A Museum of History for Boston

submitted in partial fulfillment of the requirements
for the degree of Bachelor of Architecture at the
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June 1965

Calvin F. Opitz

Laurence B. Anderson, Chairman of the Department of Architecture

April 5, 1965

Dean Pietro Belluschi
School of Architecture and Planning
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Dean Belluschi:

In partial fulfillment of the requirements for the degree of Bachelor in Architecture, I herewith respectfully submit this thesis entitled "A Museum of History for Boston."

Very truly yours,

Calvin F. Opitz
Cambridge
Massachusetts

TABLE OF CONTENTS

List of Figures and Tables iv

Abstract v

Acknowledgments vi

I. Introduction 1

II. The Historical Museum 5

III. Site 10

IV. The Building Proposal 18

Bibliography 23

Appendices 24

A. Site Photographs
B. Space Allotments
C. Listing of Display Items at Local Museums

LIST OF FIGURES

Fig. 1	Sites Considered	11
Fig. 2	Site Chosen	16
Fig. 3	Bonner Map of Boston	17
Fig. 4	Organization	22

TABLE

Attendance Data for Boston Facilities	19

ABSTRACT

The City of Boston has a history which warrants the building of an historical museum. Such a museum might well be built upon the site currently occupied by the soon to be replaced City Hall. It would have to conform to certain special requirements in order to effectively safeguard its collection, but it would also have to be organized in a clear manner so that the collection could be easily and logically viewed.

ACKNOWLEDGMENTS

I wish to thank Professor Douglas Adams of the Department of Mechanical Engineering of M. I. T. for his extensive help in both historical researching and for his introduction to many of the local historical societies. Among these especially helpful were the Somerville Historical Society, the Cambridge Historical Society, and the Bostonian Society. I also wish to thank the curators and staff of the Jason Russel house in Arlington, Massachusetts. Further thanks are due the Architecture Department thesis committee for its help, especially in the problem of site choice. Lastly, recognition is due my wife Betsy for her aid in countless ways, ranging from preliminary typing to site surveying.

I. INTRODUCTION

Any reading of early American history will serve to convince even the most casual student of the importance of Boston and the Massachusetts Bay Colony as a nucleøus of the English speaking United States of America. In 1620, the Pilgrims arrived and established a rather autonomous colony under the Mayflower Compact. In the years following, however, as the population of the colonies increased, the autonomy of the colonists decreased. At length, open colonial resistance appeared to this trend, but the British Parliament continued to pass acts which the colonists considered to be harrassment. In 1770, the "Boston Massacre" occured, in which British troops were forced to fire upon the colonists. In 1773, the Boston Tea Party served as further open protest. At last, open war broke out in April of 1775 as the British troops crossed the Charles River on their way to destroy colonial powder stores at Lexington and Concord, and the colonists banded together for defense.

The events of the early years were not entirely of political or military nature, however. Other fields of endeavor were pursued. In 1636, the first college in the New World was established in Cambridge, and the Boston area has since held a distinguished record in education. Some of the earliest industries in the western hemisphere settled upon the Boston area as it became a leader in the production of textiles, ships, and more. But one of the most fascinating aspects of Boston history is its record of geographical-topographical change.

The cutting down of the Traemount, Beacon Hill and its neighbors, and the filling of the harbors, is a most amazing feat.

Yet, with all its rich and interesting history, Boston has no central museum to commemorate and clarify these many events. The city of Boston is, in itself, something of a museum. It is actually difficult to walk along a downtown street and not become aware of some historical marker set in the sidewalk or hung up on a building wall, giving an often much too brief account of events which occurred on that site. A number of the most significant buildings have been retained as small museums, each housing its own little potpourri of relics. These make excellent monuments, but, when asked to function as complete museums, they become hopelessly overburdened. It is curious that in its long history the city of Boston never acted to establish a place both for the casual historically motivated visitor to browse and for the serious history student to study. A precedent for such a museum may be found in the fact that historical collections are predominant in the majority of museums in the country. Carl E. Guthe in The Management of Small Historical Museums[1] states that, "40% of the 559 members of the American Association of Museums possess historical collections. Furthermore, of these, 70 are general museums, while 81 are local city or county museums." He goes on to say:

> "most small museums, which far outnumber the membership of the Association are local history museums that cannot yet afford to become members. The inevitable conclusion is that most of the museums in this country are the small history museums which

---

[1] Carl E. Guthe, "The Management of Small History Museums," in Bulletins of the American Association for State and Local History, Vol. II, No. 10: October 1959.

> seek to stimulate the interest of their own communities in historical subjects."[2]

There are in the Greater Boston area a large number of small local historical societies which, within the scope of their own necessarily limited capacities, are functioning to bring an awareness of the historical significance of the locale to the populace. For the most part, however, their facilities are barely adequate to function in any role other than as a meeting place and depository for the membership.

A typical example of this situation is found in the Somerville Historical Society. It maintains a small building with one room used as a meeting hall and another as an exhibition area. The collection is small but of high quality. It contains items as divergent in both scale and subject as small articles of early Somerville glassware and an impressive Bulfinch staircase from an old Somerville mansion, but these items may be seen by appointment only, since the facility is not large enough to warrant hiring a person to maintain regular visiting hours. The president of the society, in addition to his administrative duties, takes time to visit the building daily and perform minor custodial functions. It is only through the devoted efforts of persons such as these that the historical societies can maintain their buildings and function as well as they do.

It is unfortunate, but inevitable, that these small centers are rarely seen by anyone save the regular society members and a few

---

[2]Ibid., p. 259.

citizens interested enough to go to the trouble of making an appointment. They are almost never discovered by casual visitors touring through the area. A major reason for this is simply that the buildings are quite isolated from the mainstream of visitor traffic. Also, for the very casual visitor, the extremely local displays are of too limited a scope to be of much interest. These reasons argue for the establishment of a centrally located museum in the Boston area to serve as a more general depository for items which pertain to the history of the Greater Boston Massachusetts Bay area, with adequate facilities to attract and accommodate large numbers of people.

II. THE HISTORICAL MUSEUM

"The primary obligation of a museum is to guarantee adequate preservation of the collection and effective use of its contents."[3] It is clear that one of the major factors to be considered in the design of any museum is the security of the collection. In a historical museum, this means more than mere protection from theft, loss and vandalism. Many of the pieces both on display and in storage will be very old and exceedingly fragile. They are likely to be harmed by excessive light, heat, moisture, and dryness as well as handling or even jarring. The displayed collection must receive protection from these potential sources of damage while at the same time, be presented to the visitor in a pleasing and effective manner. Little has been written in recent years about either the design of history museums or the method of display for such collections. In a very general UNESCO publication, Bruno Molajoli enumerated some of the special requirements of certain kinds of collections. He suggested that the display of old paintings requires a room at least 16' by 23' with a minimum ceiling height of 14'. Furniture and decorative art in showcases can be displayed in a space with a lower ceiling. Silver jewelry is shown to advantage in wall cases lit from within. Artificial light can be used for showing drawings, engravings, watercolors, textiles, etc. These can be set in a long narrow room, since

---

[3] Ibid.

there is no need to stand back for viewing. Historical museums, he asserted require that relics and papers be kept in cases with protective devices and shown under artificial light.[4]

This is a very general set of suggestions but it does serve to establish certain broad kinds of considerations which must influence the formulating of a museum design program. On the other hand, it is also certainly true that the more flexible and general the exhibition space, the greater the potential usefulness of the building.

The requirements of the stored collection are somewhat different. The pieces are kept in large cupboards with primary concern resting in their safety. This portion of the collection is used by only one small class of visitor, namely the professional, including both student and advanced researcher. It is, therefore, of utmost importance that these cupboards be efficiently arranged and easy to use. Furthermore, a most convenient arrangement would place each area of storage contiguous with its relevant display area. It is, on the other hand, also desirable for the individual storage areas to maintain some continuity as a group or system. Molajoli summarized this dilemma in the statement that there are "two conflicting requirements of circulation which must be resolved: (1) that there be easy communication between public rooms and the museum services, and (2) that it be possible to separate these two functions so they can be utilized independently to safeguard the collection."[5]

---

[4]Bruno Molajoli, "Museum Architecture" in The Organization of Museums, Practical Advice, UNESCO, 1960. Company, New York.

[5]Ibid.

While storage and exhibition account for the major space and functional uses of a museum, there are numerous secondary facilities which must be provided. Firstly, to effect the collection security demanded above, a suitable lobby or ancillary space must be provided. This ancillary space serves as a control point and should be provided with a separate entrance to and from the exhibit space. It serves as an introduction to the museum from the outside. It might also contain one or two tables, catalogues, cloak room, benches, notice board, plan of museum, clock, telephone booths, letter box, etc.[6]

Many museum service areas must also be planned, and these ought to be located so as to maintain connection with the storage areas. Molajoli[7] suggested that there are two classifications of service: external and internal. External services would be used by visitors, but exist independent of the exhibit functions. They should include rooms for temporary exhibits, lectures, and concerts. A library might also come under this heading. Internal services are for the use of the museum staff and would include workrooms for repair and maintainance of the exhibits, storerooms, a laboratory for examination of material, a photographic laboratory, and a workshop.

The external services, as he defines them, ought to have an immediate relationship to the exhibit or visitor circulation spaces, while the "internal service" must function more intimately with the stored collection or its circulation system. The workrooms and laboratories must connect in some reasonable way with the last class of

---

[6]Guthe, Op. Cit.

[7]Molajoli, Op. Cit.

service space, that devoted to the administrative functions. Separate offices for director, curator, and museum secretary should be provided, as well as some general clerical office space. Assuming the museum has a board of directors, there should also be a board room with an appended waiting room, and, if possible, a chairman's office.[8] There must, of course, be some means of public access to these offices, but this might be best gained through an entrance other than that used for general visiting purposes.

Two facilities classed as external service deserve special mention. One is the library. It must be separate from the central museum activity, since its function is more semi-public than public and its environment should be a more quiet one. It should communicate with both the public entrance and with the service circulation system. It would probably best consist of a modest reading room with stack space appended, and these subdivisions could in turn be classed as public and private respectively. The other special room is a kind of special purpose auditorium-amphitheater. It would contain a large map-model in the center and, perhaps, some form of hanging projection screen above. In this room, by means of lights, animations, and projection slides, short lectures would be presented describing sequences of events which are best explained in spatial and topographical terms. Displays of this nature have been used at the site of the Battle of Gettysburg with considerable success.

---

[8] Ibid.

This amphitheater might also be able to be used as a general lecture room. If not, such a facility ought to be included for lectures, movies and similar audio-visual events. It might also be made available to local historical societies for the holding of special meetings. This would require that separate access exist to the hall, which would not pass through the collection areas.

The proportion of space to be devoted to exhibit, stored collection and service can only be determined by means of a rather carefully considered estimate. It must be remembered, however, that in spite of whatever care has been used in preparing the estimate, it is still only a guess and should not be considered inflexible or not subject to revision. Molajoli suggests that service spaces may account for up to fifty per cent of a museum's space.[9] However, a rule of thumb, according to Guthe[10] is that forty per cent of the space be devoted to public exhibition halls: forty per cent to collection, filing and associated work rooms and laboratories: and twenty per cent t o offices, service and maintainance. In any case, the specific program, intent of the museum, and nature of the collection must serve as the most significant guiding factors. The space allocation for this museum is presented in the appendix.

---

[9] Ibid.

[10] Guthe, Op. Cit.

III. SITE

In choosing a site for a museum, clear advantages may be found in both a central location and in one out of the city. The obvious main advantage to the in-town site is its ready accessibility. The out-of-town site, on the other hand, allows much greater ease of expansion. The freedom to build parking lots out of town, however, is somewhat counterbalanced by the ease of pedestrian access in town. It is of utmost importance that the site for a particular museum be chosen with its particular function and potential visitor in mind.

Three sites were considered for the Boston Museum of History (see Fig. 1). The first of these was located at the site of the M.B.T.A. yards at Harvard Square. The location on the banks of the Charles River in the midst of the Harvard community provided a very attractive and pleasant setting. There was a fair amount of land available and proximity to Harvard Square made public transportation access reasonably good. The chief disadvantage to the site was its distance from central Boston. The casual visitor to Harvard Square is aware of having left Boston and is now more interested in the University, its landmarks, libraries and museums. It would seem that another such educational function in the immediate area would be somewhat redundant. Furthermore, since the subject matter of the museum centers in Boston, the location seems decidedly out of place.

The second site, or actually pair of sites, to be considered was at the other end of the Charles River Basin, near the Charles

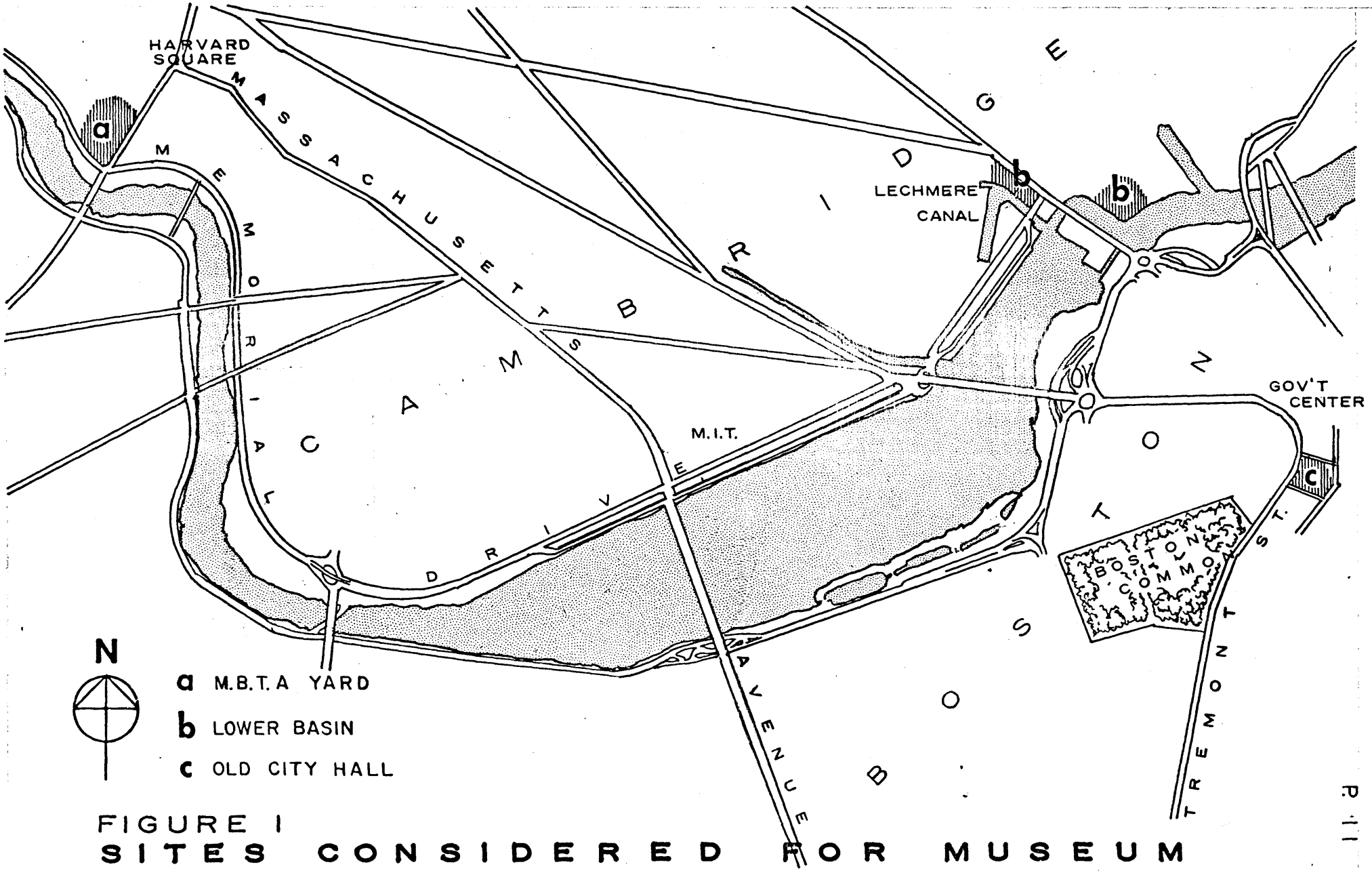


FIGURE 1
SITES CONSIDERED FOR MUSEUM

River (Craigie) Dam. The first of these was just above the dam along one side of the remaining portion of the Lechemere Canal. This site had strong historical advantages, being, as well as can be determined, the landing place of the British troops in April of 1775, beginning their march to Lexington and Concord. A second advantage over the first site was its relative nearness to the center of Boston. It was considered likely that the green belt along the shores of the Charles River Basin would eventually be extended to the dam on the Cambridge side to include this facility, in much the same way as the Museum of Science is included in the dam site parkland. The site was again large enough to contain parking. Public transportation was thought to be provided by Lechemere M.B.T.A. line. The North Terminal Area Study of 1962,[11] in its Route number 1 proposal, however, recommends abandonment of this line. That would create a prime defect in both this site and the next.

The second of these two sites was just below the dam on the wide peninsula formed by the narrowing of the Charles River. It is currently used as a rail and truck depot and is reached primarily from the dam itself. It possessed many of the same qualities as the other site but was not quite as well located from the historical point of view. On the other hand, it was in better visual contact with the Science Museum and would participate in the lower basin development as suggested in the North Terminal Area Study. This improvement would

---

[11] North Terminal Area Policy Committee, North Terminal Area Study, August 1962.

consist of the building of a new lower Charles River Dam and the extending of the green belt and recreational facilities from the present dam to the new one.[12] A problem of both of these sites is the unpredictability of the outcome of the planning suggestions. Both of these sites are currently located in very low grade industrial areas which would not serve as any positive inducement to potential visitors. Furthermore, even if parklands were introduced, the lower basin promises to be a fiercely highway-congested area since, in addition to the roads already present, the connections of the Inner Belt and to Interstate Route 93 will probably appear there.[13] Another reason to question the future of these sites and their neighbors is the arrival of the NASA space center in Cambridge. This will displace very many of the East Cambridge industries. A likely direction for these industries to migrate is toward the relatively cheap lands farther East, which includes the sites in question. Furthermore, the City of Cambridge is not likely to discourage such a movement since it is desirous to keep these tax revenue producing entities within the city if possible.

Finally, both of these sites suffer from the same problem as does the first, and to an even greater extent. While they are closer to the city of Boston, they still do not participate in the life of the city. In the case of the first site, at least visitors to Harvard might be attracted to the facility, but with either of these sites, there is

---

[12] Ibid.

[13] Ibid.

little reason to believe that any but the most serious visitors could be induced to make the trip to the site. And, whereas the Harvard site provided the visitor with an environment which is conducive to the study of history, the dam sites definitely do not.

The last site considered was located where the present City Hall stands in downtown Boston. This site has certain very definite limitations and drawbacks. It is rather small, comprising about 23,400 square feet. It allows no possibility of a parking facility. It requires that the present building be acquired and demolished. It imposes on the designer the responsibility of producing a building to share a space with one of the city's important landmarks, King's Chapel. But it does also present some very important advantages. It is in the central part of the city, in a place conspicuous to out-of-town visitors, suburban visitors, and Bostonians. It is surrounded by distinguished neighbors of many ages ranging from the historic King's Chapel and the nearby Old State House to the equally near New State House and the New Government Center.

The convenience of the site is a factor of major importance. It is in the heart of the downtown area, just a few blocks from the central shopping district. A number of parking garages exist nearby, including the huge new structure in the Government Center. The M.B.T.A. has nearby stations in the Government Center, in the Old State House, on Tremont Street, and on Washington Street. In addition, the site is on the popular Freedom Trail (see Fig. 2).

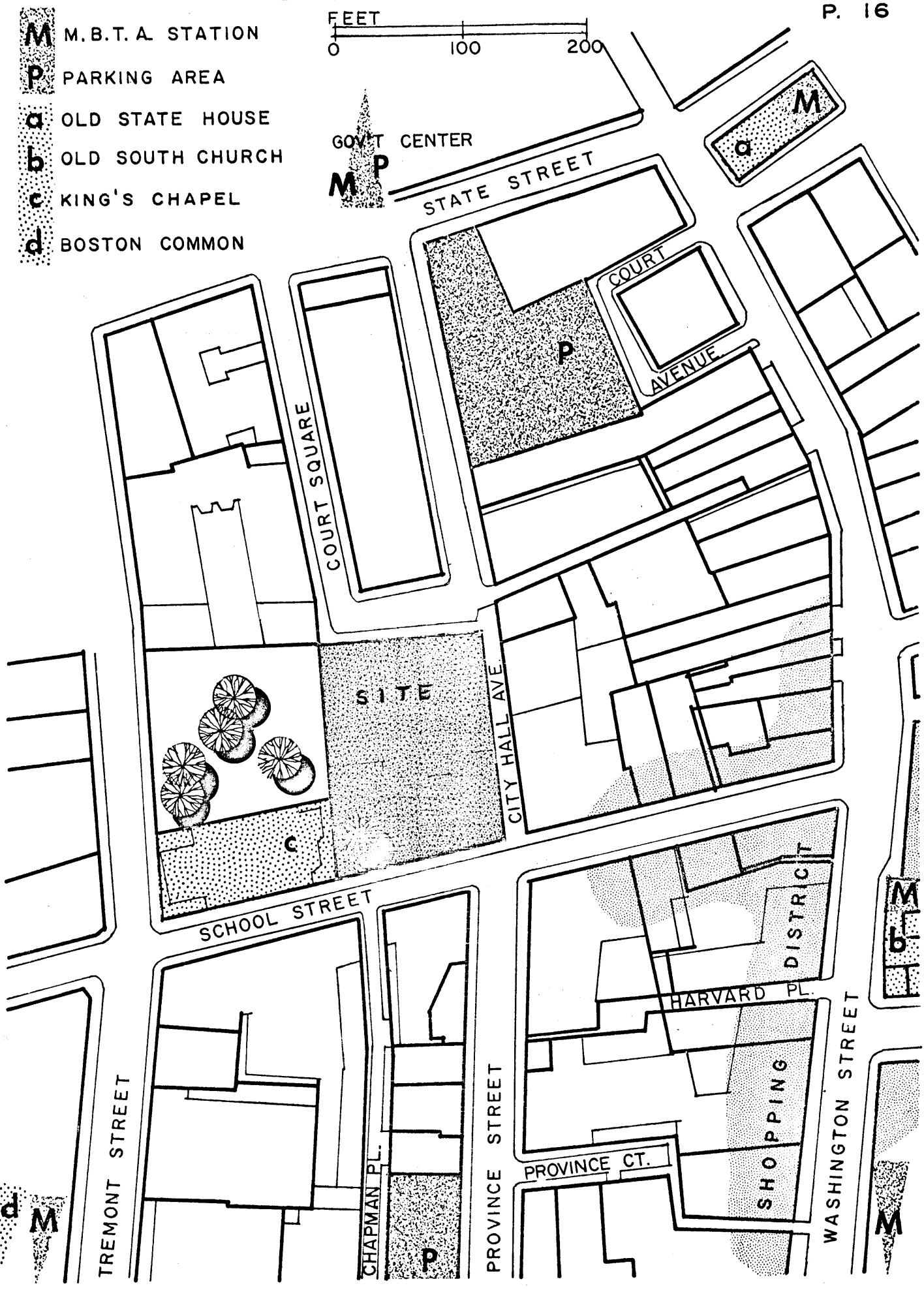
The site does present the visitor with an historic environment. It is bounded on the west by King's Chapel and its graveyard, dating

to 1688. It is very close to the Old South Church (1660) and the Old State House. Within a short walk are the New State House, the Boston Common, the Park Street Church and other historical sites (see Fig. 2). On this very site stood the Old South Grammar School as shown on John Bonner's map of Boston in 1772. (see Fig. 3)

The site is part of a block bounded by School Street, Washington Street, State Street, and Tremont Street. These form a counter-clockwise circulation loop. The block is partially punctured by Court Square which provides access from State Street to the rear of the site offering easy access for service (see Fig. 2).

It is assumed that the present building will be vacated when the new City Hall building is completed. It is further assumed that the old building is structurally unsuitable and inadequate for the purpose of this thesis, and that, therefore, remodelling of the building is not an economically or functionally reasonable approach to the problem of using the site for a museum. It is recognized, however, that excavation does exist where the old building is situated, and that it would be advantageous to use it. Furthermore, it is recognized that the soil under the existing building has been well compacted and that, therefore, it differs markedly from the soil under the unbuilt-on portion. It is reasonable to assume that these two portions of the site will exhibit significantly different settlement characteristics when built (or rebuilt) upon.

FIGURE 2- SITE CHOSEN FOR MUSEUM



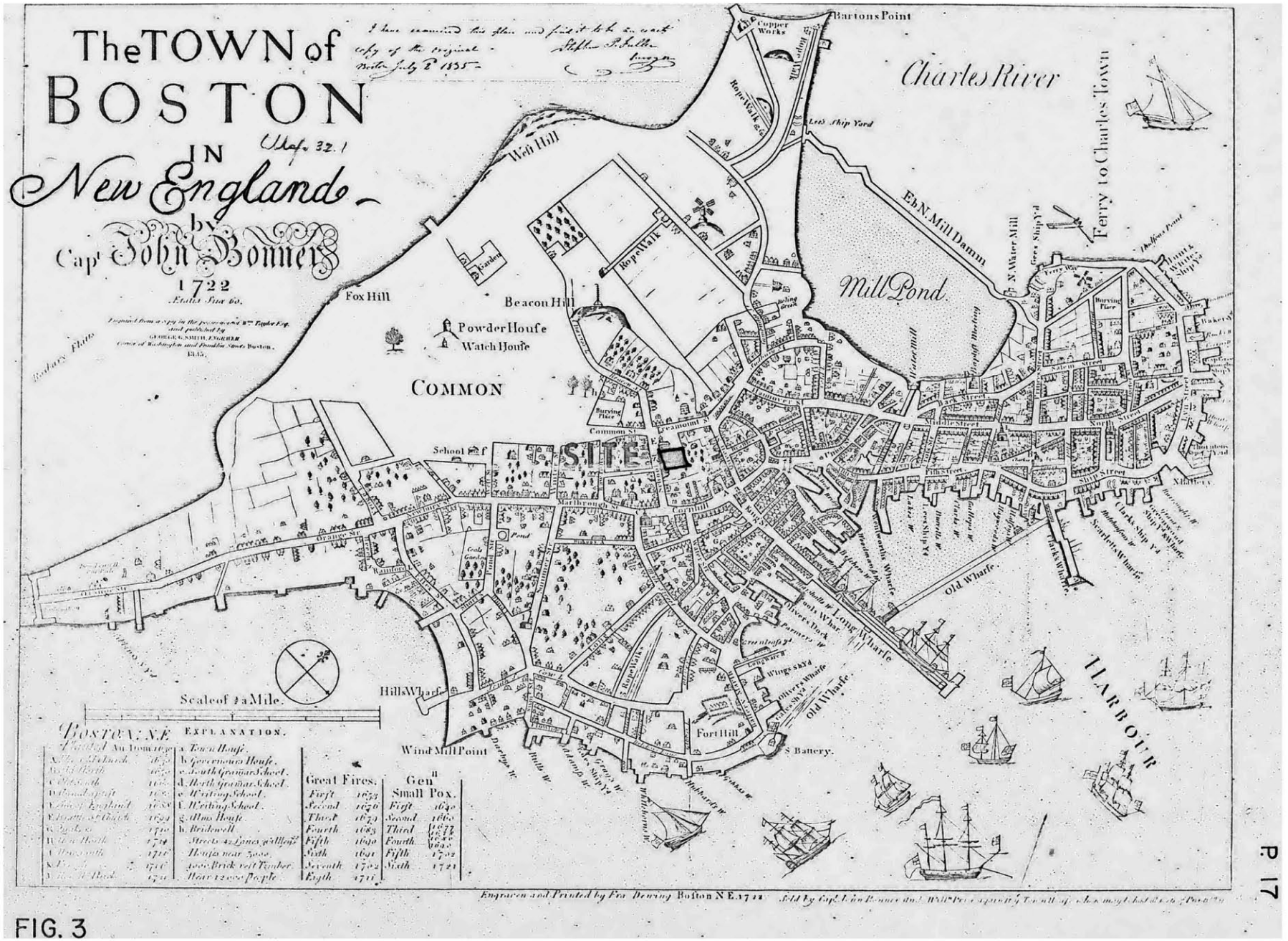

The TOWN of
BOSTON
IN
New England
by
Capt John Bonner
1722
Charles River
Barton's Point
Copper Works
Rope Walk &c.
Lee's Ship Yard
West Hill
Eb. N. Mill Damm
Ferry to Charles Town
Mill Pond
N. Water Mill
Fox Hill
Beacon Hill
Powder House
Watch House
Rope Walk
Garden
COMMON
Burying Place
Common St.
Tremont
School
SITE
Marlborough
Cornhill
Ann Street
Orange St.
Ramsdon
Scale of ½ a Mile.
Hills Wharf
Wind Mill Point
Fort Hill
Battery.
Old Wharfe
Long Wharfe
Clarks Wharfe
Scarlets Wharfe
Oliver's Dock
Oliver's Wharfe
Old Wharfe
HARBOUR
Boston N E
Explanation.
a. Town House.
b. Governours House.
c. South Grammar School.
d. North Grammar School.
e. Writing School.
f. Writing School.
g. Alms House.
h. Bridewell
Streets 42 Lanes & Alleys
Houses near 2000.
1000 Brick & 1 Timber.
Hear 12000 People
Great Fires.
First 1653
Second 1676
Third 1679
Fourth 1683
Fifth 1690
Sixth 1691
Seventh 1702
Eyth 1711
Gen.ll Small Pox.
First 1640
Second 1666
Third 1677 1678
Fourth 1689
Fifth 1702
Sixth 1721
Engraven and Printed by Fra. Dewing Boston N E. 1722

FIG. 3

p. 17

IV. THE BUILDING PROPOSAL

A primary fact which must be ascertained about any public building before any size estimate can be made is the number of people it is intended to accommodate. Unfortunately, it is also a very difficult fact to predict and is, at best, a carefully considered estimate. Attendance figures for many Boston institutions of this general nature were obtained (Table I). The yearly figures ranged from about 150,000 to 800,000 people per year. The Old State House handles about 150,000 people per year. It is, however, a very small facility with a very static display collection. The Museum of Fine Arts, on the other hand, is very large and has constantly varying exhibits, including many special shows. For this reason many people become regular visitors. This leads to the huge attendance figure of 800,000 people per year. The Boston historical museum would fall somewhere between these two classes. There would be a certain amount of repetitive visiting by students and scholars. The displays would hopefully vary somewhat, although by their very nature, they are more static than those in an art museum. Allowing for the increasing interest in history among the general public and the approaching Revolutionary War bicentenniel, the figure of 500,000 people per year was decided upon. This would give a peak daily attendance of about 5,000 people and a maximum of about 1,000 in the building at a time.

TABLE I ATTENDANCE DATA

NAME	PEAK YEARLY ATTENDANCE	PEAK YEAR	MAXIMUM DAILY ATTENDANCE	PEAK SEASON	AVG. DURATION OF VISIT	MUSEUM HOURS	PEAK HOUR
MUSEUM OF FINE ARTS	800,000	1964	43,000(1)	WINTER	1.5 HR.	TUES. 10-10 W-SAT. 10-5 SUN 1-5:30 MON: CLOSED 44.5	3 PM
OLD STATE HOUSE	139,000	1963(2)	1300	SUMMER	20-30 MIN.	MON.-SAT. 9-4 42	3 PM
U.S.S. CONSTITUTION	371,000	1963(2)	5500	JULY-AUG.	15-20 MIN.	(3)	11:30-12:30; 3-4
PAUL REVERE HOUSE	150,000	1964	12-1800	AUGUST	15 MIN.	9-3:45 WINTER: 5 DAYS/WK 33.75 SUMMER: 6 DAYS/WK 40.5	MORNING
BUNKER HILL	400,000(4)	1964	2500(5)	SUMMER	20 MIN.	WINTER 8-4:8 SUMMER 9-5:8 EVERY DAY EX/XMAS: 56	11-3:30
MUSEUM OF SCIENCE	418,000	1964	4000	SUMMER	1.5 HR.	TU-SAT 10-5 FRI 10-10 SUN 1-5 51	WEEKDAYS: 10-11 SUNDAYS: 4 PM

(1) KENNEDY LIBRARY EXHIBIT
(2) N.Y. WORLD'S FAIR CAUSED REDUCTION IN NEW ENGLAND TOURIST TRADE
(3) SPECIAL GROUPS, WHICH COMPRISE A GOOD SHARE OF ATTENDANCE, ARE SHOWN ABOUT AT SPECIALLY ARRANGED HOURS
(4) OF THESE, 100,000 CLIMB THE STRUCTURE
(5) JUNE 17

A second major consideration in designing a museum is the development of a scheme of organization of the exhibit material. Little has been published since World War II regarding this problem. There is no tried and proven precedent established to guide the designer in this matter. It was decided to institute four broad subject groups, these being the political-military, the physical-geographical, the industrial-commercial, and the educational-cultural. A second form of organizational subdivision is also proposed which is simply based on historical chronology. The first grouping here would be the Colonial Period, extending from the earliest settlement in 1620 to 1763; the second group would be the Revolutionary Period, extending from the Writs of Assistance in 1763 to 1787; the third group would be the Federal Period, commencing with the signing of the Constitution in 1787 to 1829; and the last period, would cover ~~covering~~ the growth of Sectionalism, beginning with the inauguration of Andrew Jackson in 1829 and continuing to the beginning of the Civil War in 1861.

These two forms of subdivision could be applied to one another to yield workable size subunits, such as the "Political-Military events in the Revolutionary Period." These subunits would form the elements of the museum. They could then be arranged so that one form of subdivision would be represented in the horizontal layers of the building, and the other would appear in the vertical stacking of the floors. Whichever ordering is presented as the horizontal layers will be, naturally, the preferred form of circulation, but the alternative of vertical circulation will permit the visitor to choose whichever form of ordering he prefers.

In this study, it was decided to let the horizontal layers represent the time periods, so that, in traversing a floor, the visitor is presented with the developments in various phases of life for one particular time before proceeding to the next. It is possible, however, for the visitor who is so inclined to proceed upward through time within his one specific field of interest.

The other major idea which was thought to be of interest was that of arranging the exhibition areas so that they might be connected by a system of spiralling ramps. The visitor could then proceed from one subject to the next while gradually climbing, so that when he had fully progressed through the different subject classes for one time period, he would arrive at the first subject of the successive time period. In this way, by means of alternative viewing platforms and circulation ramps, he would make his way through the museum in a clear and orderly manner, going through four cycles of subject class repetition (see Fig. 4).

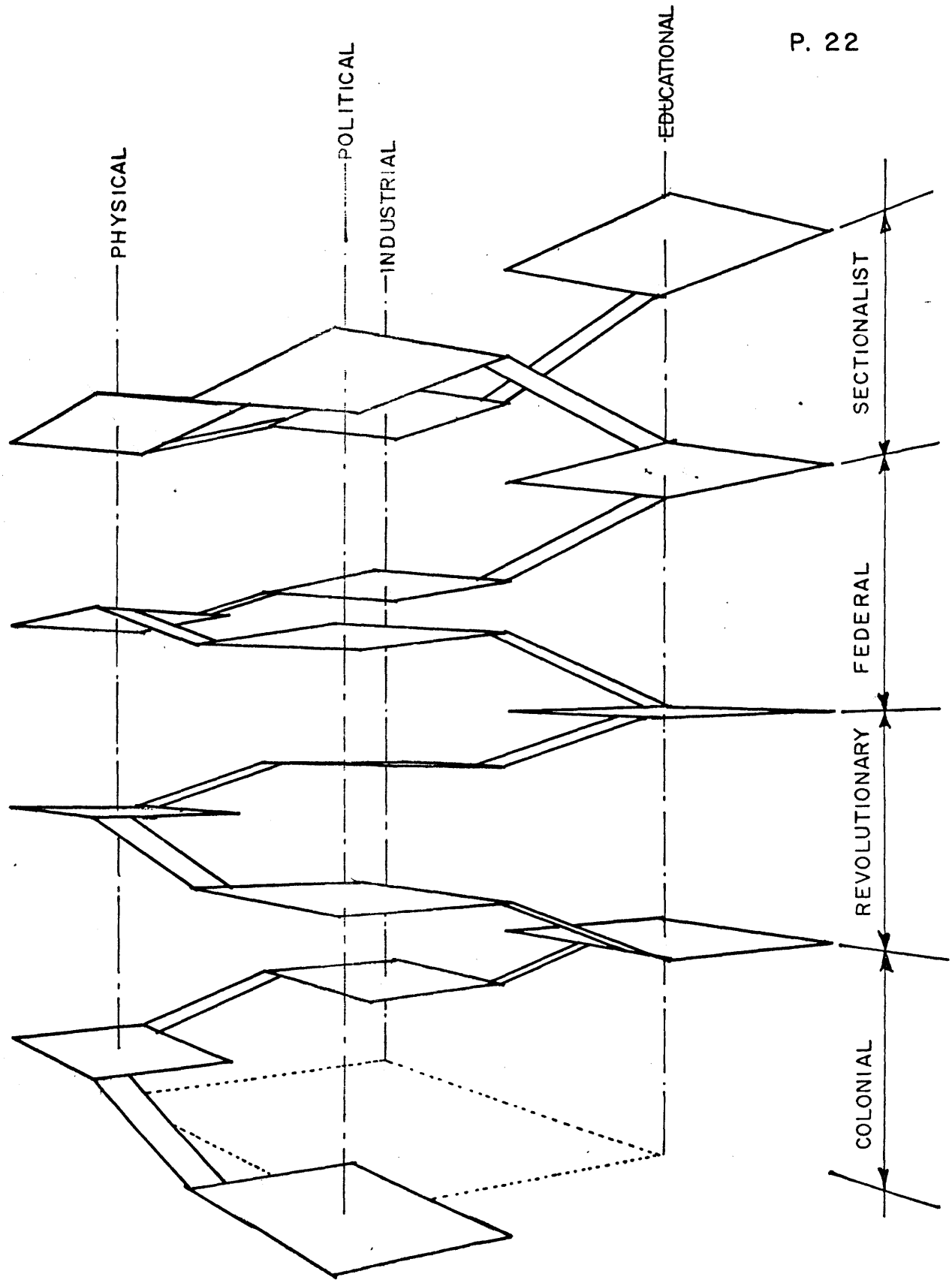


FIGURE 4 - **PROPOSED ORGANIZATION**

BIBLIOGRAPHY

1. Coleman, Laurence Vail, Manual For Small Museums, G. P. Putnam's Sons, New York, London, 1927.

2. Coleman, Laurence Vail, The Museum In America, 3 Vols., The American Association of Museums, Washington, D. C., 1939.

3. Guthe, Carl E., "The Management of Small History Museums, in Bulletins of the American Association for State and Local History, Vol. 11, No. 10: October 1959.

4. Molajoli, Bruno, "Museum Architecture" in The Organization of Museums, Practical Advice, UNESCO, 1960.

5. North Terminal Area Policy Committee, North Terminal Area Study, Boston, August, 1962.

6. Richards, Charles R., The Industrial Museum, The MacMillan Co., New York, 1925.

7. Wittlin, Alma S., Ph.D., The Museum, Its History and Its Tasks, Routledge and Kegan Paul, Ltd., London, 1949.

APPENDIX A

SITE PHOTOGRAPHS

VIEW OF SITE FROM TREMONT STREET *(CONSTRUCTED PANORAMA)*

P

VIEW FROM SITE LOOKING TOWARD TREMONT STREET

A2

APPENDIX B

SPACE REQUIREMENTS

	Sq.Ft.	Sq.Ft.	Sq.Ft.
A. DISPLAY AREAS INCL. STORAGE AREAS			
I. Colonial Area			
a. Physical	3,500		
b. Industrial	2,250		
c. Political	2,750		
d. Educational	1,500		
		10,000	
II. Revolutionary			
a. Physical	1,250		
b. Industrial	2,750		
c. Political	3,500		
d. Educational	2,000		
		9,500	
III. Federal			
a. Physical	3,500		
b. Industrial	2,000		
c. Political	2,500		
d. Educational	1,000		
		9,000	
IV. Sectionalist			
a. Physical	2,000		
b. Industrial	3,500		
c. Political	2,500		
d. Educational	1,000		
		9,000	
V. Services - Sanitary		2,000	
			39,500
B. PUBLIC CONVENING ROOMS			
I. Dramatized maps			

	Sq.Ft.	Sq.Ft.	Sq.Ft.
a. Physical Boston	1,500		
b. Military action in Boston	1,500		
		3,000	
II. Lecture room/Meeting room (multi-purpose auditorium seating 300)	3,000		
III. Library	5,000		
		8,000	11,000
C. Private Rooms			
I. Offices			
a. curator	200		
b. assistants	200		
c. office staff	400		
d. board room and offices	700		
		1,500	
II. Work Rooms			
a. Display Preparation			
b. Maintainance			
c. Laboratory	1,500		
		3,000	
			53,500
D. CIRCULATION AREAS			
I. Lobby - Control			
II. Concession			
III. Snack bar (minimal/machines)	1,200		
IV. Fire Provisions	3,800		
E. RECEIVING AREAS			
(Truck Dock) Immediate storage	1,000		
		6,000	
F. MECHANICAL, ETC.	6,000		
		6,000	
TOTAL			65,500

APPENDIX C

PART I

A partial listing of display items at the JASON RUSSELL HOUSE in Arlington, Massachusetts

	Sq. Ft.
2 antique clocks @ 0.5 sf	1.0
doll collection - 6 dolls about 30 inches tall in case	8.0
1 antique piano - 6' x 2 1/2' x 3'	15.0
1 bench - 5' x 2' x 3'	10.0
numerous wall hangings including photographs, documents, paintings, maps	
2 pewter bowls @ 0.5 sf	1.0
wooden and iron cooking implements ranging in size from about 1 1/2 feet long to 3 feet long (hanging)	
iron kettles ranging in size from 1' diam. to 2 1/2' diam. (in fireplace - 8.0 sf)	
1 hour glass 10 inches high	0.4
varied candles and lanterns	2.0
1 butter churn	1.0
early musical instruments - 1 violin, 1 cello, 1 guitar, 1 marching drum, 1 orphecleide - in cupboard	6.0
1 flax wheel 3' x 2' x 3'	6.0
fragments of doors and building frames showing bullet holes (hanging)	
4 flint lock rifles (hanging)	

	Sq. Ft.
2 candle molds	1.0
pewter platter belonging to Lucy Hancock	1.0
flax comb	0.2
1 yarn reel - 3 1/2' high	2.0
2 percussion rifles (hanging)	
2 powder horns (hanging)	
4 spinning wheels - 4' x 1' x 4' @ 4 sf	16.0
1 cradle - 3 1/2' x 1' x 2'	3.5
additional flax weaving tools	4.0
2 chests of drawers @ 5 sf	10.0
3 fire buckets ca. 1850	6.0
1 parlor table - 3' x 2' x 3'	6.0
2 rocking chairs - 2' x 3' x 3'	6.0
1 ladder chair - 2' x 2' x 3'	4.0
1 setee 5' x 2' x 3'	10.0
1 clock - 1' x 3" x 1'	0.25
1 clavichord - 3 1/2' x 1 1/2' x 3'	5.5
cupboard of old ware including pewter tea pot reputed to have been one of few saved from melting into bullets	4.5
Silver by Paul Revere	
6 antique chairs - 2' x 3' x 3' @ 6 sf	36.0
knife and fork chests 18" x 11" x 16"	1.5
case of grandfather clock, the works of which were taken for the British for metal	1.5
1 writing desk - 4' x 2' x 7'	8.0

	Sq. Ft.
1 bed - 6 1/2' x 4' x 2' with partial canopy	26.0
2 chests 3' x 1 1/2' x 1 1/2' @ 2.25 sf	4.5
1 table - 2' x 2' x 3'	4.0
1 tray - 3' x 2' oval	5.0
1 table - 4' x 1' x 4' in folded position	4.0
5 framed samplers (hanging)	
bowl and pitcher	1.0
5 shelves old books @ 5 sf	25.0
old clothing: 3 child's garments, 2 gowns in case	6.0
1 niddy-noddy reel for winding yearn	1.0
small chest and chairs	8.0
quilling wheel - 3' x 2' x 3'	6.0
2 wrought iron candle holders	1.0
1 cradle - 4' x 1' x 2'	4.0
1 woolen yarn reel	1.0
1 large spinning wheel - 4' x 1'	4.0
old boots	2.0
4 sabres and swords (hanging)	
1 whale oil lamp	0.5
4 baskets	4.0
1 - 3 chambered pistol of Revolutionary vintage	0.5
continental money	1.0
pin cushion	0.2
slippers	2.0

	Sq. Ft.
spectacles	0.2
hand warmers	0.1
cartridge box	0.3
candle snuffers	0.3
cuff buttons	0.1
1 Bible from which the British alledgedly tore leaves to start a fire	0.4
wick trimming scissor	0.2
old nails	0.1
old shears	0.2
shoes	1.0
1 child's bonnet	0.7
gloves	0.5
carpentry tools including wooden plane	8.0
bells	4.0
spice mill	0.7
old ice skates	1.0
wooden bowl	1.0
2 chests - 4' x 2' x 2' @ 8 sf	16.0
doll collection in display case - 8' x 2' x 4'	16.0
2 toy carriages @ 3 sf	6.0
articles of clothing in closet - 6' x 4'	24.0

APPENDIX C

PART II

The following items are on display at the OLD STATE HOUSE in Boston, Massachusetts

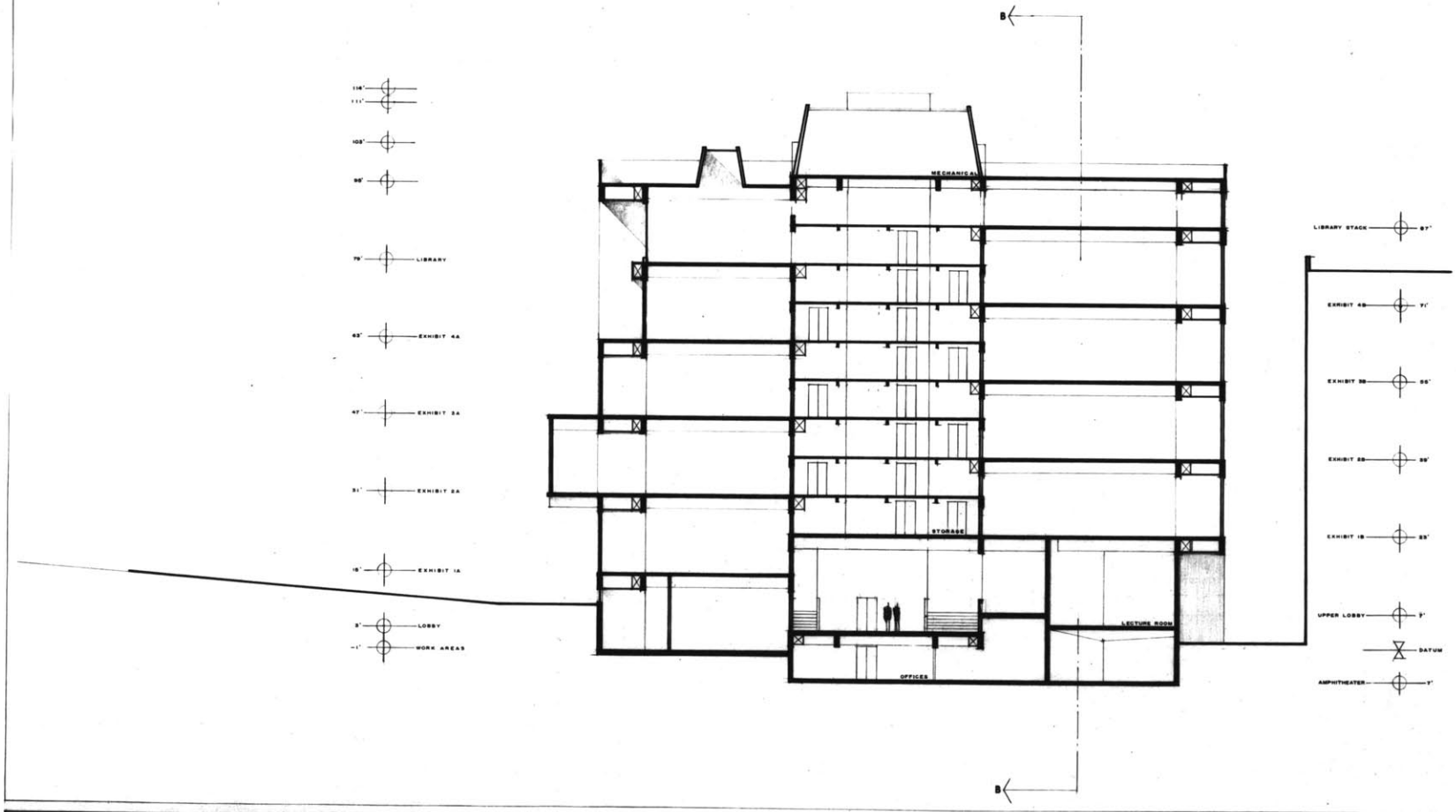
	Sq. Ft.
Rare books; e.g., a book autographed by General Lafayette and presented to Thomas Jefferson	5.0
Paul Revere silver	4.0
mementos of the New England Guards including pewter ware, helmets, and other military paraphernalia	6.0
cannon discovered at the mouth of the Charles River 3' x 2' x 1'	6.0
swords, pistols and uniforms of the Boston militia companies; case - 4' x 2' x 7'	8.0
items belonging to early Boston Fire Department: trumpets, helmets; case - 2' x 4' x 2'	8.0
case of Boston Police Department - 9' x 2' x 4' includes helmet, hight stick, ratchet, badges, jar locks	18.0
case of Fire Department relics including helmets, models of early rigs, life-line guns, pictures; case - 8' x 2' x 4'	16.0
case of ship models made of bone - 4' x 2' x 7'	8.0
model of steamer Portland; case - 4' x 2' x 7'	8.0
case of China relating to ships, e.g., cup and saucer used on Constitution and chinaware from the first Cunard Liner - 4' x 2' x 3'	8.0

	Sq. Ft.
case of Nautical Instruments including spyglasses, telescopes, parallel rules, hour glasses, speaking trumpet, sextants, chronometers, quadrants - 8' x 2' x 3'	16.0
The Little Admiral: statue sign for coffeehouse before 1770 - 1' x 1' x 3'	1.0
case of carpenter tools: axes, hammers, chisels - 4' x 2' x 3'	8.0
case of sail maker's tools - 3' x 2' x 4'	6.0
case of Scrimshaw including ditty-knocks, jagging wheels, matchbox, paper weight, yardstick, seam rubber, clothespins - 8' x 2' x 3'	16.0
whaling display; ship model in case - 4' x 2' x 7'	8.0
harpoons in rack approx. 10' in length by length of harpoon, being about 8' (hanging)	
figurehead ca. 1850 - 6' long	4.0
military Naval exhibit including sword, cartridge box, tinder box, notices - 8' x 2' x 3'	16.0
display of Clippers including banners, pictures, sailing cards, half hull model of McKay clipper - display 8' x 2' x 3' with backboard 8' high	16.0
case of decorative carving from ships - 8' x 3' x 2'	16.0
case of miscellany - 8' x 2' x 3'	16.0
model of schooner Benjamin F. Phillips - 7' x 1 1/2' x 7'	10.5
numerous paintings relating to sailing (hanging)	
wooden model of mansion known as Faniel Phillips House - 3' x 3' x 3'	9.0
pieces of embroidery, kerchief and fan having belonged to Lady Franklin Agnes Surriage - 3' x 2' x 3'	6.0

	Sq. Ft.
The Minnow cradle - 3' x 1 1/2' x 2'	4.5
chairs - 1 1/2' x 1 1/2' x 3'	2.25
corner cupboard of china, the cupboard dating from 1698, measuring 4' x 10'	4.0
cups and pots from the Price collection (in cupboard above)	
wooden sign of Samuel Thaxter, Boston, being a wooden carving 1' x 9" x 1 1/2'	0.75
Governor John Hancock's coat, waist coat, and shirt on dummy in case - 18" x 18" x 5'	2.25
"Tall Clock" by Gawen Brown, before 1756. This clock is operating.	2.0
Scandinavian ship's bell 1' in diameter	1.5
case 6' x 3' x 8' containing flint lock rifle, powder horn, drum, uniform, and pewter pieces	18.0
Colonial rocking cradle - 3' x 1 1/2' x 2'	4.5
case of bonnets and slippers 7' x 2 1/2' x 3', including tall hats, bonnets, Dorothy Quincy's satin slippers (said to have been worn at her wedding), a tall beaver hat, etc.	17.5
chair from house of General Joseph Warren 1 1/2' x 1 1/2' x 3'	2.25
case of instruments 5' x 1/2' x 5' including surveyor's compass, steel yards, folding coin scale, and carpenter's square	7.5
case 5' x 1/2' x 7' containing punch bowls and speaker's desk set from the Old State House	12.5
case pertaining to old Boston hotels includes menues, pictures, china, trays - 6' x 4' x 3'	24.0
a wooden sign which stood over Post office on State Street, said to be oldest emblematical sign in Boston - 3' high (hanging)	

	Sq. Ft.
case 5' x 3' x 3' including watches, doll figures, toys, silver goblets and spoons, knitting bag and needles, sewing kit	15.0
case 5' x 3' x 3' containing miniatures and silhouettes	15.0
case 5' x 3' x 3' containing quilts and sewing articles	15.0
case 5' x 3' x 3' including quilt, shoe buckles, silver pepper set	15.0
case 5' x 3' x 3' entitled Boston, including tiles from fireplace in Governor Hutchinson's mansion, pewter spoon and spoon bowl; table cloth belonging to the wife of John Winthrop	15.0
case 5' x 3' x 3' entitled Liberty Flag includes one Liberty Tree Flag and various early coins and documents	15.0
case 5' x 3' x 3' including swords, powder horn, cannon balls, and grape shot, saddle cloths and gold watches, a surgeon's saw, etc.	15.0
case 5' x 3' x 3' including chests, John Hancock's books, gloves worn at reception to General Lafayette, sauce pan by Benjamin Franklin, shaving bowl once the property of Benjamin Franklin, etc.	15.0
model of Bunker Hill Monument one foot high	1.0
Stafford soup tureen 1 1/2' across	2.0
model of Second Church on base 11" x 9"	0.75
case 5' x 3' x 3' containing china portraying scenes of early Boston	15.0
Shop sign, the Painter's Arms, a shop sign which belonged to Thomas Child, painter 1658-1711, 3 1/2' x 3 1/2' (hanging)	

	Sq. Ft.
shop sign from the Golden Ball Tavern 1693: a gold ball 2' diam. (hanging)	
display case 5' x 3' x 7' containing china pitchers and china fruit bowl	15.0
model of Brattle Square Church 4' x 3' x 6', Church having been built in 1772 and demolished in 1871	12.0
case 4' x 3' x 3 1/2' containing smoking set used in the room of Daniel Webster while a student at Phillips Academy; silver soup ladel of Webster's, a letter box of Webster's and an office sign used in his Boston law office, as well as other items	12.0
bust of Wendell Phillips - life size	2.0
wooden rocking horse brought from England and used by the family of Lt. Governor Samuel Phillips - 4' x 2' x 3'	8.0
Seal of the Province of Massachusetts - 3' diam. (hanging)	
lower chest case 5' x 3' x 2' containing ship's wine sets, which themselves comprise a chest and a set of decanters; also a ship's medical set, being a smaller chest with chemicals and dressings	15.0
a block made by Daniel Adams with sheaves made by Paul Revere, used at the launching of the Frigate Constitution - 3' square	9.0
front door and frame of house at 2 Bullfinch Place occupied by Miss Amelia B. Fisher and used as a boarding house - 6' x 9' (against wall)	



A BOSTON MUSEUM OF HISTORY

SECTION AA

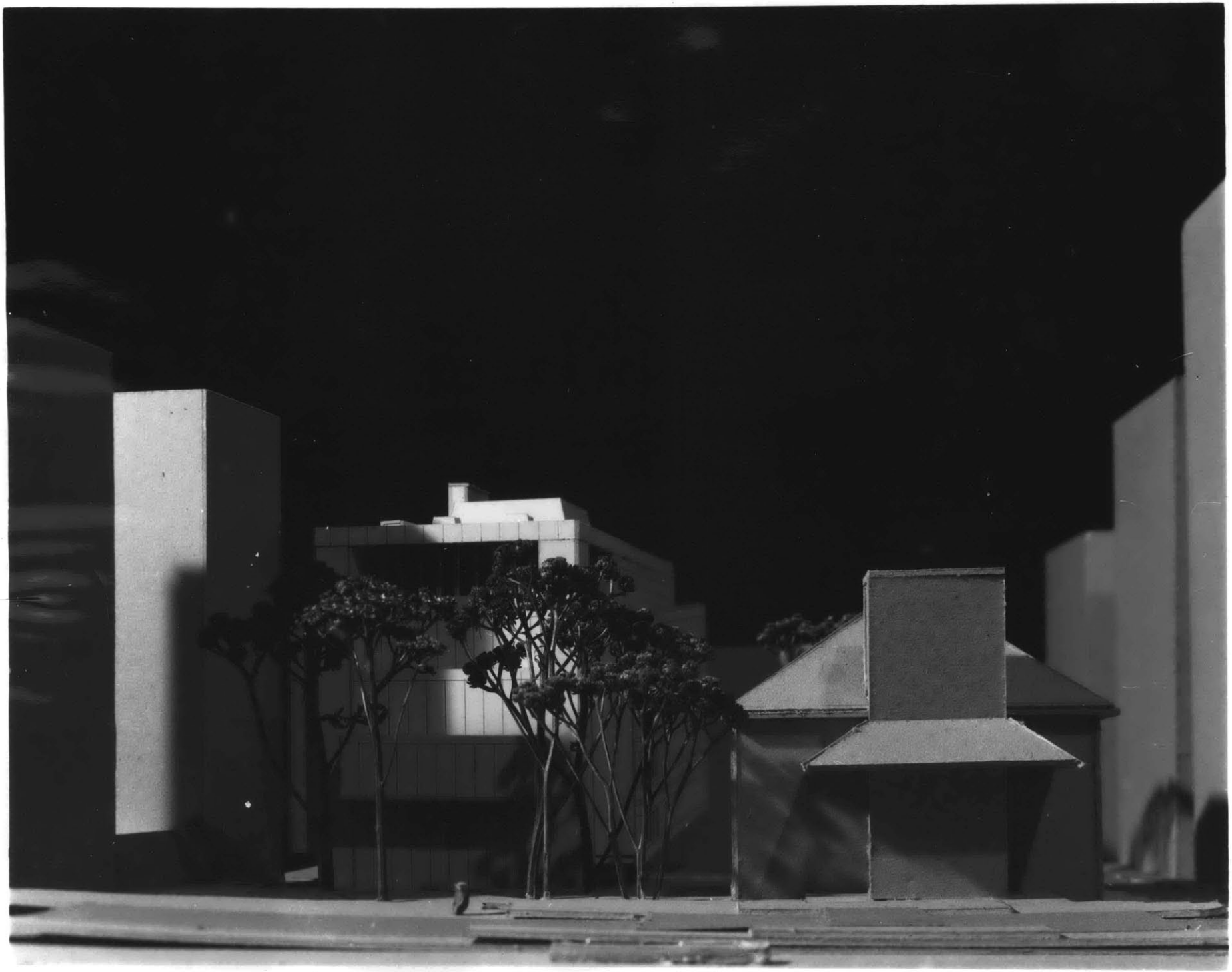
SCALE 0 5 10 15 20 25 FEET

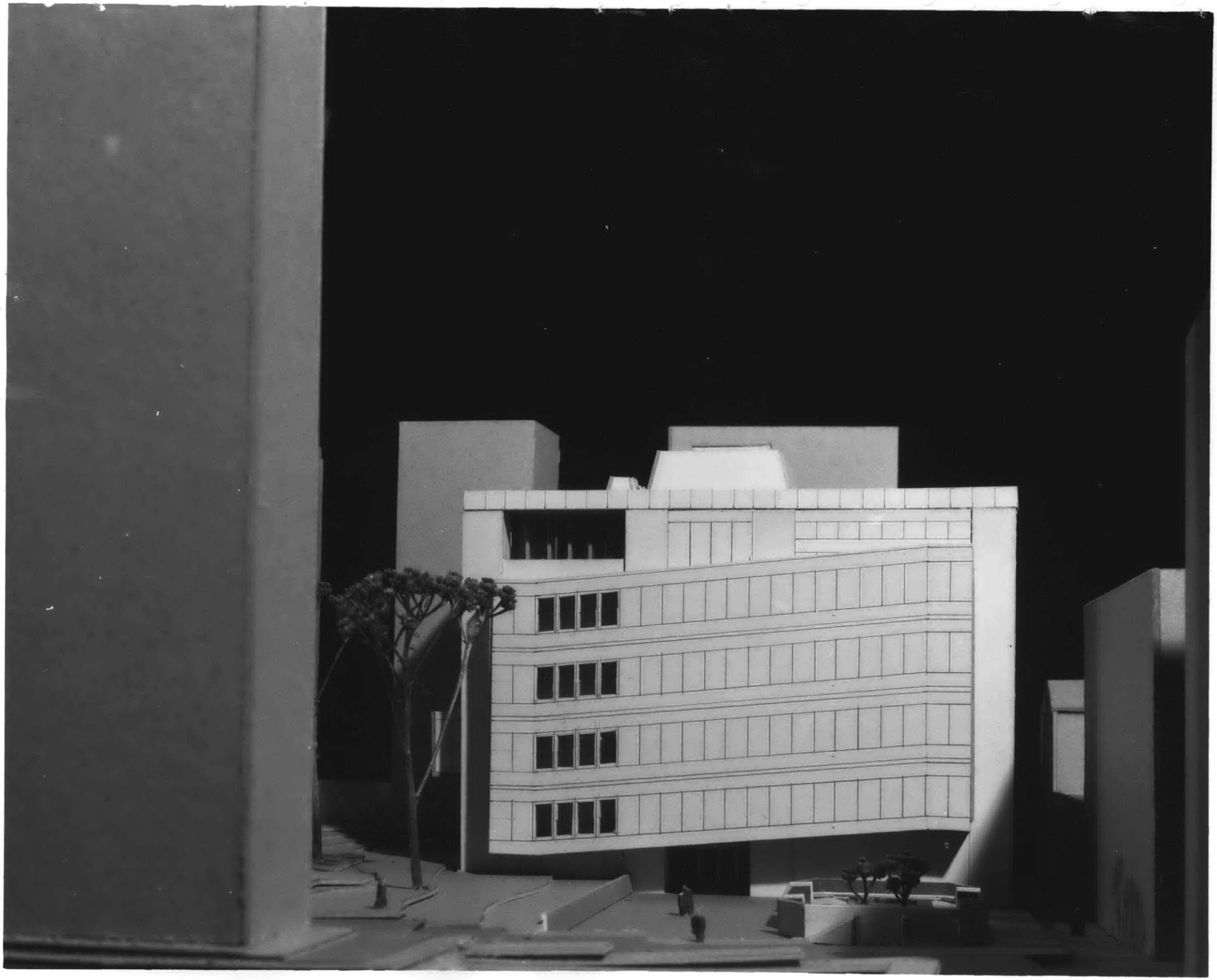
BACHELOR OF ARCHITECTURE THESIS

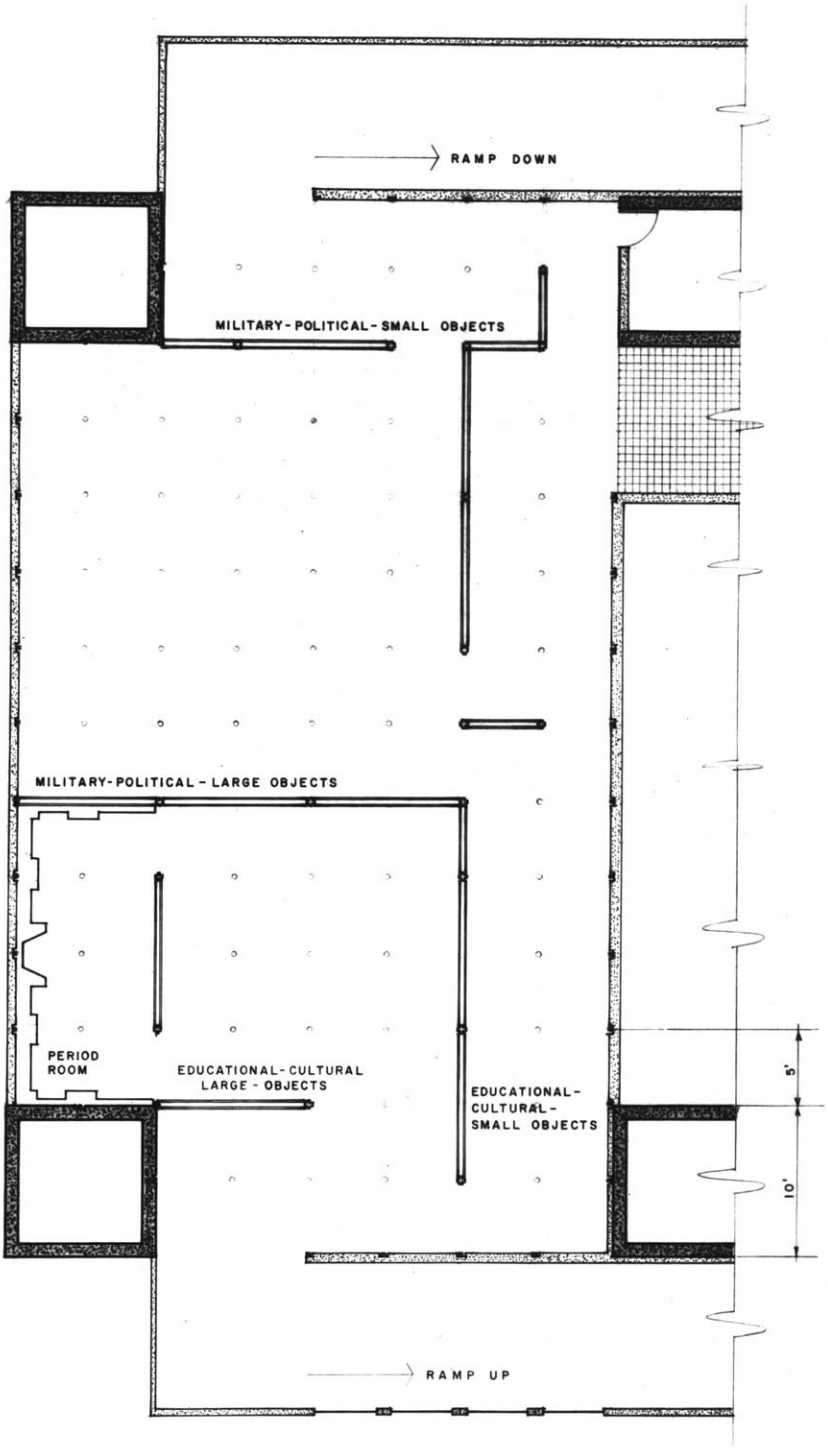
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CALVIN F. OPITZ JUNE 1966

3







PARTITION PLAN OF TYPICAL MUSEUM EXHIBIT AREA (LEVEL 3A-"THE FEDERAL PERIOD")

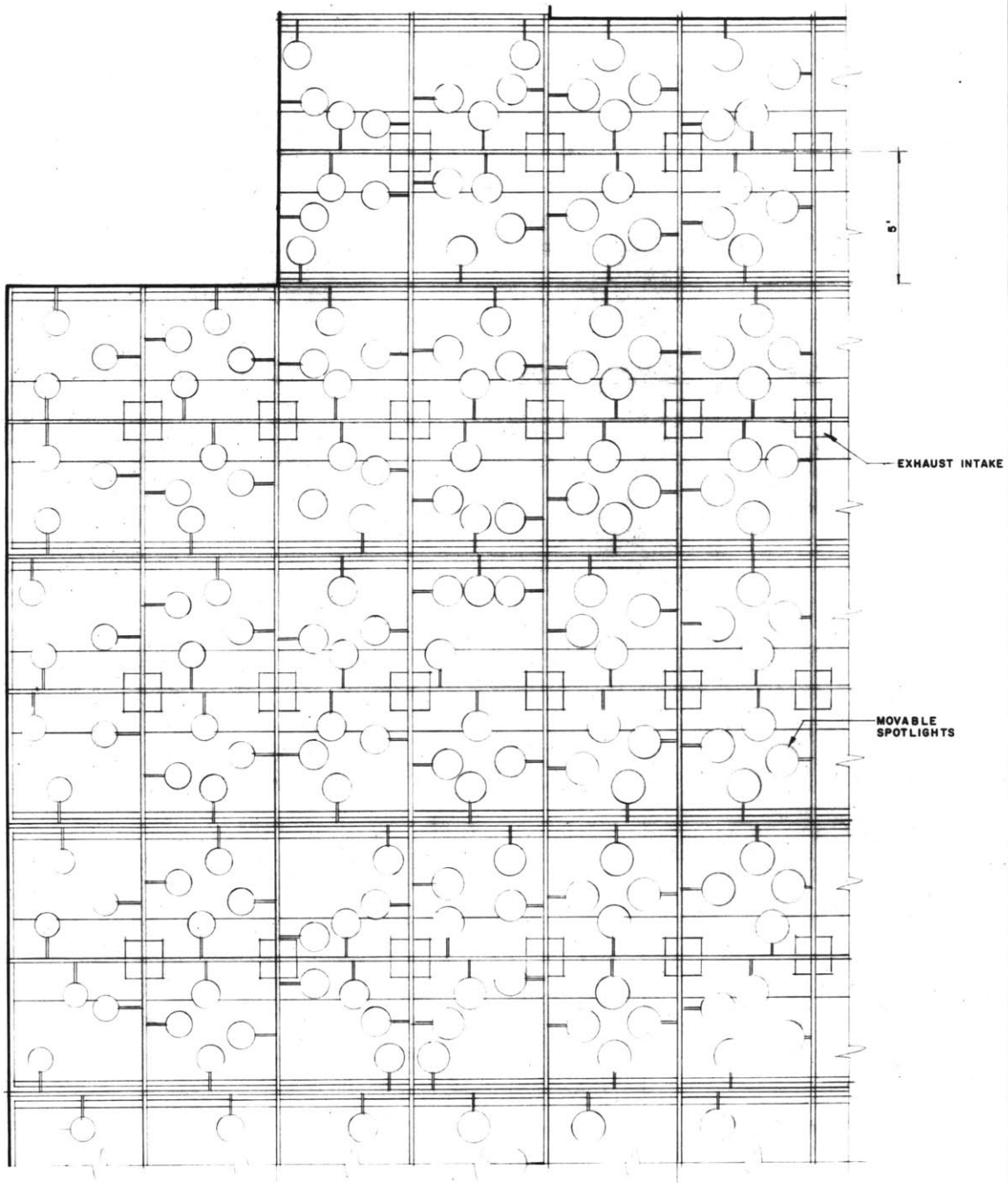
0 1 2 3 4 5 10 FEET

A BOSTON MUSEUM OF HISTORY

BACHELOR OF ARCHITECTURE THESIS

PHASE III
C. E OPITZ
JUNE 1965

1
OF SIX



REFLECTED CEILING PLAN – EXHIBIT AREA

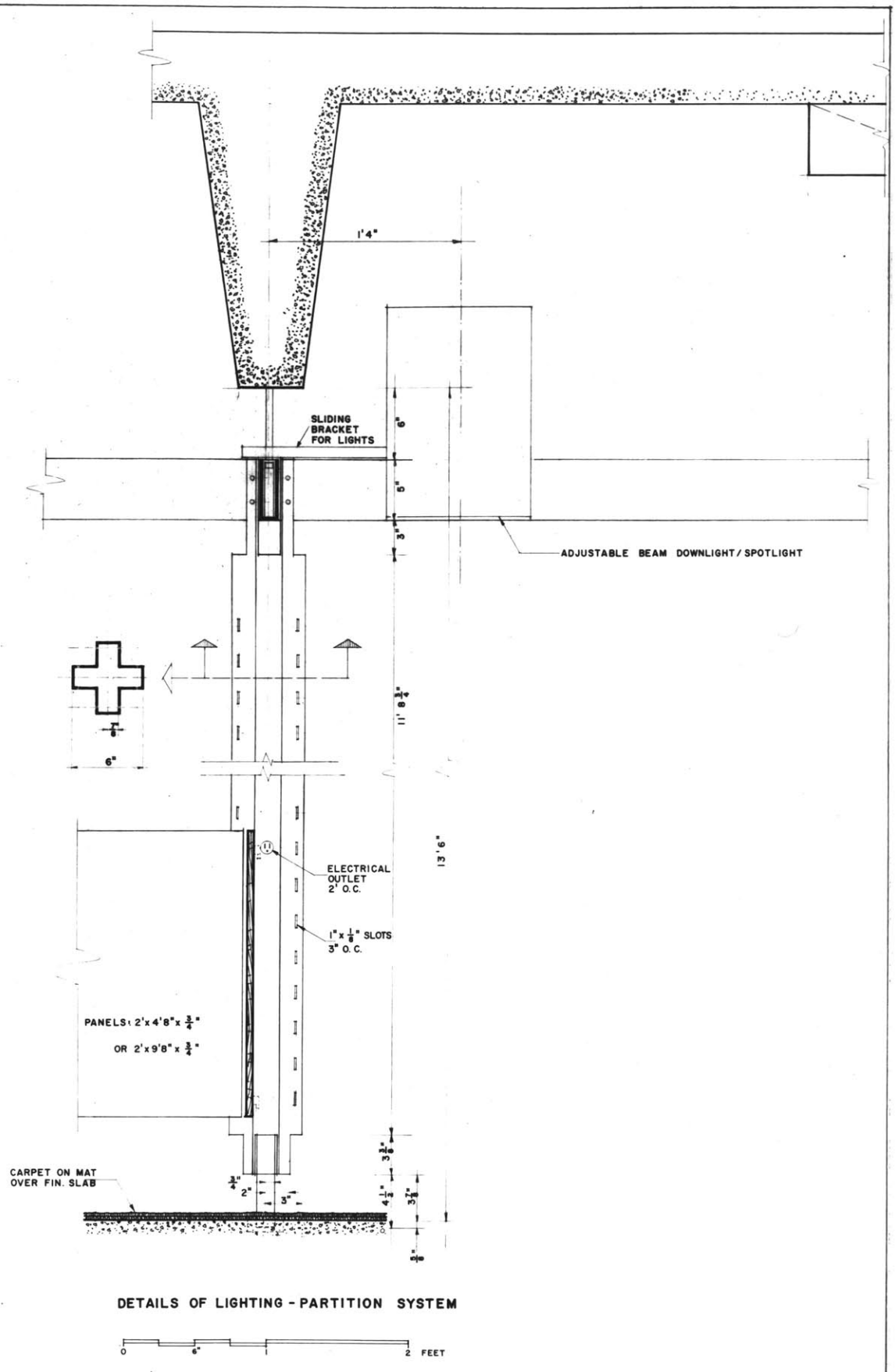
0 1 2 3 4 5 10 FEET

A BOSTON MUSEUM OF HISTORY

BACHELOR OF ARCHITECTURE THESIS

PHASE III
C. F. OPITZ
JUNE 1965

2
OF SIX



DETAILS OF LIGHTING - PARTITION SYSTEM

A BOSTON MUSEUM OF HISTORY

BACHELOR OF ARCHITECTURE THESIS

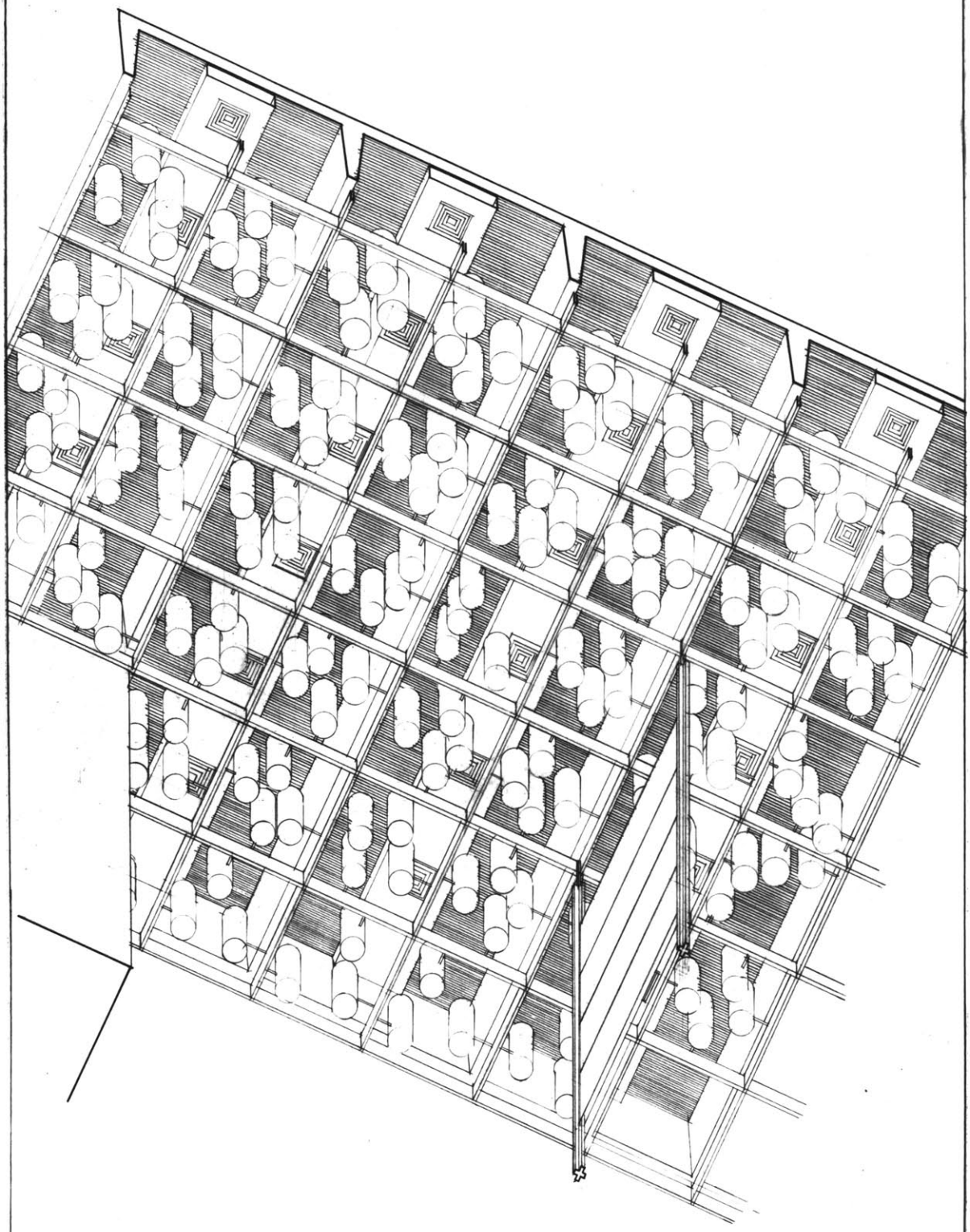
PHASE III

C. F. OPITZ

JUNE 1965

3

OF SIX



AXONOMETRIC OF DISPLAY AREA CEILING

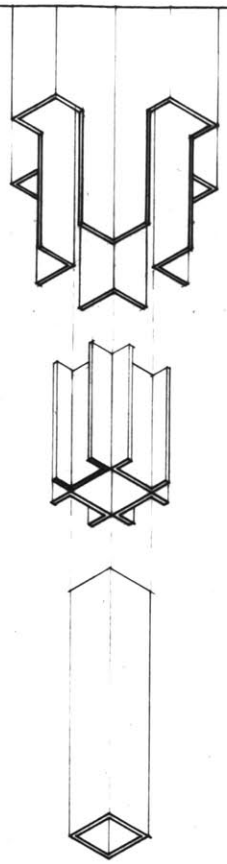
0 1 2 3 4 5 10 FEET

A BOSTON MUSEUM OF HISTORY

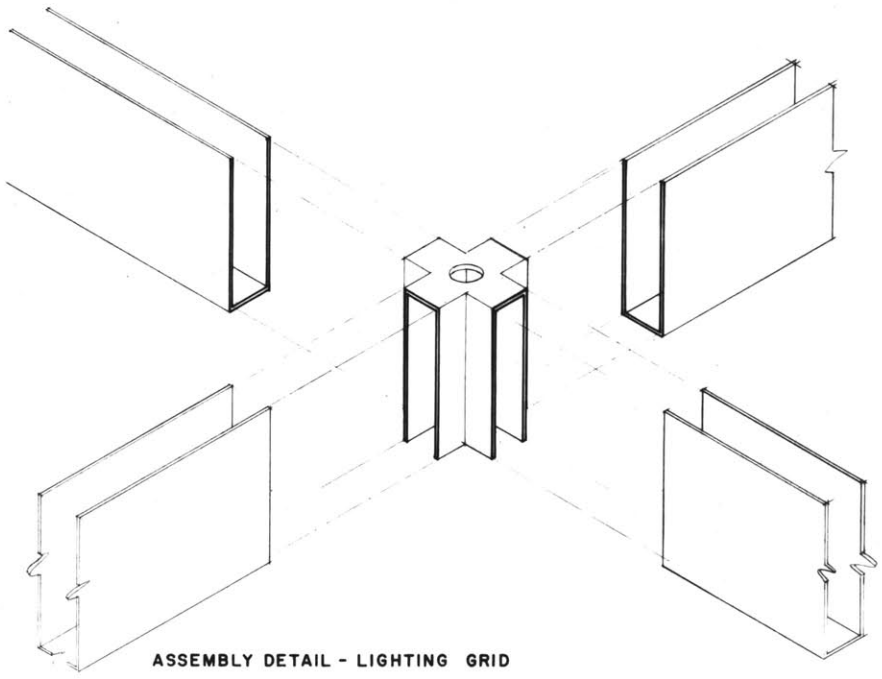
BACHELOR OF ARCHITECTURE THESIS

PHASE III
C. F. OPITZ
JUNE 1965

4
OF SIX



ASSEMBLY DETAIL - BASE OF COLUMN



ASSEMBLY DETAIL - LIGHTING GRID

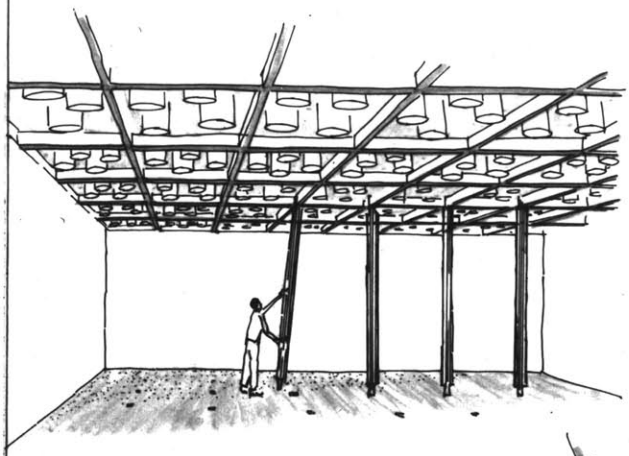
0 2 4 6 8 10 12 INCHES

A BOSTON MUSEUM OF HISTORY

BACHELOR OF ARCHITECTURE THESIS

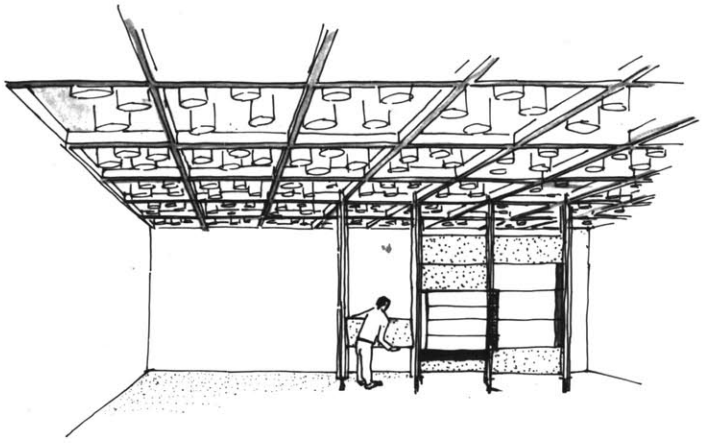
PHASE III
C. F. OPITZ
JUNE 1965

5
OF SIX



COLUMNS ARE PUT IN PLACE,
SLIDING IN FIRST AT TOP,
THEN ATTACHING AT BOTTOM.
BOLTS ARE INSERTED AND
ELECTRICAL CONNECTIONS
ARE MADE AT TOP.

PANELS AND DISPLAY CASES ARE
HUNG ON COLUMNS BY MEANS
OF HOOKS ON THE PANELS INSERTED
IN SLOTS IN THE COLUMNS.
LIGHTING FIXTURES ARE CONNECTED
TO OUTLETS IN COLUMNS.



ERECTION OF PARTITIONS

A BOSTON MUSEUM OF HISTORY

BACHELOR OF ARCHITECTURE THESIS

PHASE III
C. F. OPITZ
JUNE 1965

6
OF SIX