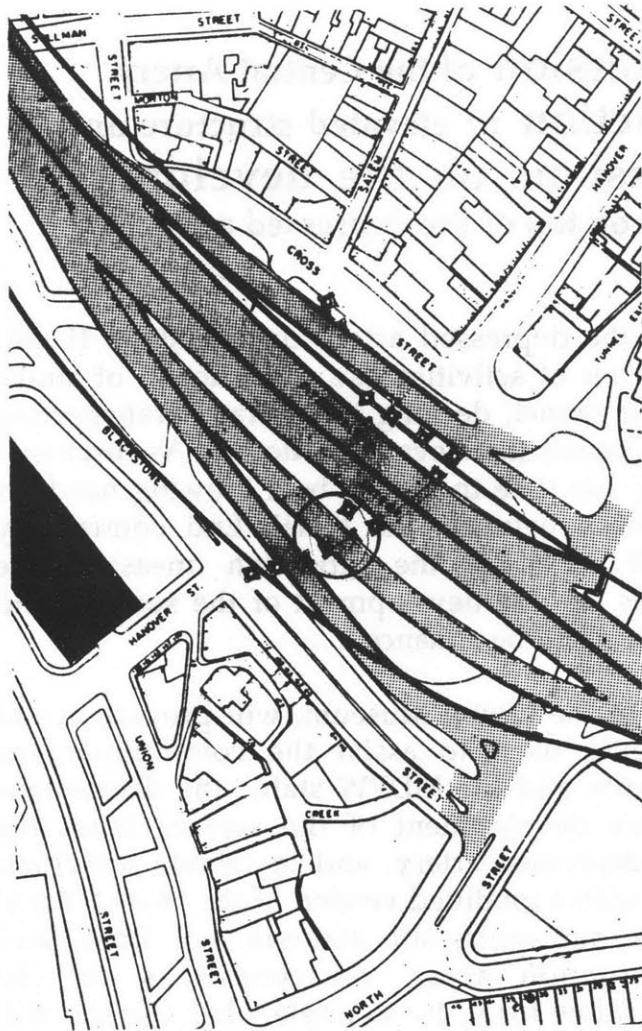
*To capture an audience with...
...contrast, variation and anything
out of the ordinary*


Stage II of the Living Museum:

**During the Depression of the Central Artery,
the De-construction of elevated structure and
ongoing discussions on the development
of the surface land on top of the depressed artery**

The construction of the depressed artery during stage II will include a complex series of activities like construction of slurry walls, digging of the tunnel, decking the surface, transporting dirt and the dismantlement the elevated structure. As discussed in Chapter II, during this time there will be a growing need for ongoing communication between the North End community and the MDPW staff to ensure the mitigation measures are kept. And discussions on the development of the surface land generated by the project will be enhanced.

Throughout stage II of the Living Museum, will provide access to objects while being used to assist the communications between the community and the MDPW staff, the discussions concerning the future development of the surface land, the construction of the depressed artery, and to related activities. This stage will start with a modified version of the "Kit of Parts" which includes look out spots, site stations, hot lines, and entrances to construction areas. As conditions on the construction site will allow for it, for example when the site will decked and most activities will be underground) the modular walk can be expanded and more permanent elements like ramps and a tower will be added.



 Entrances to Hard Hat Zones

Stage II: During the Construction of the Depressed Artery
Stage II.1 : Construction of Slurry Walls-Access to Hard Hat Zones

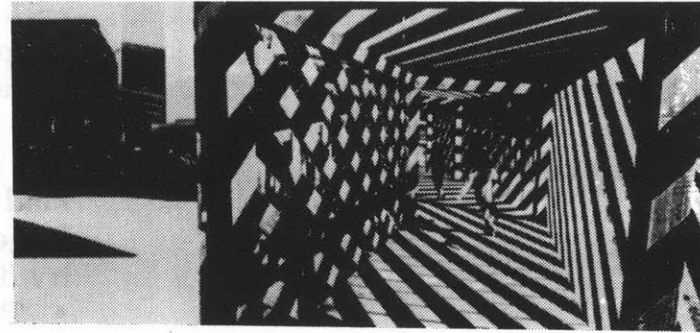


Fig 6.5

In this early stage of the construction of the depressed artery the modular walkway will probably have to be moved often because most construction activities will take place on the surface of the site, above ground. Once the construction of the slurry walls has been completed and enough digging has taken place (in later stages), most of construction activities will occur below grade under the decking. This implies that especially during the early stages of the construction of the depressed artery the modular walkways should be made of units that can be easily moved and should occupy least space as possible of the construction site. Even under these conditions there are still ways in which the pedestrian experience can be enriched, and exhibits and events can take place along the walkway as well as on the site. This can be achieved by modifying the design of the 'Kit of Parts' in ways that would allow for more options, making use of the lower part of the elevated structure to hang banners, back drops for events, and lighting, and using at least parts of the site especially after construction hours for events and meetings.[Fig 6.4] (refer back to [Fig 6.3]) The following are just a few suggestions on this might be done.

*to capture an audience with...
...contrast, variation and anything
out of the ordinary*

*to capture an audience with...
...clear and diverse options*

New Parts for the 'Kit of Parts'

A few design modification the pedestrian experience could be enriched with opportunities to obtain a closer look at what is happening on the site.

- Flexible and multi sided joints rather than welded joints. This will allow for different turning angles from the main walkway and to vary the height in different areas of the walkway. This kind of system will be especially useful during the mock up in Stage I. Flexible joints during a mock up would make it easy to try different alternatives.

- 'Plug in' structural frame into which roof and side panels can be incorporated will make it possible to play with patterns of light, color, and textures. [Fig 6.6 & 6.7] Contrast between these patterns can be used to draw pedestrians to certain directions, or to signal entry points and crossings. One possibility is a roof unit with frame units with a pyramidal shapes. As shown in Fig. 6.7

- Standard tubular connections on the floor surface can make it possible to add seating areas, hot lines, signs, or exhibits when ever desired.

Peep Holes and Hot Lines

'Peep holes' from which pedestrians can view the activities on the site, will probably draw pedestrians' curiosity more than if open or transparent panels are used. To encourage pedestrians to spend more time at any location heating (in the winter) or cooling (in the summer) comfortable seating as well as background sounds of construction. Hot-lines should be located in front of peep holes, so any one who calls to ask about the project or to report about any problem relating to construction can do so while looking at the site. These Hot Lines placed in front of Peep Holes can be used at later stages of the Living Museum. While looking at images from the construction site

they will be able to listen to the questions and concerns people had during the decade of construction.

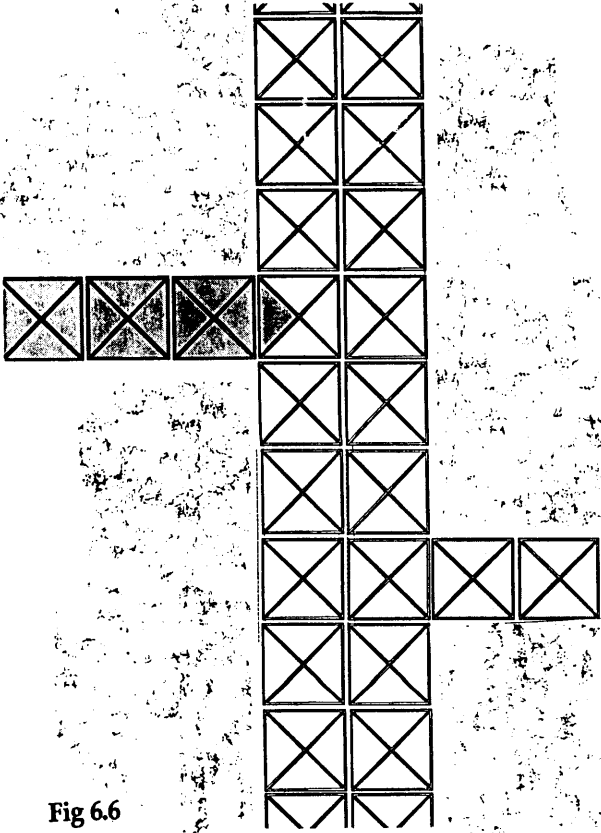


Fig 6.6

Fig6.6: Diagram of the roof plan of the pedestrian modular walkway s- indicating possible color patterns of the roof structure.

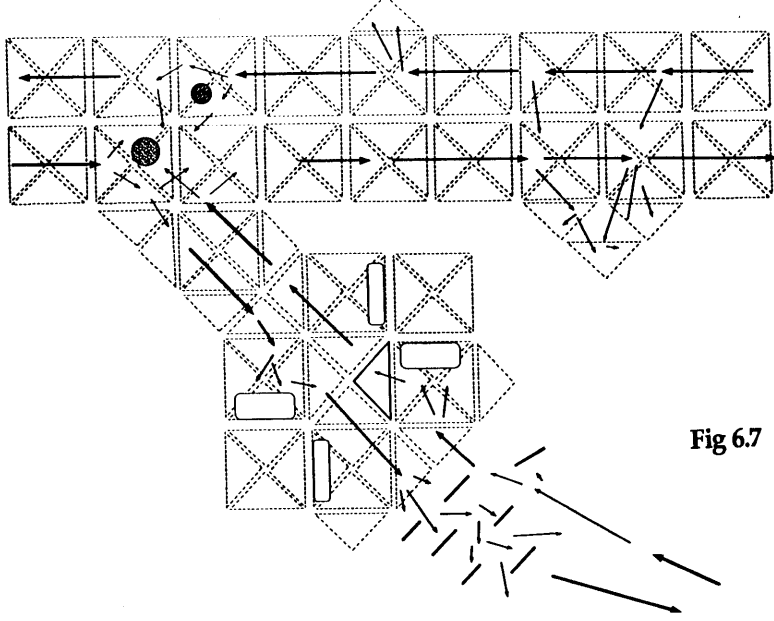


Fig 6.7

Fig 6.7: Pedestrian movement patterns

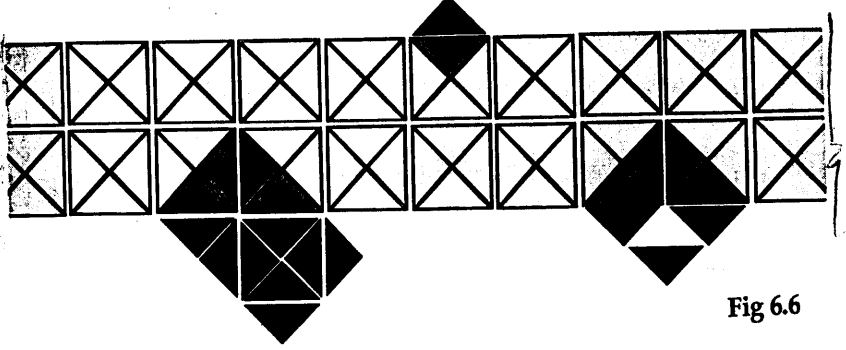


Fig 6.6

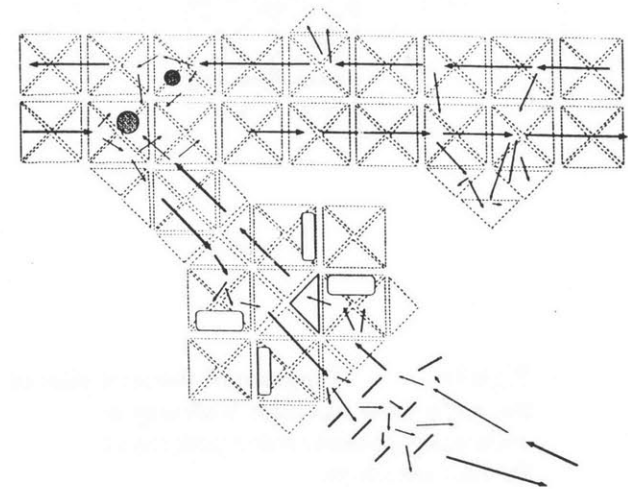
*To capture an audience with...
...en-route location...*



Fig 6.8: (right) Pedestrian movement pattern at entrances to Hard Hat Zones
Fig 6.9: (above) On a construction site, Japan, 1990

Entrances to Hard Hat Zones and Side Exhibit Spaces

For safety reasons it is not possible to let pedestrians explore the construction site on their own, but it is possible to provide guided tours, or at least bring them closer to the focus of construction activity at that time. These areas would probably require that every one wears a Hard Hat for protection. Entrances to Hard Hat Zones can be indicated by techniques mentioned in the section 'New Parts for the Kit of Parts' or an object located right on the main pedestrian path to make pedestrians aware of the possibility to visit the construction site. [Fig 6.8] The object can be something related to the construction activity or simply a pile of Hard Hats. Once obtaining a Hard Hats and joining the tour pedestrians will have to walk through a reflective maze of panels to make them aware of what they look like in construction gear. In later stages of the Living Museum these entrances can become entrances to exhibit on the decade of construction, or areas where people can try on construction clothes, and play like. [Fig 6.9, Fig 6.10]



*To tell the story with...
a personal touch...*

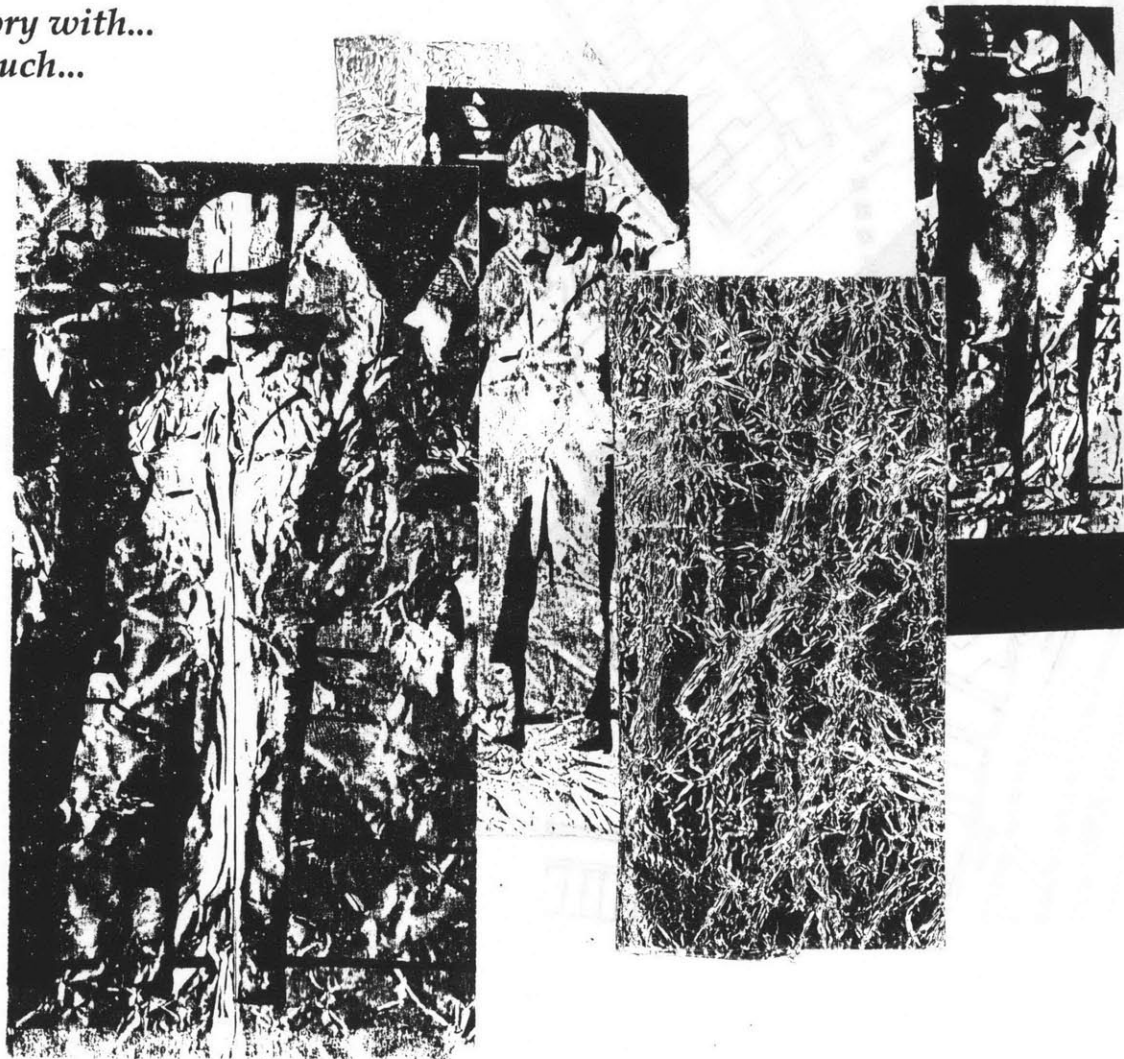


Fig 6.10: Reflective surfaces at the entrances to Hard Hat Zones.

*To tell the story with...
...comprehensive views*

*To tell the story with...
...inverted meaning*

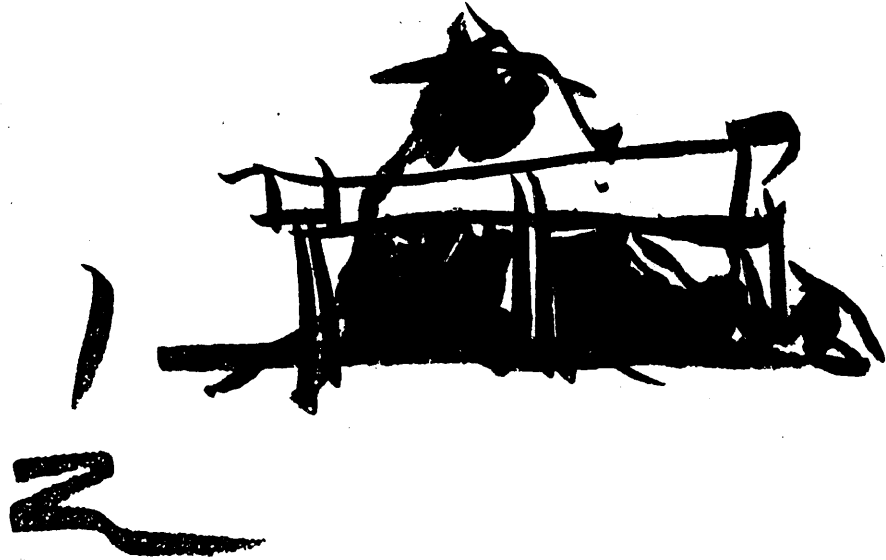


Fig 6.11: Sketch of mound

At this stage the following construction activities begin: digging, decking over the site, and dismantling of the on and off ramps. The small mound of dirt growing at one end of the site signals the digging taking place below; it may be reached through the 'Kit of Parts' [Fig 6.11]. A portion of the existing off ramp which currently runs parallel to the Haymarket is retained as part of the Living Museum, and cars or sculptural figures of cars are left on top as a reminder of the ramps' original purpose. The surface of the ramp may be used as a temporary exhibit area. From the ramp pedestrians will attain a bird's-eye view of the construction site and see where the main museum structure will be built. At a later stage this ramp will connect downtown to the North End directly across the museum site.



*to tell the story with...
... inverted meanings*

Fig 6.13: 'Public participation with vehicles', Highway'86 Processional World Exposition, Canada, 1986, SITE, page 204.

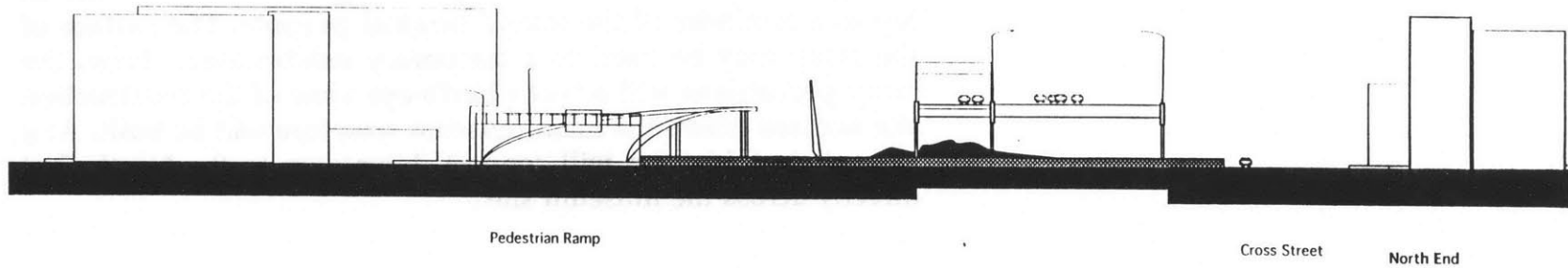


Fig 6.14, South East Elevation during construction.

*To tell the story with...
...comprehensive views*

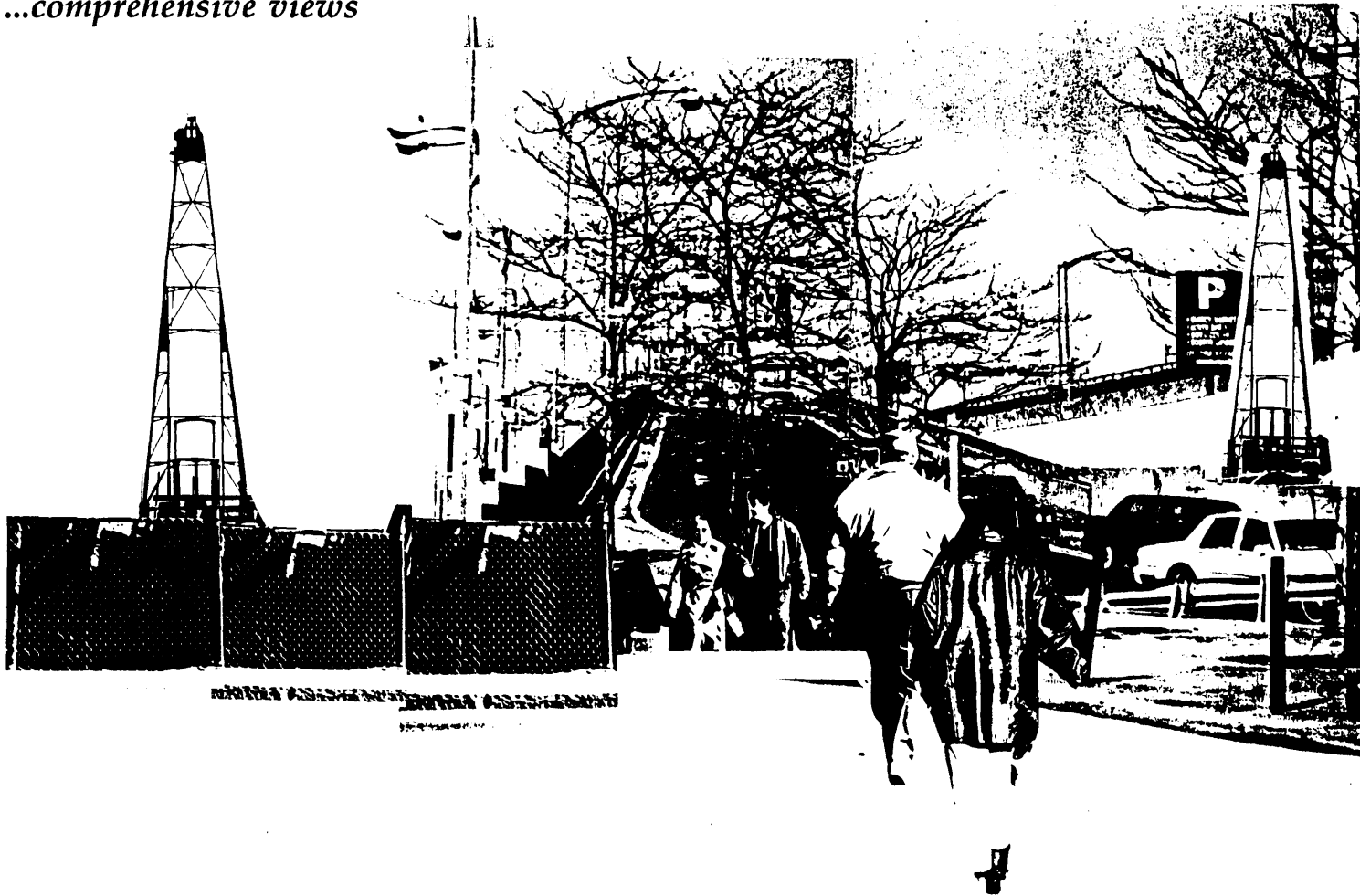
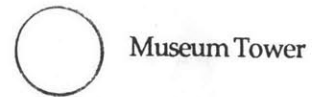
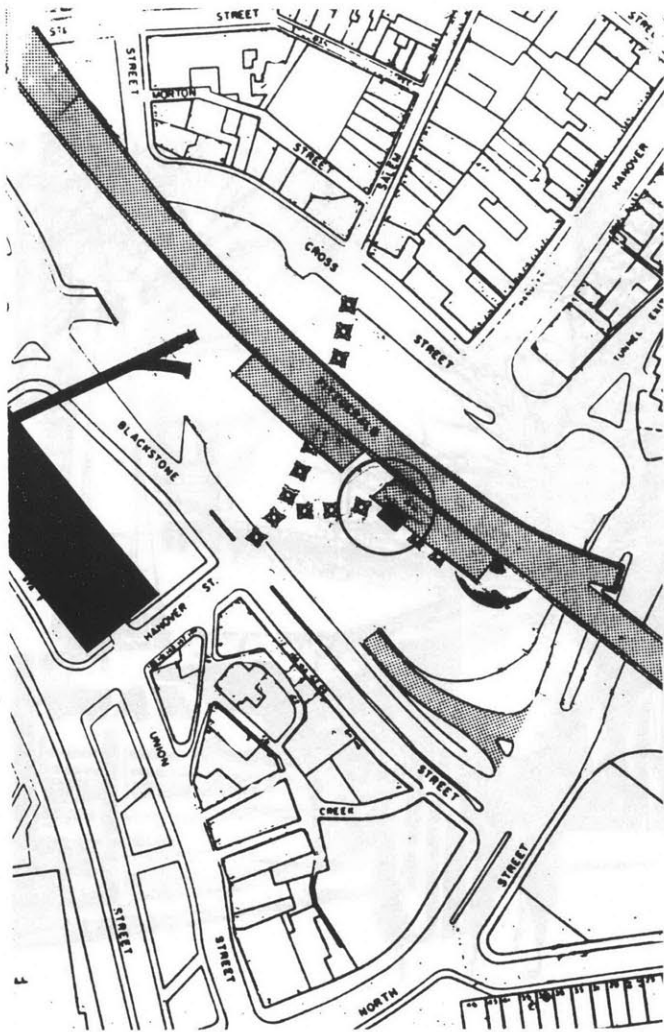


Fig 6.15: Pedestrians walk up the off ramp kept in place after the demolition of ramps of the elevated artery.



Stage II.3 of the Living Museum

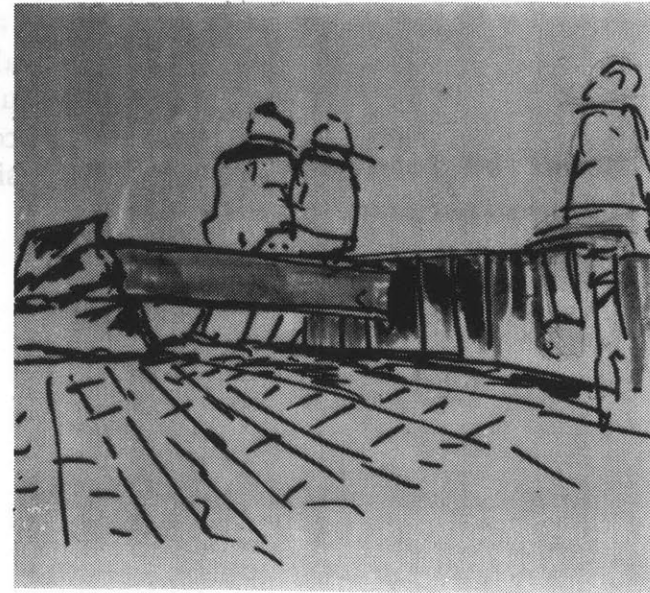


Fig 6.16

During stage II.3 of the Living Museum, the northbound tunnel will be completed, southbound traffic will be moved to the north bound elevated lane, and the south bound elevated lane will be dismantled. At this stage two pieces of the south bound elevated lane will be kept to become part of the Living Museum, the mound will grow as digging underground continues and a museum tower will be constructed (described in more detail below). The changes taking place on the site will be celebrated with events like opening the elevated structure to pedestrians before dismantling it, and using pieces of it for public art and sculpture all over the city of Boston [Fig 6. 16]

The Museum Tower

The museum tower will be located in the center of the site on the south side of Hanover street so it can be seen from afar. [Fig6.17] At this stage of the Living Museum pedestrians will be able to approach the tower through the 'Kit of Parts'. Climbing up the tower pedestrians will be able to view from above, construction activities on the site, and the city surrounding the site.

*to tell the story with...
... comprehensive views*

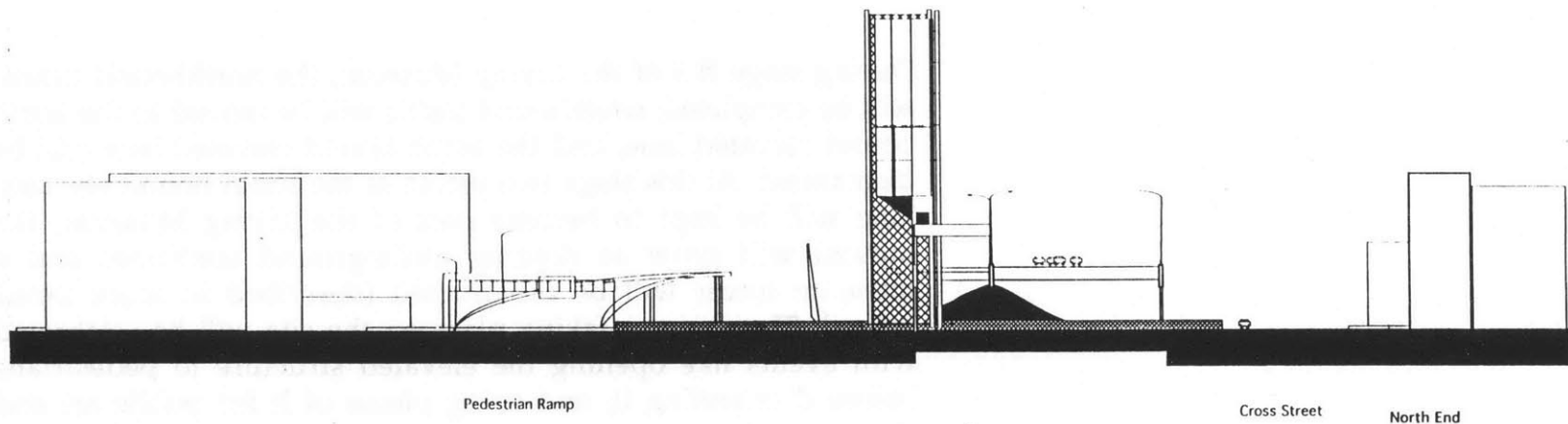


Fig 6.17: a. South East Elevation - During Construction



Fig 6.17: b. View of the Museum Tower from Hanover Street, looking from the North End towards Government Center

Visitors can climb up the tower by elevator or a set of stairs flanking it. Both the elevator and the stairs provide linear circulation system and sequential exhibition spaces. Objects found during the construction of the depressed artery can be placed for viewing on the skeleton and a screen attached to it that surround the elevator. To the side of the stairs, there are small enclaves from which visitors can view construction and gain fragmented views of the site and the city around it. From the top level visitors can gain a panoramic view of the city. In a later stages of the Living Museum the views from the tower will change from construction and demolition of the artery to the construction of the exhibition building. When the museum is built visitors will be able to acquire from the tower a preview of what is exhibited in the main building. In any part of the tower exhibits explaining the views can be seen so visitors will be able to learn about their city and the construction taking place while looking at the real thing. To create the central core of circulation and the small enclaves the plan of the tower was generated from the overlapping of two rectangles as shown below [Fig 6.18]

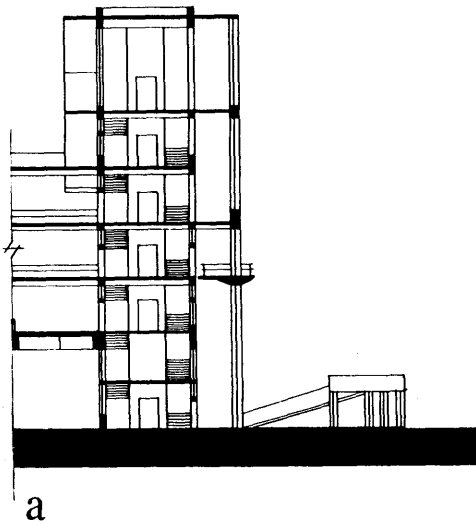
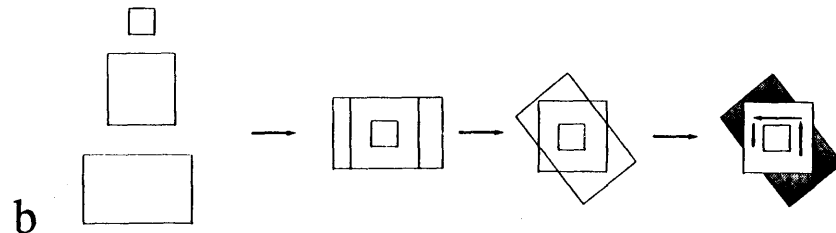


Fig 6.18 (above) a. Tower Section A A
(right) b. Formation of the Tower Plan



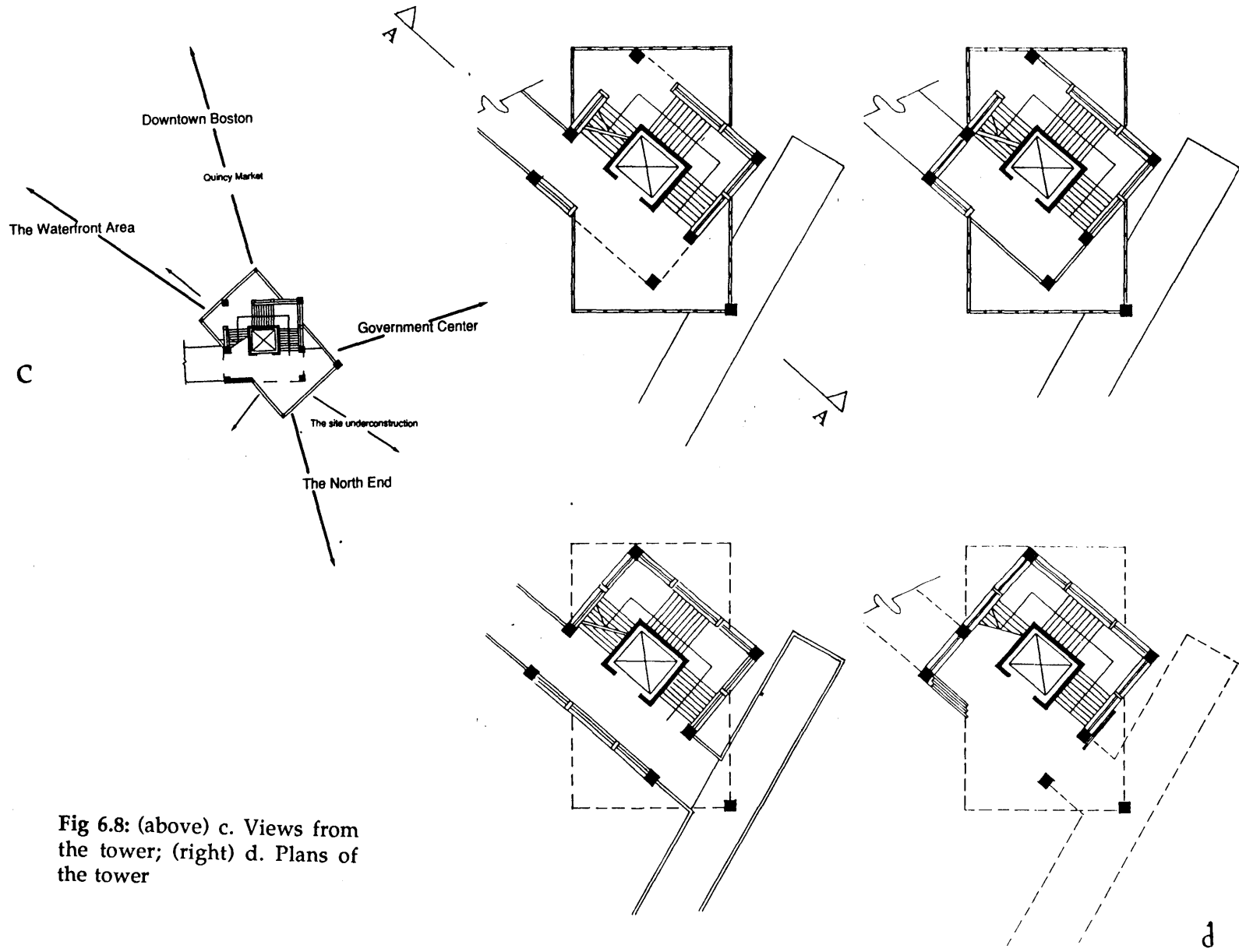


Fig 6.8: (above) c. Views from the tower; (right) d. Plans of the tower



Stage III: Beginning of the Construction of the Development Above the Depressed Artery

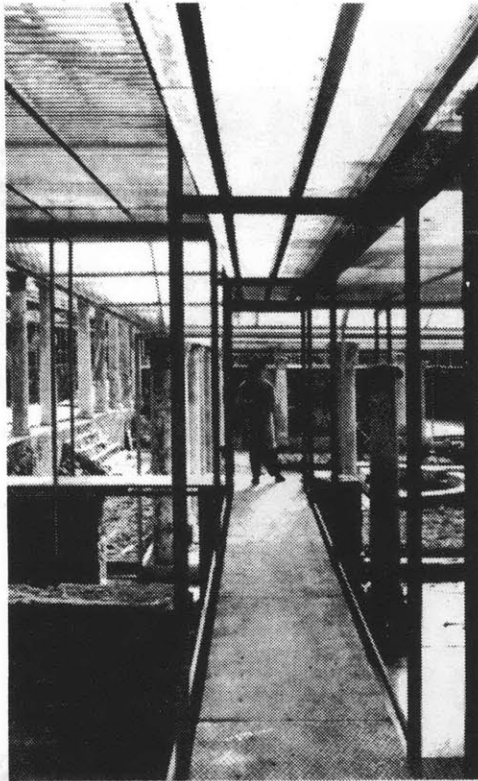


Fig 6.19 : Image of reconstruction of digs and old fabric

At this stage, construction of the depressed artery is completed, project generated construction begins. Elements of the museum from previous stages, including entrances to Hard Hat Zones, pieces of the 'Kit of Parts,' Hot Lines, and tools for on site modelling, become permanent exhibits. The old fabric and archaeological digs are reconstructed [Fig 6.19]. An underground exhibit space is added, and the construction of the main exhibit hall begins. Since the digging has been completed the mound reaches its maximum size. The whole site becomes accessible to pedestrians except for the construction area of the main exhibition building

The ramp starting from the Quincy Market area is extended and leads pedestrians to the remaining piece of the artery and the tower. From the surface of the artery pedestrians can make several choices. They can watch the construction of the main exhibit building, visit the tower to watch the construction from above, cross over Hanover street using a new ramp or descend to street level. Cracks in the surface of the artery point to the direction of the entrance to the tower.

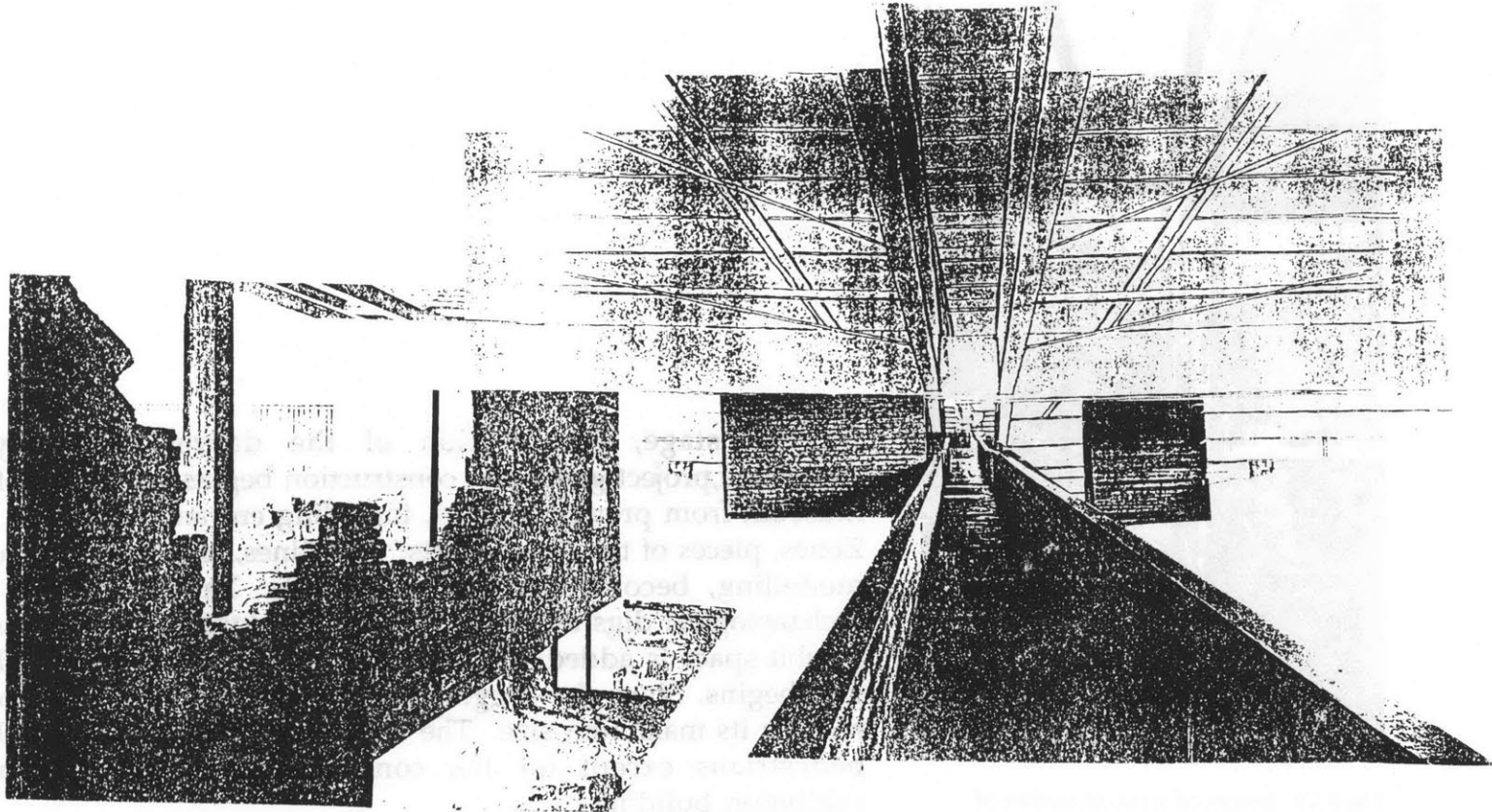
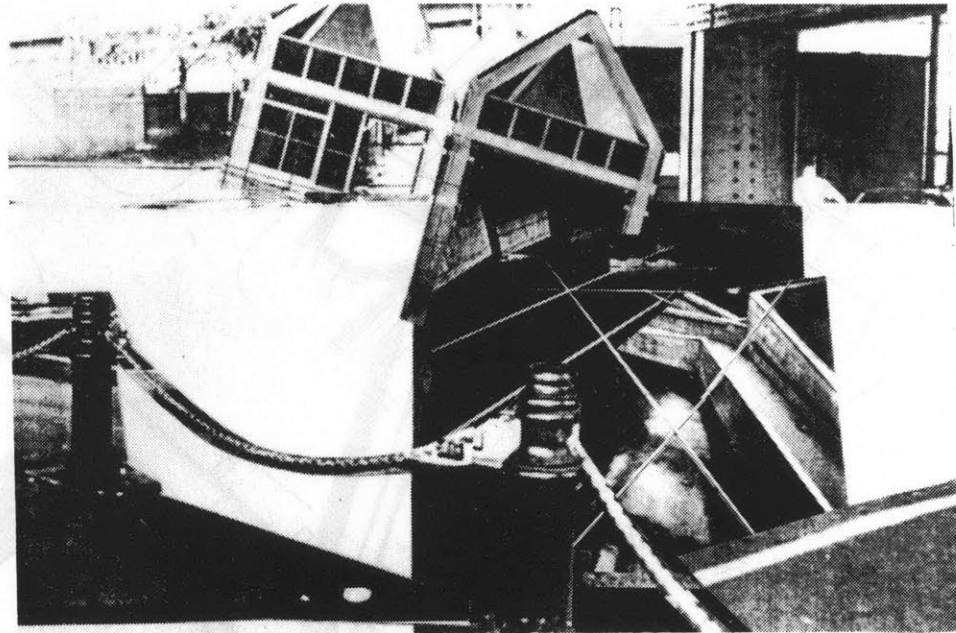


Fig 6.20: View of the pedestrian ramp located below the structure of the elevated structure.

In addition a new ramp is added under the artery connecting to the ramp crossing Hanover Street. From this ramp pedestrians can view the archaeological digs and old fabric from above and view exhibits hang from the artery structure, as done during construction. Because there the construction is completed more elaborate exhibits and lighting fixtures can be placed. Walking along this ramp pedestrians may come closer to the artery structure from below and even touch it if they like. [Fig 6.20]

*To capture an audience with...
... anything out of the ordinary*

Fig 6.21: Entrance to the underground exhibit area.



A permanent exhibit space is added below ground to tell the story of the construction of the depressed artery. A tilted facade 'emerging' from the ground signals the location of the entrance to this exhibition area. A ramp located in the archaeological digs leads down into an open area adjacent to a larger enclosed space. Rods and lights that follow the pattern of the reconstructed old fabric are stretched over this open area. [Fig 6.21] The exhibition in this area includes viewing points to the tunnel below, skylights through exposed pieces of decking, recordings of Hot Lines, sounds of construction and reflective surfaces used during construction in the entrances to Hard Hat Zones. Visitors learn about the construction listening to the sounds of construction, to recordings of pedestrians expressing concerns during construction, trying on construction clothes and hats, and looking at the final outcome - the tunnel below.

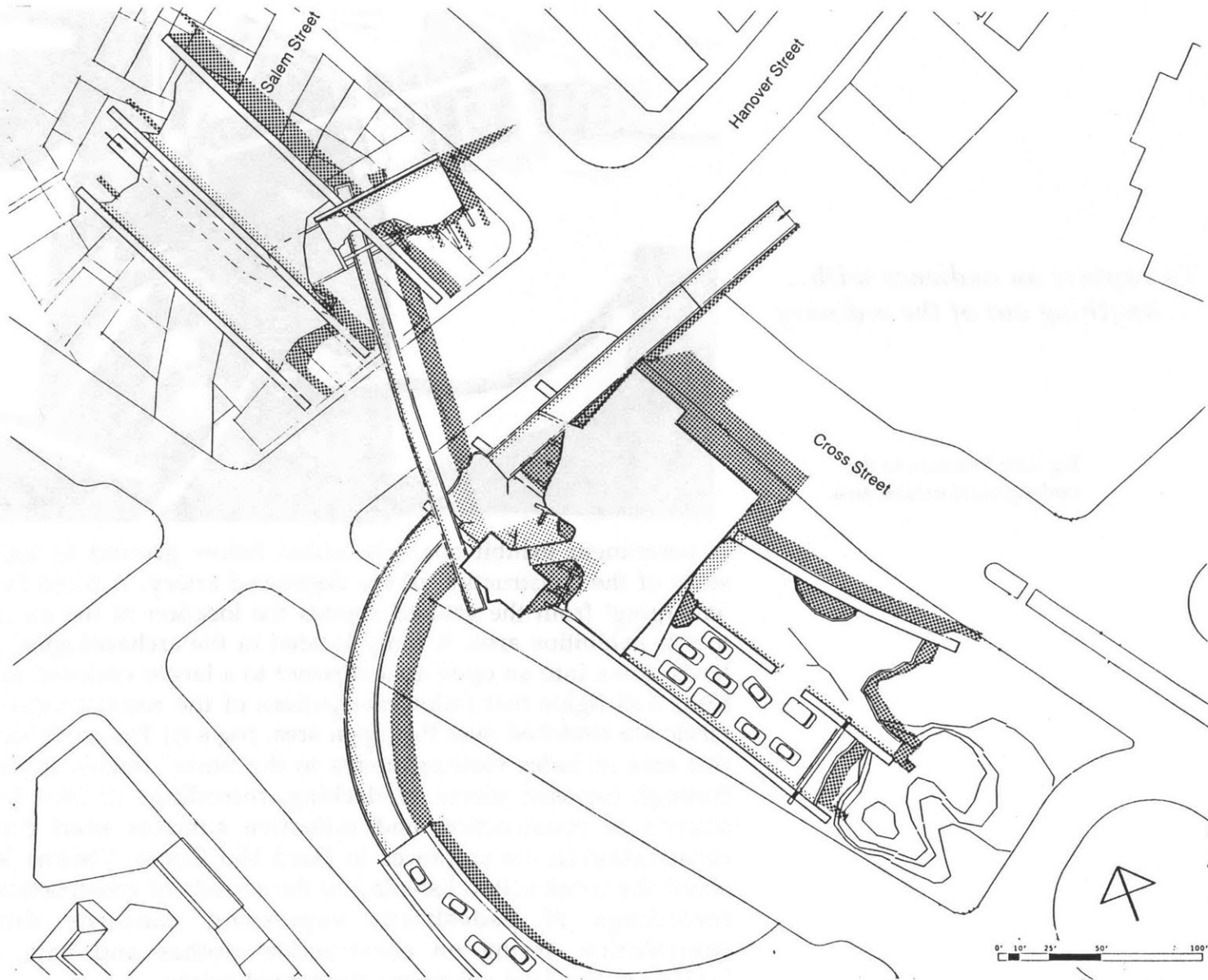


Fig 6.22: Roof Plan of the Living Museum

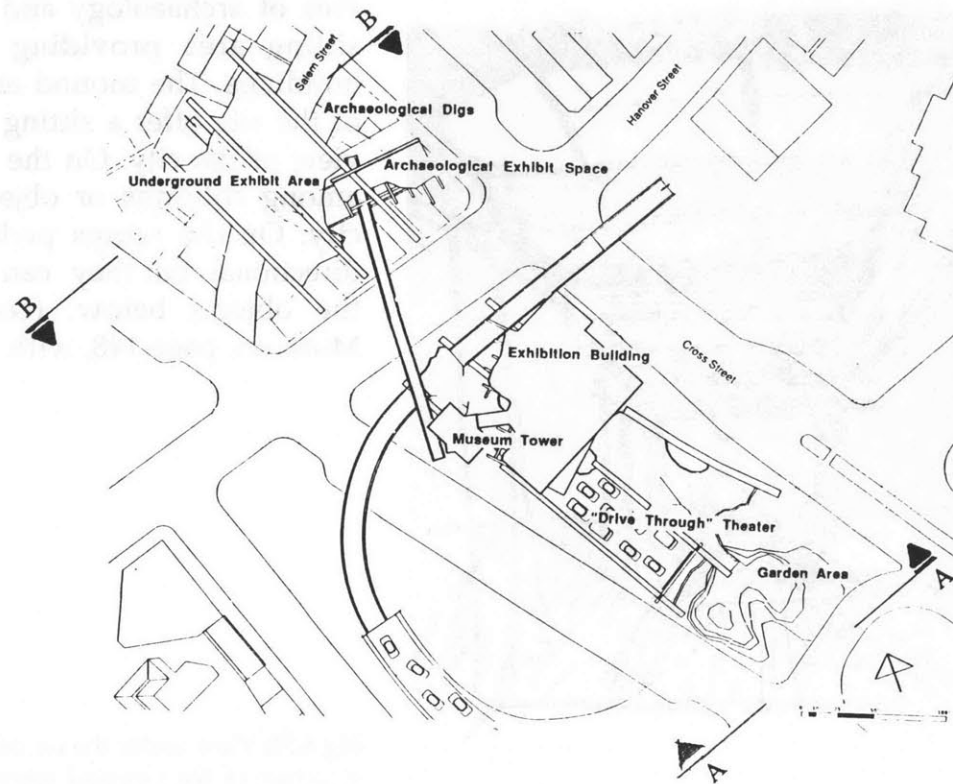
Stage IV of The Living Museum



Fig 6.23: (above) Trees of the garden area penetrate through the structure of the elevated artery

Fig 6.24: (right) Elements of the Living Museum

When the construction of the main exhibit structure of the Living Museum is completed the pedestrian ramp that lead to the artery is extended over Cross Street. The "Drive Through" theater placed on the remaining piece of the artery is opened for pedestrians, and all the main elements of the museum are in place. Elements of the museum include the reconstructed archaeology digs and old fabric, a system of ramps, a garden on the mound, underground exhibit area and viewing of the depressed artery and two main enclosed exhibit structures above ground. [Fig 6.23, 6.24]



*To capture an audience with ...
...clear and diverse options*



The Living Museum becomes a park telling the history of the Central Artery Project that can be used for exhibitions and events relating to future urban projects in Boston. Residents of the North End can use it as a neighborhood open space and play area, people working downtown can lunch, tourists can stop to rest. While crossing the site, pedestrians can learn about the history of the project and can be exposed of the temporary exhibits about current urban issues and projects in Boston.

Each area of the museum differs from the others in texture, light and usage. Together they offer a broad range of experiences for pedestrians visiting or passing through the site. The paved area of archaeology and reconstructed fabric create an enclosed sitting area providing an intimate view of the North End buildings. The mound and the park around it on the south side of the site offer a sitting area on a planted ground with a broad view of the city. On the street level pedestrians can move freely among columns or objects while getting only glimpses of the city. On the ramps pedestrians' movement is constrained and directional, but they can gain broader views of the city as well as the objects below. (compare the Roof Plan of the Living Museum, page 148, with the ground plan page 151).

Fig 6.25: View under the remaining structure of the elevated artery.

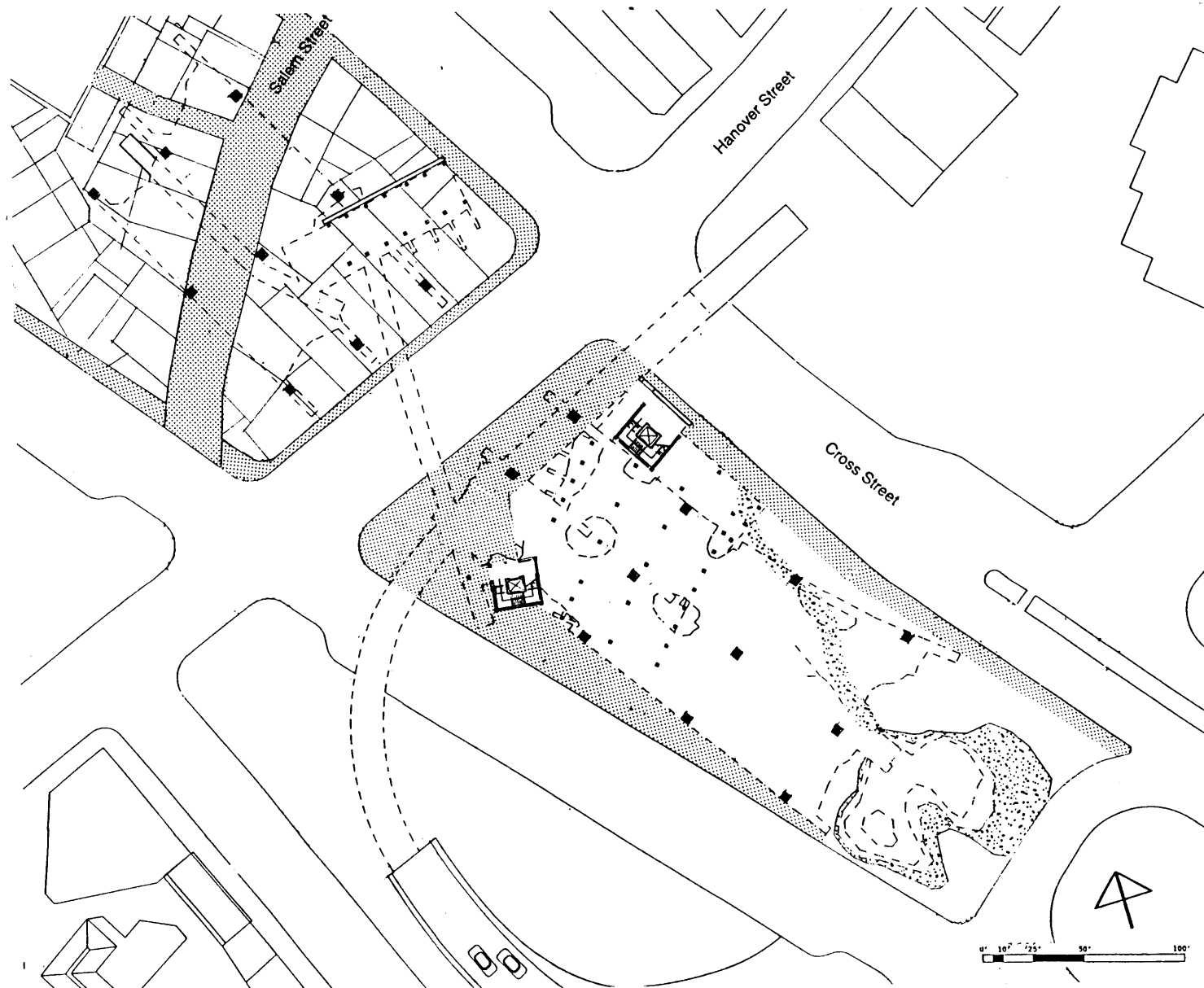


Fig 6.26: Ground Plan of the Living Museum

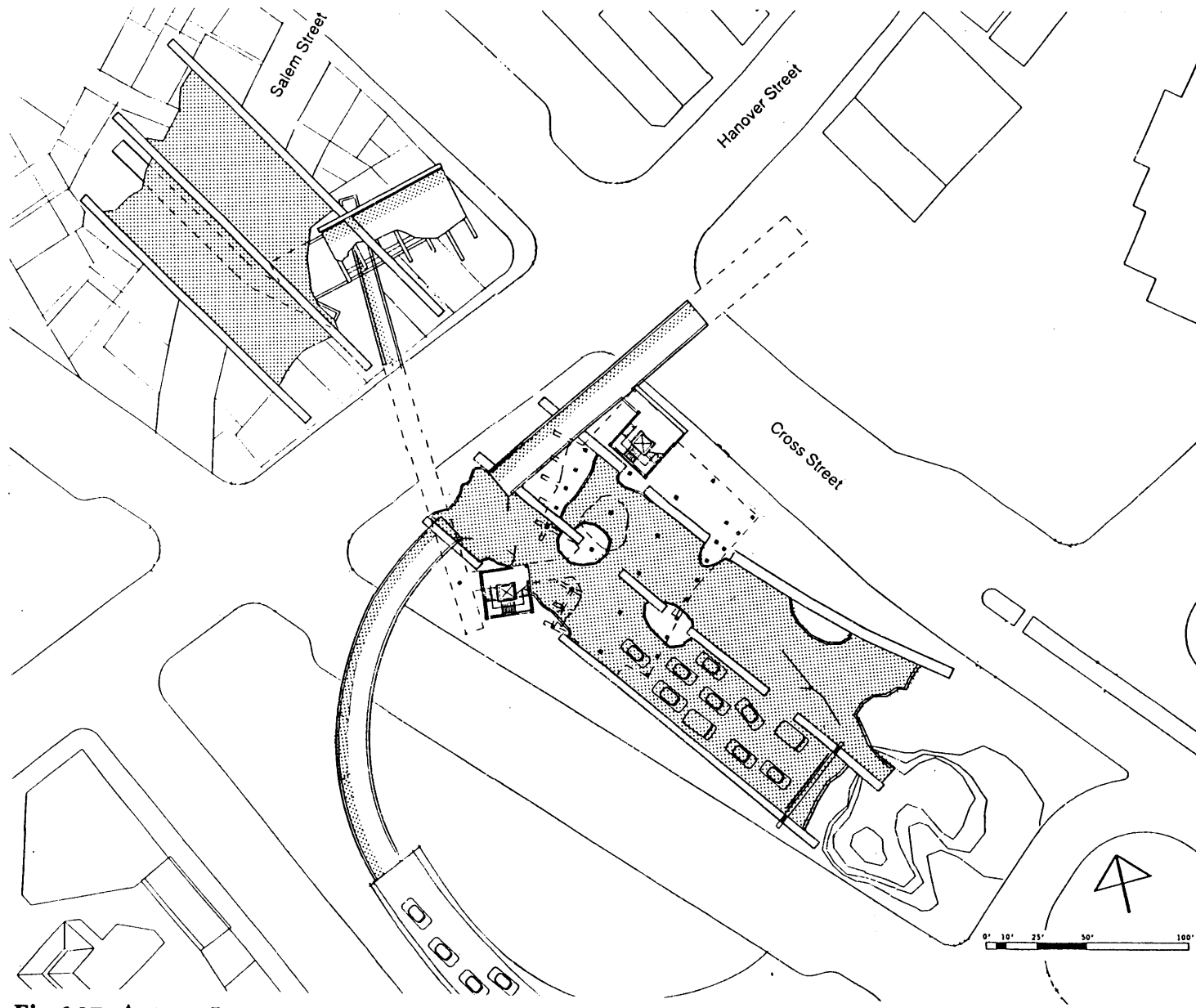


Fig 6.27: Artery Level Plan of the Living Museum

The Pedestrian Ramps

The system of pedestrian ramps consists of four ramps of different lengths providing pedestrians several alternative routes and experiences along the way. [Fig 6.26]

Ramp 1 leads pedestrians between Quincy market area across the site along Hanover Street to Hanover street in the North End.

Ramp 2 connects both sides of Hanover street and the remaining pieces of the artery in the middle of the site.

Ramp 3 provides access between the parking structure, the MBTA stop and the north west part of the site.

Ramp 4 ascends under the artery and leads towards ramp 2.

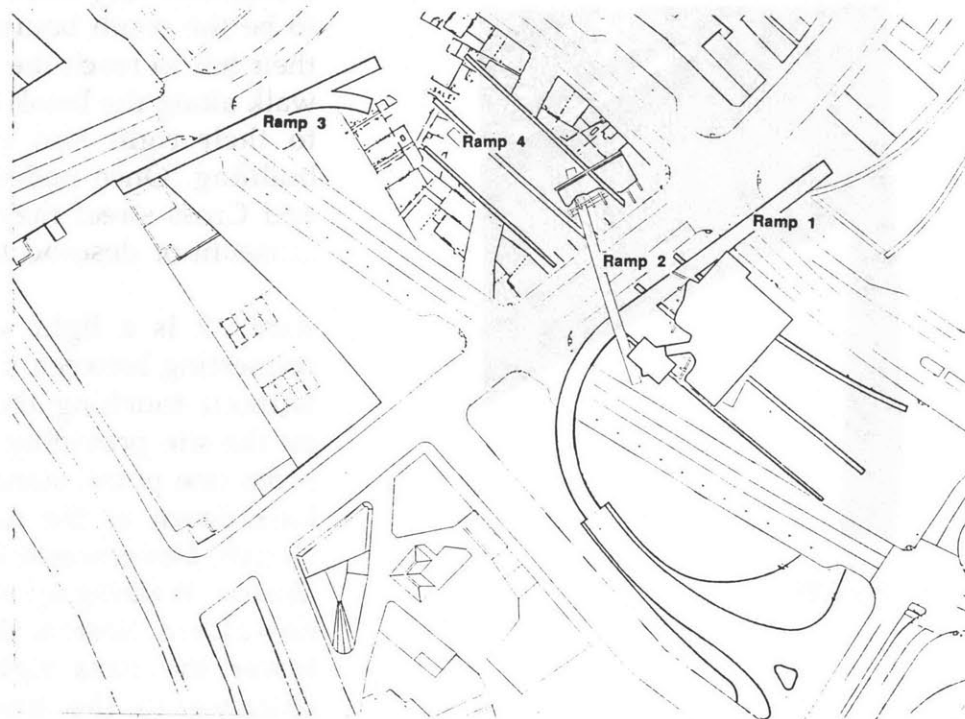


Fig 6.28: The Pedestrian Ramps

Coming from Quincy Market area on ramp 1, pedestrians first walk up the old vehicular down ramp through a maze of sculptures of cars. In these cars pedestrians can hear recordings of drivers telling their stories of what it used to be like driving on the central artery. As pedestrians continue toward the site, on the segment of the ramp built during stage II.3. they can get an overview of the site and its content. Their options are clear. They can visit the tower and the museum building behind it, spend time on the surface of the artery for example, visiting the "Drive Through" theater and temporary outdoor exhibits and events, ascend the tower so they can cross Hanover street from above, descend to street level, or continue straight ahead towards the North End. If pedestrians chose to continue towards the North End they need to walk across the surface of the what used to be the south bound lane of the artery and along its break on their left to reach the continuation of the ramp. Here pedestrians walk along the break of the former northbound lane of the artery to their right and under the 'broken' edge of the museum building. Once pedestrians reach the corner of Hanover street and Cross street they can change their mind and ascend to the museum or descend to street level.



Fig 6.29

Ramp 2 is a light structure hovering above Hanover street, connecting between the two artery pieces that were kept in place without touching them.[Fig 6.29] This ramp is the highest ramp on the site providing the most comprehensive views of the city. From one point, standing above Hanover Street pedestrians can look down at the cars below, with a view of St. Stephen's church, Government Center, Old North Church and Downtown Boston. Walking up towards the tower, pedestrians can view downtown Boston. This view is framed by a column of the tower the runs right through the ramp and indicates the entrance to the tower as well. Before entering the tower

pedestrians may choose to walk around this column and gain an unobstructed view of Boston.

Walking in the other direction, pedestrians descend towards the North End. Slowly the silhouette of the North End disappears behind a thick brick wall, and pedestrians can only see the North End through a large break in this wall. Coming close to the wall, pedestrians continue to descend under the artery level, and can walk through the break to the edge of the ramp. From this point they can gain a close view of the North End and a top view of the archaeological digs. Pedestrians can choose to enter a small exhibit building instead or descend to a platform connecting ramp 4 with the street level. The small exhibit building includes a permanent exhibition of archaeological findings and the history of the North End neighborhood.

Ramp 3 is the shortest ramp on the site.[Fig 6.30] From the parking structure and the MBTA stop pedestrians can safely cross the boulevard and reach the northwest part of the site. Before descending to the site pedestrians can gain an overview of the site, looking down toward the reconstructed fabric below them, looking at the artery structure from above, and viewing the building and the city beyond from the distance.

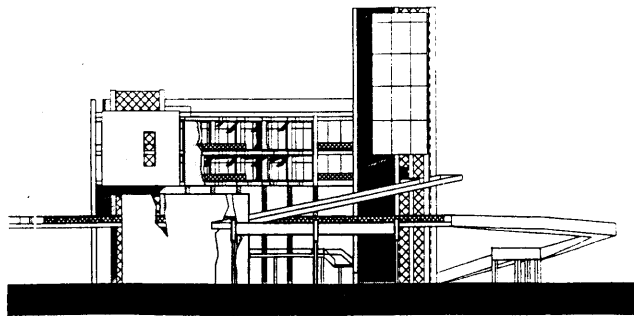


Fig 6.30: The Pedestrian ramps as seen from the North West Elevation

Once on the ground level, pedestrians can continue walking through the reconstructed fabric, or ascend ramp 4. Ramp 4 is the lowest ramp in the park. It ascends under the artery toward the platform connecting between it, ramp 2, and the ground. This ramp gives pedestrians a chance to come very close to the elevated structure.

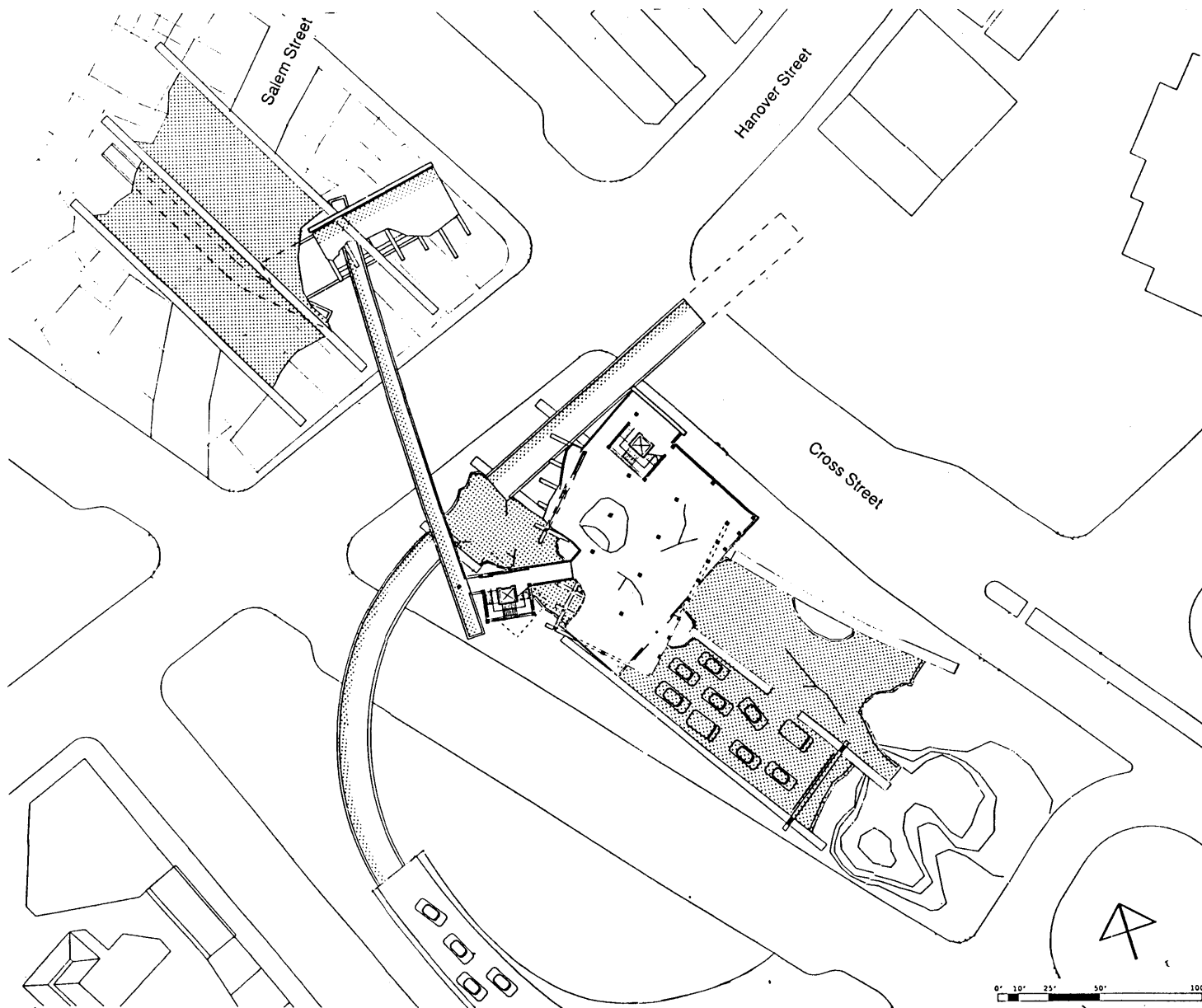


Fig 6.31: Building Plan of the Living Museum

The Main Exhibition Building

The building, like the other parts of the museum park, is designed to remind visitors and pedestrians that building the city is an evolutionary process and that the process of depressing the artery is closely related to the construction and building of the city. This message is portrayed through the placement of the building on the site and the way it is constructed.

The main exhibit building is connected to the tower on the south side of Hanover street, where it can be seen from everywhere on the site and from the distance. (see also Fig 6.36 sketch) It stands above the artery on a grid of columns which penetrate through the artery structure. It completes the sequence of structures 'emerging' from the ground as the construction of the depressed artery advances. Symbolically, the exhibition area on the construction of depressed artery is located underground with the 'emerging' facade. The stairs connecting between the ramp crossing Hanover street, the ramp coming under the artery and the ground flanks the artery structure. The wall next to it extends only a little bit above the artery. The main exhibition building stands above the artery. [Fig 6.32]

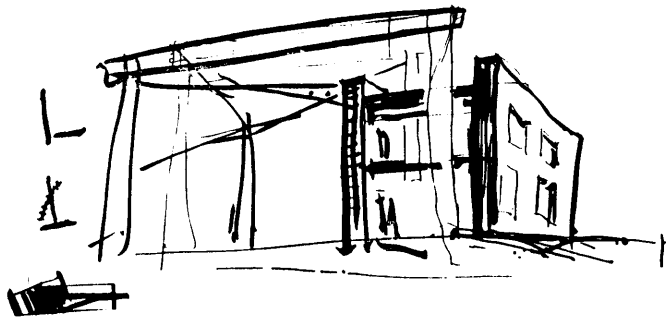
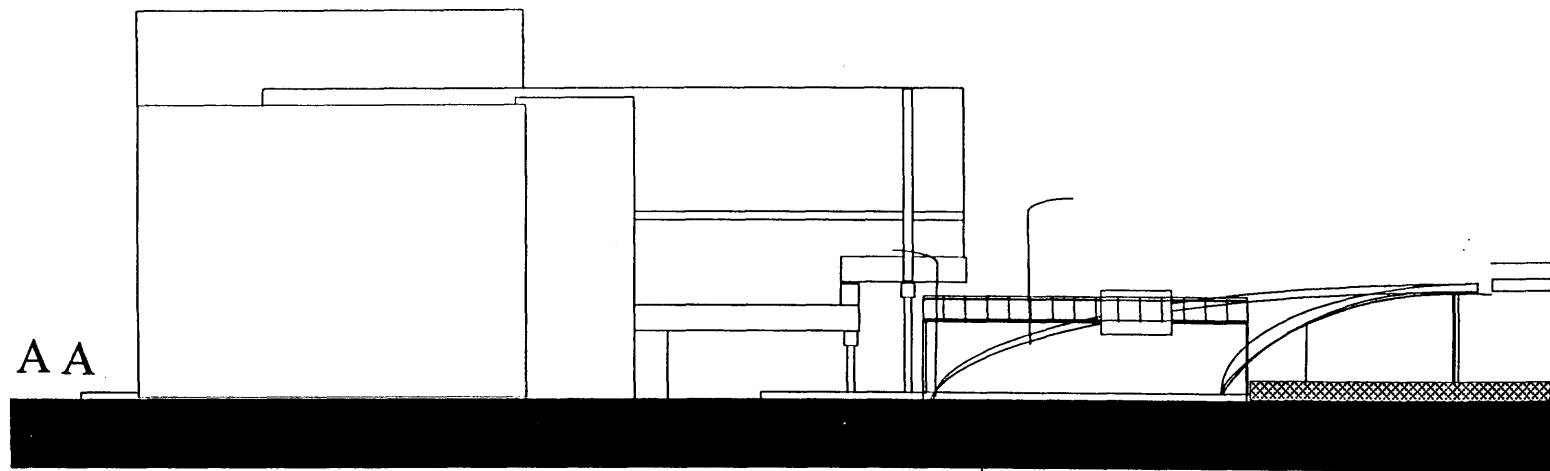


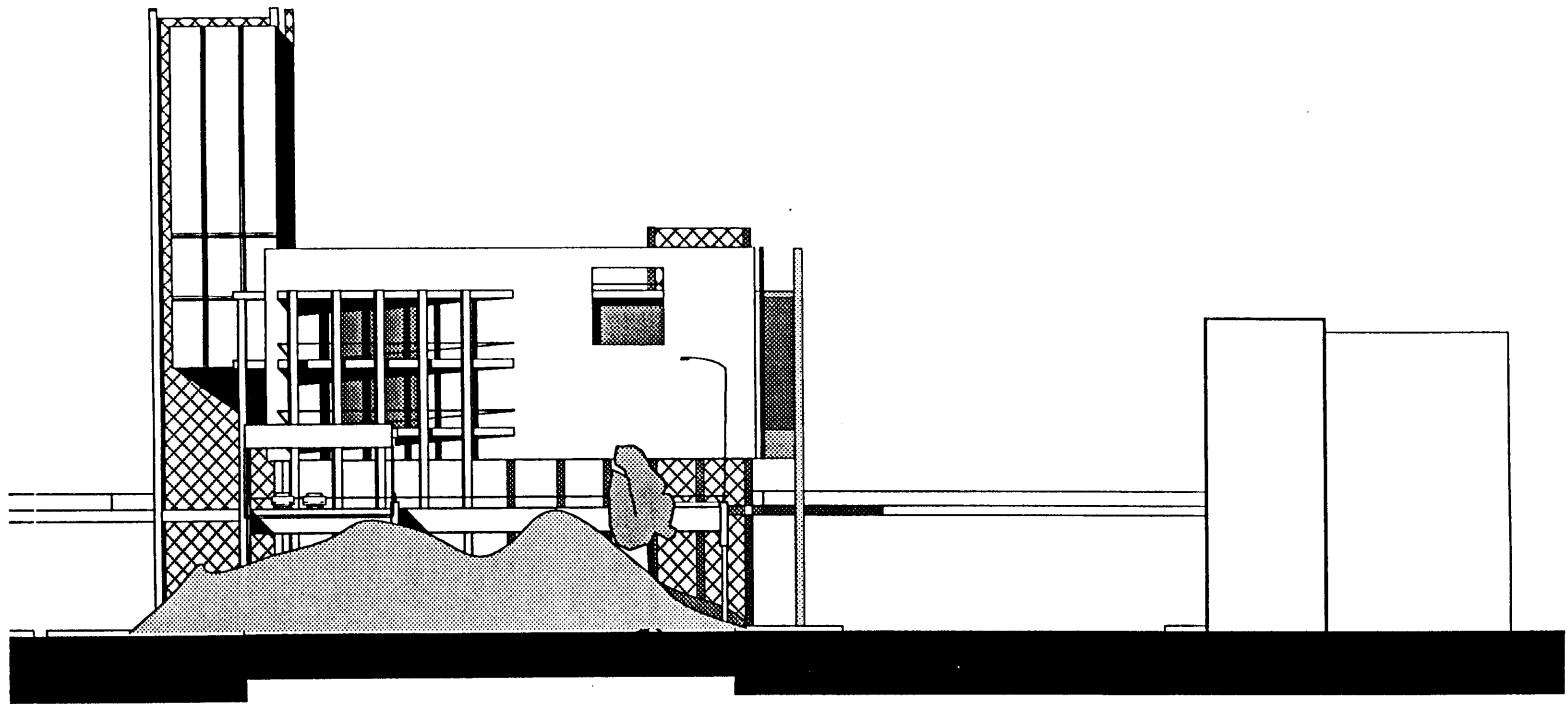
Fig 6.32: Sketch of the archaeology exhibit space flanking the artery

The building is structured from steel frame with screens attached to it enclosing it from all sides. Each facade of the building differs from the other to give the feeling of different stages of construction and levels of completeness. (to compare elevations, see Fig 6.33 and 6.34 pages 157-160)

Fig 6.33: South East Elevation
of the Main Exhibition Building
Looking from downtown Boston towards the museum



Pedestrian Ramp



10 25 50 100


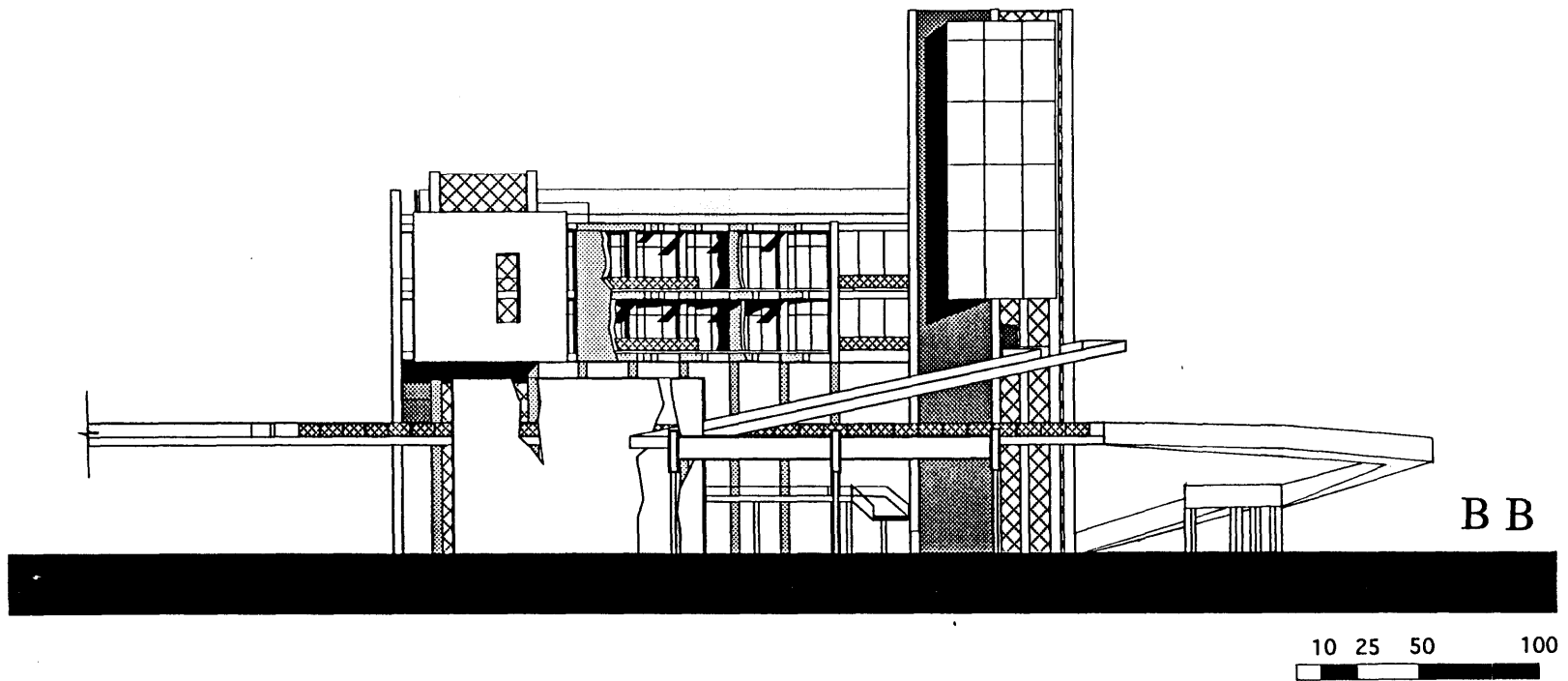
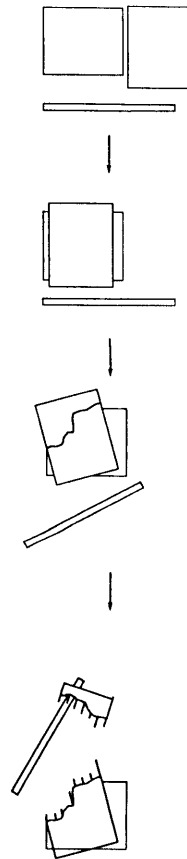


Fig 6.34: North West Elevation
of the Main Exhibition Building
Looking towards downtown Boston



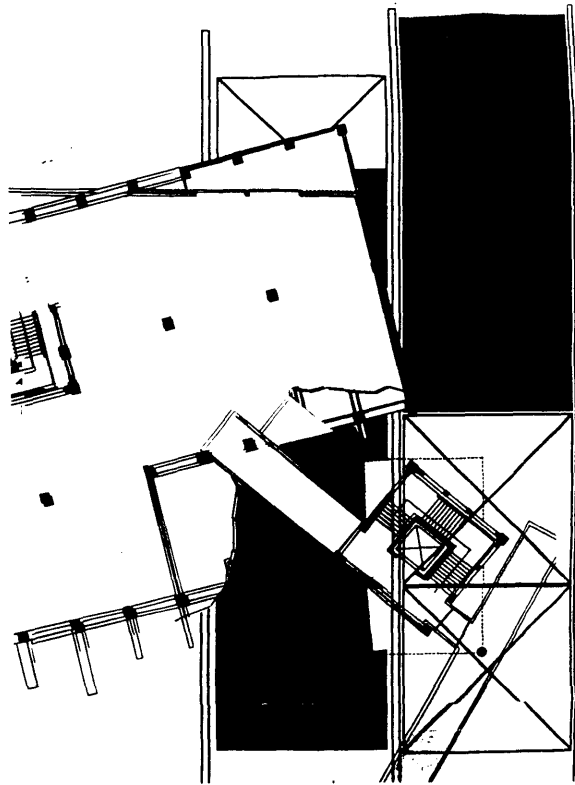
The plan of the building was generated by juxtaposing two rectangles. [Fig 6.35] One rectangle was kept parallel to the artery and the fabric of the city around it. The other rectangle was shifted to accent the break and the tear in the building as well as the artery below it. By shifting the two rectangles, clear orientation and points of destination, and spaces of different shapes and sizes are created. The views of the city are incorporated as part of the exhibits.



The south facade of the building facing the city is complete and finished, with only a few clues indicating what is inside. [Fig 6.33] For example, standing at street level or on the artery one can get a glimpse of the activities taking place inside through a large window on the right and one can see people on the balconies and roof. The small number of columns of the balconies indicate the structural system behind the screens. The screen on this side is made of metallic, finished material that would glitter in the sun. Contrary to the south facade of the exhibition building the side of the building facing Hanover street is broken and incomplete. The uneven, broken steel beams hang over the artery and the pedestrian ramp to 'imitate' and to accent the break in the artery below it. The side of the building facing the North End is a solid brick wall. [Fig6.34]

To make the building more visible and accessible, its entrances are located on major pedestrian routes. Its two main vertical circulation cores, which are also its entrances, are distinct from the rest of the building and can easily be identified. [Fig 6.33 and 6.34]

Fig 6.35: The formation of the plan



To make the building more visible and accessible, its entrances are located on major pedestrian routes. Its two main vertical circulation cores, which are also its entrances, are distinct from the rest of the building and can easily be identified. [Fig 6.33 and Fig6.34]

Pedestrians can enter the museum from the street level, the artery level and from the ramp crossing over Hanover street. One circulation core is located on the corner of Cross Street and Hanover Street. The other circulation core of the exhibition building is the tower. The artery structure directly above the entry is cut away to allow natural light to penetrate. Contrasting with the relatively dark area under the artery, this light will accent and draw attention to this entrance. From both of these entrances pedestrians would have to go up a few flights of stairs to reach the first level of the museum. While climbing they can see small exhibits, or gain a side view of the artery that reveals how it was made. [Fig 6.36]

Fig. 6.36: sketch of plan of tower connection to the main exhibit building

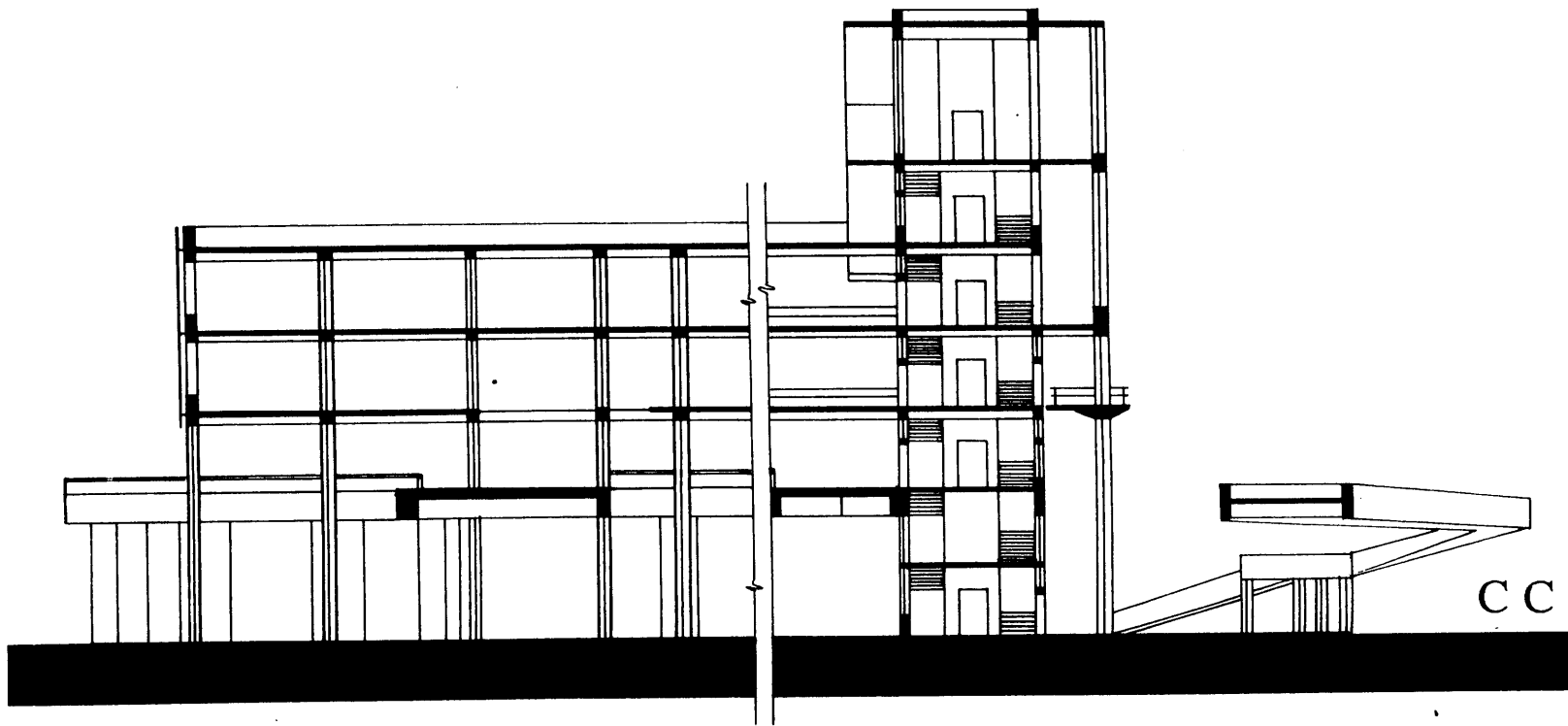


Fig 6.37 Section of Museum Tower and Main Exhibition Building

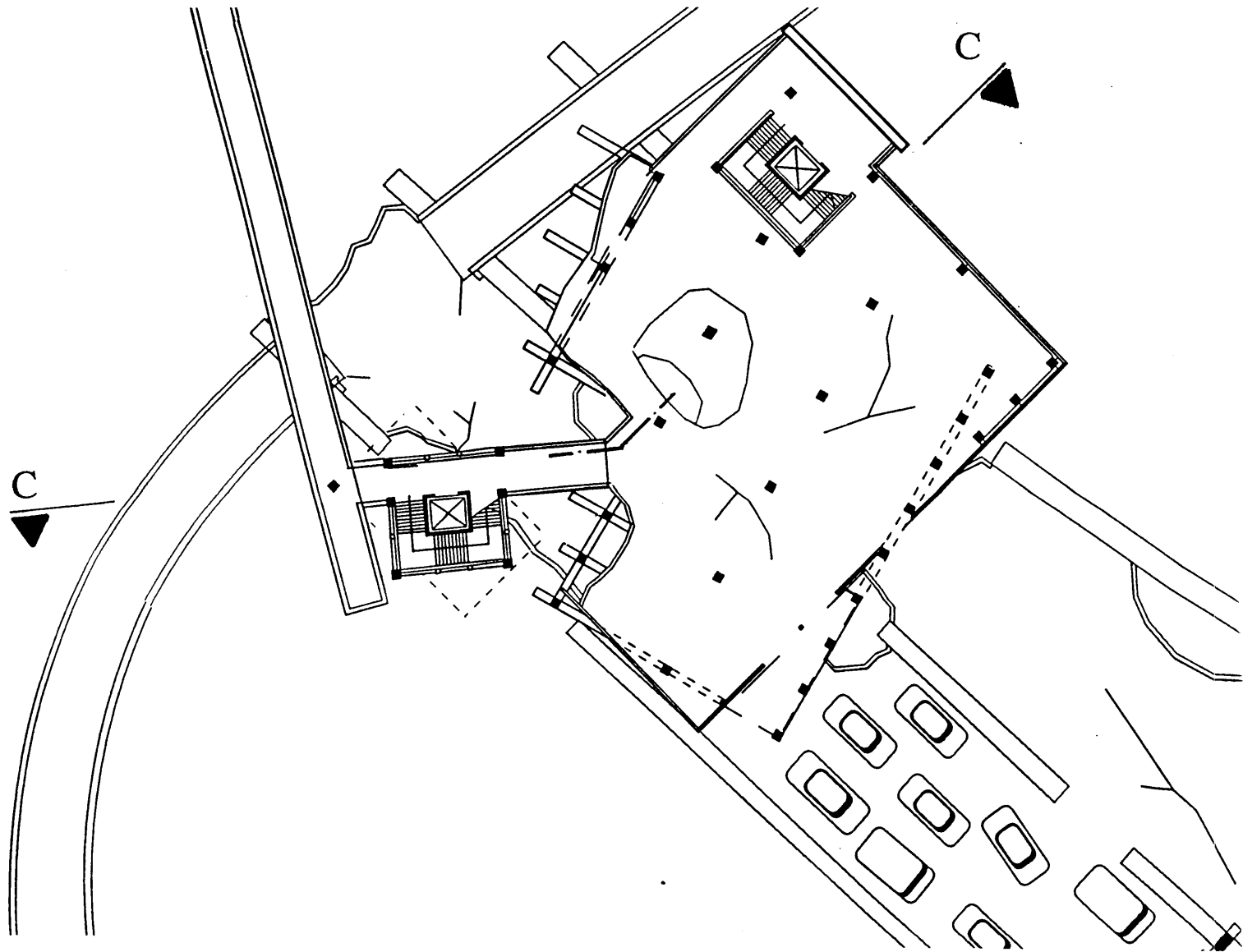


Fig 6.38: Floor Plan of the Main Exhibition Building-First Level

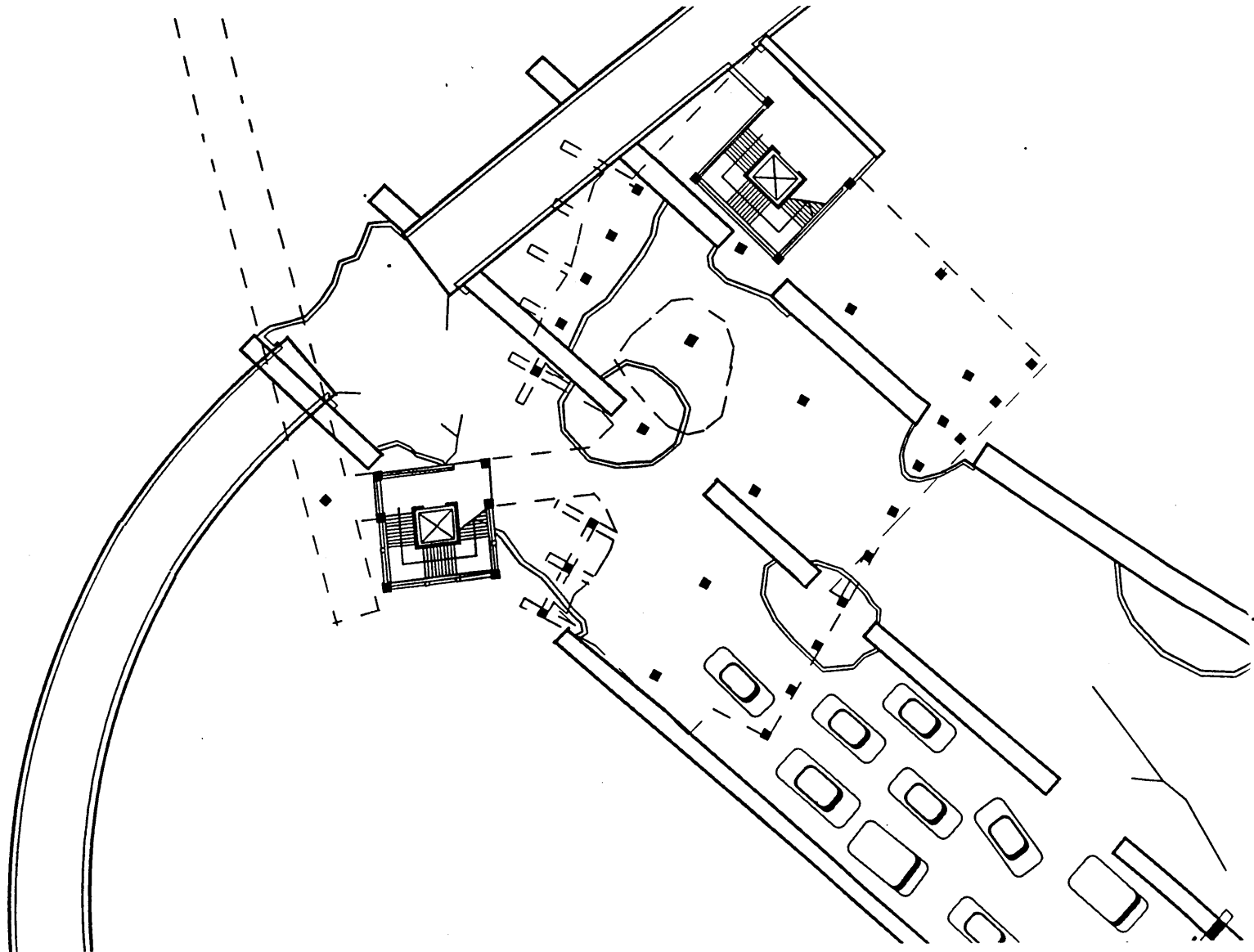


Fig 6.39 Artery Level Plan of the Main Exhibition Building

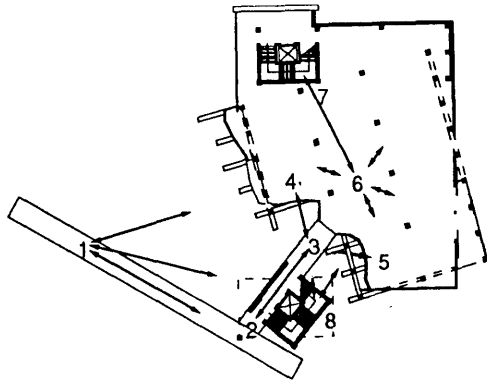


Fig 6.40 : Orientation

*To Capture an audience with...
...clear and diverse options*

At the artery level, pedestrians can enter the tower from the artery surface itself as well as from the ramp stretching over Cross Street. Pedestrians approaching the building coming along the ramp connecting both sides of Hanover Street can enter the museum at the first floor. From this ramp they can see the tower, the building, and the entrance to the tower which is marked by a column standing right in front of it. (see Fig.6.40 ,#1). Once turning into the museum (Fig 6.40 ,#2) they can clearly see the main exhibit area (Fig 6.40 #6). Previews of exhibit areas are provided from the tower (Fig 6.40, #8). Continuing ahead to the exhibit area visitors can see the exhibits in the areas to the side (Fig 6.40 ,#4,5) while walking on towards the main exhibition building. Once in the building, visitors can view from the central area all exhibit spaces around them before choosing where to go. The directions toward the smaller exhibit areas are further accented with cracks in the concrete floor (which picks up the theme of the break as well). From the central place (Fig6.40 ,#6) visitors can also see two circulation cores. An area in the concrete floor is 'eaten away' and covered with a meshed wire (see building floor plan Fig 38 and Fig 39). Through this area visitors can look at the artery below them. Another spot where visitors can gain view of the artery below is from the balcony. Looking down they can see to the ground level through a break in the artery structure.

The shift of the two rectangles creates a large central space, with small spaces around it. [Fig 6.41] The large central area can be used as a temporary and flexible exhibition space. It can be altered and subdivided according to the needs of specific exhibits. The exhibition areas created around it are less flexible because of their small size. This large space contrasts to the linear, sequential spaces of the ramps, and the circulation cores.

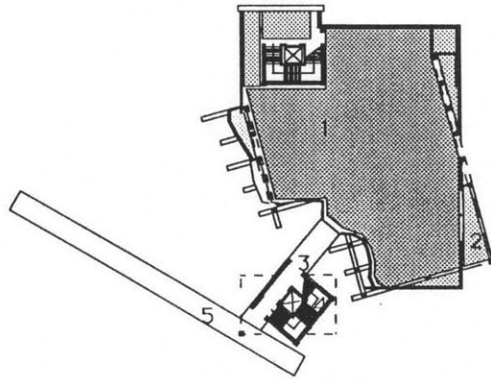


Fig 6.41: Variation in the sizes of spaces

From almost any point from the building, views of the city can be incorporated [Fig 6.42] and become part of the exhibits. From the tower, visitors can gain a view of the reconstructed archaeological digs and the North End and the Old North Church from tower [Fig 6.42, #6]

Standing at the central point of the exhibit area, visitors can get different views of the city, framed by the structure and the screens around it. Looking toward the downtown area, the view is framed by the opening leading to the balcony and the columns behind it.[Fig 6. 42, #8] Looking through the large window [Fig 6. 42, # 9] the situation is reversed. The view is framed with columns closer to the viewer and the window further behind. The view toward the North End [Fig 6. 42, #7] is framed by free standing columns and glass windows between them.

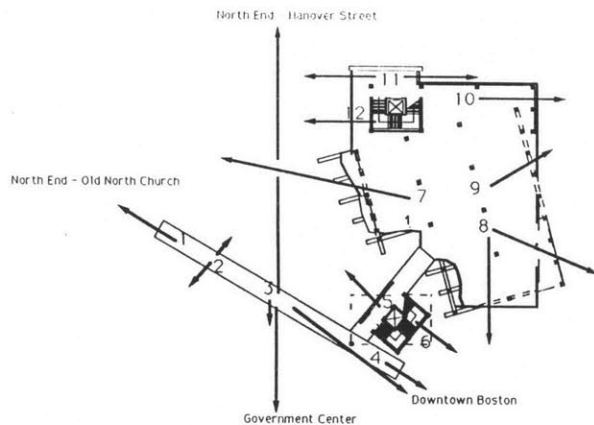


Fig 6.42: Borrowed cityscape

In addition, objects can be placed in the small spaces around the central exhibition space, or in front of them to frame the views of the city in a similar way. The objects or any exhibits used can be directly related to the views so visitors can study the exhibits while referring to the real city outside.

Conclusions

I started this thesis with the concern that the lack of public debate on the development of the land that will be generated by the project may cause the Boston Redevelopment Authority to overlook its long standing goal to make the downtown a place for pedestrians. I chose to design an exhibition that would provoke discussion on this topic and would counter the limited discussion. To be able to design an appropriate exhibition I both looked at the history of exhibition design, and I tried to gain a better understanding of the nature of discussions taking place in relation to the future development of downtown Boston.

The study of the history of exhibition design revealed that using exhibitions as a method of communicating and experimenting with new social and architectural ideals is not a new one. Though the examples of exhibitions and museums I have shown cannot do justice to the history of exhibition design and to the contribution of architects in shaping exhibition design, these examples provide important lessons that have guided me throughout the design. For example, closer attention to the viewers' background and experience should be considered when designing the exhibit. Moreover, the way exhibits and their settings are designed can influence who visits the exhibit, and can help lay persons understand the exhibits better. These examples and especially the example of the Children's Museum provide ways to communicate with the viewers through the design of the exhibits.

As I began to explore discussions taking place about the Central Artery Project and the future development of Downtown Boston, I met with many designers, planners, and individuals

who have been in some way involved in the Central Artery project and learned about the project's history, the visions for the development of downtown, plans for the decade of construction and about the Massachusetts Department of Public Works public participation program. Many surprises awaited for me along the way. Most of the persons I talked to raised similar concerns to my own regarding the pedestrian environment, the lack of effective communication between the project and affected communities, and discussions about the development on the surface. Many design ideas for the development of the land created by the project have been generated within the project as well as outside of it. In both cases, ideas that did not comply with the engineering and traffic constraints were overpowered by priorities generated by traffic and engineering considerations.

Most striking to me was that the two values seemed to be shared by every one I talked to, -- broad public participation, and provision of a better pedestrian environment downtown -- were in danger of being neglected. By accepting the traffic constraints and developing the surface in the form of two boulevards, the BRA is likely to create a barrier for pedestrians on the surface. The conventional methods of communication the MDPW public information staff chose to use may exclude many persons, thereby contradictory to their efforts to reach out to a broad public.

As a result, my interest shifted. I was no longer concerned with designing a particular exhibit that would provoke discussion regarding the development of the surface land. Instead, I became interested in proposing an appropriate setting that would enhance a living interplay of ideas. How can exhibition design be applied to enhance and encourage communication among designers, planners and other professionals as well as with

laypersons who might be affected by their decisions ?

Attempting to develop a setting for a live interplay I drew both from my study of exhibition design and my knowledge of the Central Artery Project. I have regarded change of the kind reflected by the depression of the Central Artery as an opportunity for everyone to celebrate, learn, and get involved. Searching for ways to offer everyone this chance, I suggest that one could capture a broad audience and tell the story of change through design. I applied these principles in every scale of my design including the site layout, the choice of elements on the site and the design of the main exhibition building. The design of the setting, what I call the Living Museum, illustrates one way in which these design principles can be applied and the pedestrian experience of the exhibits can be enriched. My interventions, including placing a system of pedestrian ramps across the site, and keeping pieces of the elevated structure in place, respond specifically to the history, conditions of the site, and the concerns of the North End residents.

If the Living Museum were implemented and existed exactly as described in this thesis it would be successful in my view, if people -- passerby, residents of the North End, tourists, planners, designers and others -- would come, discover the Living Museum and come again; if they took part and changed its environment; if they gained new knowledge and had a chance to change their ideas; On the other hand, it would be more accurate to say that, the Living Museum would be a failure if it were implemented exactly as I outlined it. The power of the Living Museum lies in its new ideas of talking about change while it is taking place, where it is taking place and in its specific application of exhibition design to get everyone involved in this change.

Specific interventions I have used on the site of the Living Museum, like New Parts for the 'Kit of Parts' or 'on site modelling' could be applied to other major pedestrian walkways running under the elevated Central Artery throughout downtown. If applied these would have to be molded and revised to fit the special conditions of each site, and the needs and the backgrounds of the pedestrians crossing it. If the intent is to attract everyone to come to these crossways, new measures would have to be considered because most walkways do not host a diverse crowd of pedestrians as does the crossing connecting between the North End and downtown. Pedestrian ramps, and retaining pieces of the artery should also be carefully considered. Key to success on one site, they might be a cause for disaster on another. In addition, if pieces of the artery were retained and ramps were stretched across all pedestrian crossings a new kind of barrier might be created

Of far greater importance is the lesson that the pedestrian experience during construction on site can be enriched and that these experiences can get people involved in changes taking place. Providing pedestrians the opportunity to climb up the "forbidden" down-ramp may be one unforgettable experience that is worth a thousand words. Experiencing the artery structure in new ways, from below, above and all directions might get persons who never thought they would be interested, involved in how their city is made. The 'ugly barrier' can break barriers !

The overall concepts and design of the Living Museum illustrate that design can make a difference not only in creating better environments in their final form but in the process of creating them as well. Design offers new grounds for interactions between laypersons and professionals and the possibility for

them to go beyond conventional means of communications. Features such as light, texture, real objects, layout and movement can help laypersons understand designers' and planners' ideas. and to imagine new future environments. together with architects and planners Involvement and participation can become in this setting a two way street of learning and teaching.

The concepts and design of the Living Museum are an opportunity for live interplay of ideas. But the design of such a museum cannot stand alone. If planners and designers come to the Living Museum to present predetermined ideas to the public, if the exhibits placed in the Living Museum are not conceived with an experimental attitude, and if passerbys do get involved with out receiving a timely response (for example if they called from the Hot Lines stationed in front of 'Peep Holes' and no one answered) the proposed setting will become a place to view change and gain only an appearance of involvement. The Living Museum would die.

To bring the museum to life, and implement it, at least in spirit, I would try to identify the appropriate institutional setting to help maintain its experimental and interdisciplinary spirit. I would study more closely who would support the ideas of the Living Museum and might want to adopt them.

Within the BRA and the MDPW, there are several groups involved in the project, that might be interested in applying new methods of communication, for example, the public information group of the MDPW. Neither the BRA nor the MDPW staff need to invent these methods from scratch. The Children's Museum is right next door ! The Children's Museum staff could offer their expertise in speaking with their audience

through design, and would bring with them audiences who might not otherwise get involved. Participating in neighborhood exhibitions, and especially exhibitions on the construction site, would be a golden opportunity for the Children's Museum staff as well. They could extend their interest in using the city environment as a lab and would be able to teach and learn in the city itself.

In addition, I would study more carefully the nature of the opposition such an attempt to implement these ideas would generate. Because, one group's interest might be a source of compensation for another group's concern. One main concern has been the safety of pedestrians during construction. Pedestrian safety can be achieved in a number of ways while enhancing the pedestrian environment and implementing ideas like the Living Museum. The underlying source of opposition by contractors might actually be extra costs required. Groups involved for their own interests could bring with them sources of funding that would cover at least part of any additional costs required. For example, research groups interested in experimenting with new ideas to represent future environments on site and in full scale might be interested in taking part in the Living Museum.

At this stage it might be too late to stop the momentum of the Central Artery Project and affect decisions like developing the surface land in the form of two boulevards, or the intent to dismantle the artery structure. The Central Artery Project will be a focus of interest and research years to come and is likely to affect the way planners, designers and laypersons think about the process of creating and shaping their cities. What ever the exact shape the Living Museum would take in form and spirit I think it is important to include with it an unforgettable

experience for pedestrians. The lingering memory of the structure in a First Night's parade, a marathon or any other event on the Central Artery might affect the way people think and could remain part of Boston's legacy forever.

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Fig 6.31: Computer drawn plans prepared by Avigail Shimshoni , pasted by Chloe on CAD generated plans from the Central Artery Project by Chloe and rendered by Pratap Talwar and Alona Shiftan
Fig 6.32: Sketch by Avigail Shimshoni
Fig 6.33: Computer generated elevation by Avigail Shimshoni with the assistance of Paul and Gang with initial layout and the assistance of Pratap Talwar with rendering
Fig 6.34: (same as 6.30) Computer drawn elevation by Avigail Shimshoni, with assistance of Gang Peng and Paul with the initial layout, and the assistance of Pratap Talwar with rendering
Fig 6.35: Computer generated diagram prepared by Avigail Shimshoni
Fig 6.36: Collage of Computer generated plans prepared by Avigail Shimshoni
Fig 6.37: (same as 6.18a) Section inked by Pratap Talwar
Fig 6.38: Computer generated plan prepared by Avigail Shimshoni
Fig 6.39: Computer generated plan prepared by Avigail Shimshoni
Fig 6.40: Computer generated diagram prepared by Avigail Shimshoni
Fig 6.41: Computer generated diagram prepared by Avigail Shimshoni
Fig 6.42: Computer generated diagram prepared by Avigail Shimshoni