Preservation and the ADA:

Adapting the historic building for accessibility

by

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CHAPTER I: BACKGROUND

Introduction

Historic preservation is one part of the larger need to provide for a better quality of human life. A community needs to preserve its historic buildings not simply to profit from tourists, but rather to give strength and permanence to its local community. Historic preservation has traditionally existed for three principal reasons: education, recreation, and inspiration. There is another critical reason for preservation: that of putting historically or architecturally significant buildings and sites to good use. Such uses can be different and compatible to the original function of the building. This perhaps is the preservationists' greatest challenge: How to reuse a building whose original function has become obsolete (Poinsett, 1983).

The American's with Disabilities Act (ADA) was passed into law on July 26, 1991, for the purpose of protecting the civil rights of people with disabilities. The law does not simply prohibit discrimination against people with disabilities in public accommodation. Rather, it is the intent of the ADA to enhance opportunities for independent, unassisted access to the built environment.

The ADA has wrought a tremendous change in the way we must think about architecture in general, and preservation in particular. The law stipulates that all newly constructed buildings and facilities must be "readily accessible," that all altered portions of existing buildings be "readily accessible," and that all architectural barriers be removed as soon as it is

"readily achievable" to do so. The law applies to all places of public accommodation, commercial facilities, and local government entities (ADA, 1990).

The requirements to remove barriers to accessibility effects most buildings open to the public, including historic buildings. Buildings listed in, or eligible for listing in, the National Register of Historic Places, or designated under state or local law, must comply with the American's with Disabilities Act Accessibility Guidelines (ADAAG) as fully as is feasible. While ADAAG does provide some special provisions, historic buildings are not exempt, and must provide accessibility (ADAAG, 1991).

The goal of any ADA modification made to a historic building must be to provide the highest level of physical access with the least degree of impact to the building's significant features.

Objectives

The objective of this thesis is to find a means of bringing together the separate goals of ADA and preservation legislation, to determine where there is agreement or disagreement in the legislation, and to develop an approach that treats the needs of the historic building and its users in a holistic way. Simply looking at how an intervention deals with ADA, and how another mitigates its effect on the historic fabric or character of the building, is not the answer. An intervention effects both the quality of experience for the user, and the quality of the building as artifact.

The purpose here is not to compose a list of do's and don'ts. Rather, the intent is to establish a means of evaluation for the quality of a modification that is not based simply upon compliance with preservation and accessibility legislation. Rather it will draw from and bring together the issues and ethics of preservation and universal accessibility; experience and artifact; human and object. This evaluation will not be limited to the criticism of previous or existing work. It will become part of the design process; an evaluation of design options.

Scope of Study

People with disabilities belong to the largest minority group yet to be defined, some 43 million, as cited in the Americans with Disabilities Act. It is also an extremely heterogeneous population. It is comprised of such groups as wheelchair users, people with walking or mobility disabilities, people with auditory or visual impairments, or people with mental limitations (LaPlante, 1991). The list could be almost limitless. This study, however, will consider primarily people with mobility limitations and wheelchair users, and the means and methods used to achieve access into and throughout the primary circulation and public areas in historic buildings.

CHAPTER II: REVIEW OF RELATED LITERATURE

Overview

The Literature Review for this study is both a discussion of the historical background of the Disabilities' Rights and Historic Preservation movement in the United States, and investigation into the different opinions and theories of how to address the problem of providing accessibility in the historic building. Through analysis of these various views, several questions arise:

- How have we dealt with this issue historically?
- How are we dealing with this issue now?
- How can we better address this issue?

From these questions develops the problem statement for this thesis.

The Disabilities' Rights movement

Most of the things that have been designed for mass use, have been designed with a limited view: that everyone can walk, see, hear, and think quickly. This is clearly not the case. Whenever something is designed, someone has been excluded from it. However, designers have tended to exclude people who could just as easily been included. People with disabilities are handicapped not by their disabilities, but by society's attitudes and thus, the social and physical environment designed with those attitudes.

The American's with Disabilities Act gives clear direction as to what our attitudes toward people with disabilities ought to be: respect, inclusion, and support. It represents 20 years of efforts to change policies based on very different attitudes: pity, patronization, and exclusion. The ADA is the culmination of a process which began in earnest with the Architectural Barriers Act of 1968, which stated that no Federally operated or occupied building could have architectural barriers which limited the accessibility of people with physical disabilities. The Rehabilitation Act of 1973 built upon this, and in section 504 stated that no person could be excluded from any program or activity receiving funds from the Federal government, based solely on their disability.

As a group, people with disabilities have occupied an inferior status in society, and have been disadvantaged socially, vocationally, and educationally. It is believed that the elimination of discrimination will move us toward the goals of equal opportunity, full participation, independent living, and economic self-sufficiency. By establishing a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities, the ADA contributes toward attaining these goals.

People with disabilities have, over the years, been isolated and segregated by society. Discrimination continues in practically every aspect of their lives. The ADA states that people with disabilities have been "subjected to a history of purposeful unequal treatment, and relegated to a position of political powerlessness."(ADA, 1990) Discrimination against people with disabilities takes two forms: prejudice and barriers. People

with physical disabilities have long encountered the stereotype that holds that you are less of a person if any aspect of your functioning is impaired. Thus, "Impaired functioning equals impaired personhood."(West, 1991) This prejudicial view about the capabilities of people with disabilities has foreclosed many opportunities to them.

While people with disabilities may share the experience of being the target of prejudice with other groups, many of the barriers they face are unique to them. Barriers can be defined as any aspect of the social or physical environment that prohibits or limits the meaningful involvement by people with disabilities (West, 1991). Examples of physical barriers include: stairs or doors that are too heavy for a person with any mobility limitations, excessively complex way-finding for a person with mental limitations, or elevators without Braille, or chimes for a blind person. An example of a social barrier would be the case of the woman with no arms who used her feet to pick up items in the grocery store, and was asked to refrain from that activity, or take her business elsewhere.

This second aspect of discrimination generates the accommodation imperative, which requires that efforts be made to render the experience in the environment available "in a meaningful way" to the person with a disability. This makes the idea of equal opportunities viable, as an opportunity is not equal if there is neither an accommodation nor accessibility.

To achieve non-discrimination, society has entered into a contract with a person who has a disability through the ADA. Society agrees to structure or manipulate the social and physical environment in every

reasonable way, with the goal of creating a meaningful equal opportunity for the individual with the disability. This obligation may involve an allocation of resources or an expenditure of funds. The person with a disability agrees to make the same effort at citizenship that we expect from anyone else (West, 1991). In other words, society agrees to make the environment as accessible as possible, and people with disabilities agree to participate as best they can.

The ADA states that simply eliminating exclusionary practices may not always be sufficient; more may be required. For some groups, a non-discrimination policy would be to treat people just like everyone else. With people with disabilities, however, a recognition of the disability and an effort to manipulate the social and physical environment to facilitate meaningful involvement is often required, (Burgdorf, 1991). Rather than viewing it as a series of obstacles that exacerbate an impairment, the ADA requires that the environment be seen as a medium that can provide opportunities to diminish the effects of functional impairments or to develop alternatives that enable accomplishment of a particular task.

A significant aspect of the "accommodation imperative" is that it must be individualized. That is, while people with disabilities can be considered as a class for purposes of civil rights, or defined by certain characteristics that qualify them for certain programs, there is a uniqueness of each person in how his or her disability effects him or her, and in what circumstances.

There was a time that being the target of discrimination and negative attitudes was perhaps the one common experience among people with disabilities. They have shared the experiences of being ignored or being the

object of pity. When a charitable attitude goes overboard, it may turn into pity or patronization. These attitudes are rarely grounded in respect for the dignity of the person with the disability and rarely engender independence and empowerment. Rather, they are accompanied by feelings of condescension and superiority, and do little to engender self-esteem. (West, 1991).

People with disabilities have historically been defined negatively by society; their identity has been given to them, and shaped by society. Society has agreed to marginal acceptance of people with disabilities as long as these people cheerfully strive to be normal. The more normal each becomes, the more acceptance the person gains. Many people with disabilities have not been comfortable with this, and this discomfort has spurred the disabilities' rights movement, which has endeavored to put self definition in the hands of people with disabilities themselves.

Although many of the negative experiences of encountering discrimination are common to other minority groups, positive minority-group experiences are lacking for the disabled. People with disabilities have generally grown up isolated from each other, and there is little sense of shared experience or subculture with which they can identify. People with disabilities have been encouraged to overcome their disabilities, not to identify with them. The challenge of turning stigma into pride is at the heart of the matter (West, 1991).

The Historic Preservation Movement

While historic preservation in the United States has, over the past several decades, enjoyed greater support than at any time in its history, many of its fundamental concepts are still widely misunderstood. Considering the dramatic changes in the understanding of preservation in this century, it is understandable that charges of antiquarianism, elitism, and government interference have often colored the public view (Murtagh, 1988).

The preservation movement, as we know it today, has become so preoccupied with the processes and methodologies as to have all but lost sight of the subject itself. Before judgments can be made about the solutions to preservation problems, we must decide whether the problems are related to preservation. By accepting at face value all issues that present themselves, a wide range of interpretations has developed within the preservation community: what preservation is, why it has evolved, and where it ought to be going (Stipe, 1972).

The preservation movement has become driven by legal opinions, standards, and regulations. When a controversy arises, it usually comes down to whether a regulation has been followed; not whether the historic value of the building has been preserved.

Early efforts in historic preservation dealt with preserving landmarks as artifacts, held separately from the community for veneration, education, or pleasure. With the government's increasing role in historic preservation during the 1930's (e.g. WPA projects), a new sensitivity to preservation

issues became part of the social fabric and led to the current idea that recreation, environmental planning, housing, and health, all comprise part of preservation.

Patriotism fueled early efforts at preservation. The protection of individual buildings of landmark quality and historical significance was the goal of early preservationists. The role of the Federal Government grew out of its concern for the conservation of the country's natural resources, which led to the establishment of Yellowstone, our first national park. It was not until the early twentieth century that the Federal Government in Washington began its direct involvement in preservation, beginning with the Antiquities Act in 1906, and continuing through the Preservation Act of 1966, and more recently, through tax incentives (Stipe, 1987).

The movement began with a concentration on period rooms and individual house museums; now it has grown to encompass entire complexes of buildings, e.g. outdoor museums like Colonial Williamsburg or the historic districts of our cities and towns. It is also notable that there is now an interest in preserving the rural environment; not only small towns, but the farmland, woods, etc., that surround them.

Where the early leaders of the preservation movement were of a similar type or background (e.g. the Mount Vernon Ladies Association fixing up Washington's home; similar groups creating museums from other buildings with similar associations), the present movement in the late twentieth century is quite different. In part, this is the result of a much broader range of interest and the involvement of a greater variety of people. It represents a broader view of the scope of historic preservation as an effort

to better understand our cultural background. There is an interest in not only sites with specific historic associations or special architectural value, but also a concern for social history, how the average person lived and worked. Underlying all this is the belief that the past may be better understood in the context of surviving historical buildings and artifacts (Murtagh, 1988).

Preservation and the Americans with Disabilities Act

In "Preserving the Past and Making it Accessible to Everyone," by Park, Weeks, Meier, Buehner, and Jandl (1991), it is noted that many historic buildings are inaccessible because the design and construction ethics of the day did not consider the varying abilities of the public as we are now required to do. Thus, the monumental entrance stairs, raised English basements with steps both up and down, and other such obstacles, are common in historic buildings.

In his report, Access to Historic Buildings for the Disabled: Suggestions for Planning and Implementation, Charles Parrott (1980) observes that most historic buildings were designed to be accessible only for people without disabilities, and that barriers to accessibility that began as historical ceremonial and functional requirements, evolved into the traditional building practices which have excluded people with disabilities from the activities that take place within many buildings, historic and otherwise. During the past 30 years, Americans have become both more conscious of the need to make the built and social environment more

accessible to people with disabilities and the need to preserve many of our historic buildings. As Parrott states, "It is unfortunate that historic buildings generally tend to be inaccessible to the disabled. It is also unfortunate, however, that when full accessibility is assured, those very qualities that made the buildings worthy of preservation may be seriously compromised" (Parrott, 1980). Herein lies the problem.

Access to any building consists of access to the building and the building site, access into the building, and access within the building to the goods and services offered there. Access to the building and site requires the unassisted free movement from arrival to destination. Stairs and some ramps can be formidable barriers to people with physical disabilities, thus an assessment of the grade, alignment, width, and surface material and texture of all routes to the building is critical. Minimizing the distance between arrival and destination is often the best solution to accessibility through the site (Park, 1991).

The ADA states that access into the historic building should be at the primary entrance, and that people with disabilities should not be relegated to a rear service entrance. Alternate public entrances can be used if it is deemed that the cost is not feasible or that the historic configuration of the entrance is untenable. The National Park Service's guidelines state that it is important to assess the impact of any modification on character-defining features of the historic building. It is critical that accessibility and preservation requirements be reconciled. Thus, if a front entrance cannot be adequately or appropriately modified for accessibility, a secondary or side entrance already used by the public might be considered. In order to make

an accessible entrance more principal, the internal functions of the building can be rearranged (Park, 1991).

Once the visitor with disabilities has gained access to the building, it is expected that he or she will have unrestricted access to all goods and services offered to the general public. The extent to which a historic building can be modified depends to a great extent upon the size, scale, and detailing of the accessible route. Features which are not considered to be character defining can be altered to provide the greatest degree of access with the least impact. Also, interior spaces of less significance can be used to provide necessary amenities on the principal floor. Providing a public space, such as a conference room, allows for services offered elsewhere in the building to be available on the floor of principal access. While access to all spaces often cannot be provided, such alternative spaces meet the intent of the ADA (Park, 1991). It is critical to determine early in the process which are the character-defining features of the historic building, what specific alteration is required to achieve accessibility, and thus which areas of the historic property can be modified without sacrificing the integrity of the historic character or materials.

While it is the intent of the ADA to achieve the highest degree of accessibility that is technically and financially feasible, it establishes a set of minimum accessibility requirements in an attempt to reconcile the preservation and accessibility mandates. This is because it may not always be possible to make a historic building fully accessible. In cases where the minimum standards cannot be met without the loss of the building's

historical significance, the building owner must use alternative means of making goods and services accessible (Park, 1992).

It is critical to preserve the significant spaces, materials and features of the historic building when planning accessibility modifications. Part of this process is the development of a list prioritizing the options of what modifications can appropriately be made, and which spaces and features may be modified without compromising the historic character of the building. While many spaces and features of secondary significance offer more options for providing accessibility, care must be taken to ensure that the cumulative effect of modifications does not compromise the significance of the building. Thus, the majority of significant spaces and features must be preserved, as their contribution to the overall significance of the building comes not simply from the individual features, but also from their relationships (Park, 1992).

Park (1992) suggests that when evaluating historic buildings for compliance with accessibility requirements, it is important, first, to fully understand what is legally required. The ADA is the law of the land, but many states have their own accessibility regulations. Generally, then, the more stringent of regulations should be followed. Once accessibility options have been developed, they should be checked against the Secretary of Interior's Standards for Rehabilitation for conformance. The options which provide the greatest degree of access should be evaluated first, and if it retains and preserves the building character and significant features, then it may be implemented.

If it is believed, after consultation with the State Historic Preservation Office, that compliance with accessibility requirements would compromise the integrity of the historic building, the ADAAG minimum standards may be used. If compliance with the minimum standards proves threatening, then alternative methods, such as audio visual presentations, or guided tours may be used (Park, 1992).

In their article, "Historic Properties and the ADA," Salmen, Park, and Jester (1992) note that where full compliance with the ADA is not practical or would significantly compromise the historic character, there are special provisions for historic buildings. All buildings, both historic and otherwise, are required by the ADA to be modified to be accessible to people with disabilities. The ADA also recognizes, however, that full compliance may "threaten or destroy" the architectural character and significant materials in some historic buildings. If the owner of the historic building can prove to the State Historic Preservation Office that compliance would threaten the buildings architectural or historic significance, then it may be required to meet only the "minimum requirements" that require:

- Only one accessible route from a single site access point to an accessible entrance.
- The principal entrance need not be accessible, but the accessible entrance must remain unlocked while the building is open.
- Ramps may exceed the ordinarily permissible slope of 1 to 12. A slope of 1 to 6 is permissible, but only for a maximum run of 2 feet.
- There should be at least one accessible unisex restroom, should restrooms be provided.

- Access to levels other than that of the accessible entrance is only required where practical.
- Exhibits and displays must be so placed as to be visible to a seated person.

The authors observe that while the cost savings between the ADAAG standards and the minimum requirements may be considerable, the real benefit is that buildings in which full compliance is either impossible or would compromise its historic fabric and character, can be made at least minimally accessible (Salmen et al., 1992).

Historic buildings often can, with careful planning, exceed the minimum requirements, but many that are particularly small or intact cannot achieve this without significant damage to their historic character. In such a case, alternative methods can be used to provide accessible programs and services. Such methods include:

- the use of audio-visual materials to interpret inaccessible parts of the building
- the use of guides to lead disabled visitors through inaccessible parts of the building
- the use of other innovative methods

The ADA often falls short in efforts to balance the needs of preservation and accessibility, particularly where building owners are neither sensitive to the needs of people with disabilities, nor knowledgeable of the significance of architectural features or spatial relationships. Park and Jester (1992) identify a three-step process for identifying and implementing appropriate accessibility solutions for historic buildings in

their article, "Strategies for Making Historic Properties Accessible to Persons with Disabilities":

- Identification of the significant material, spaces and features of the historic building
- Evaluation of the building for compliance with the ADA
- Evaluation of accessibility options by use of the Secretary of Interior's Standards for Rehabilitation .

The Identification of Significant Historical Features

Buildings eligible for special provisions under the ADA are those listed on the National Register of Historic places, eligible for such listing, or designated by state of local laws. Historic places may be significant because of associations with important persons or events, or because of their architecture. After the determination that a building is historic, all historic materials, features and spaces related to the building's significance must be identified and prioritized, so that it can be determined which changes can be made without harming the historic materials and nature of the building.

Evaluation of the Buildings Compliance with the ADA

The evaluation of the historic building for compliance with the ADA should be undertaken in conjunction with the evaluation of its historic significance. It is important to realize that full compliance with ADAAG may not be possible in many historic buildings, but there are four priorities recommended by the Department of Justice:

- access to the building

- access to the goods and service provided in the building
- access to such amenities as restrooms, telephones, drinking fountain.
- the elimination of any other barriers

Even when no formal alterations to the historic building are planned, owners are required to remove all barriers to accessibility when it is "readily achievable" to do so. Changes made to improve accessibility in the meantime should follow ADAAG standards where possible. However, in such cases, any changes improving accessibility are acceptable so long as they are safe. It is then a continuing responsibility to remove barriers as it becomes readily achievable to do so.

Evaluation of Accessibility Options

This is possible once it has been determined which modifications are required to make the building accessible and which elements of the building are most significant. All changes considered for the historic building must conform with the Secretary of Interior's Standards for Rehabilitation. Standards identified by Salmen et al. include:

- The historic character of the building shall be retained and preserved.
- Distinctive features, finishes and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
- New additions...shall not destroy historic materials that characterize the property. New work shall be differentiated from the old and shall be compatible with the massing, size, scale and architectural features to protect the historic integrity of the building and its environment.

- New additions...shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Charles Parrott (1980) lays out a planning process to achieve accessibility through changes within the historic building (program activity changes) or changes to the building (architectural changes). He describes a process that comprises of collection and evaluation of background information and selection of appropriate methods for providing access.

Background Information

Parrott proposes that background information consists of determining the legal accessibility and preservation requirements for the particular building, followed by an assessment of the existing conditions of the historic building and the needs of the user with physical disabilities.

In evaluating the existing conditions of the historic building, one must perform first an accessibility inventory, which determines the extent to which the prevailing accessibility requirements are being met. Parrott writes that the accessibility inventory should include dimensional and operational information on all architectural features of the building and site that may receive design attention. A description of the functions, space needs and operational characteristics, for all the program activities that take place in the building should also be included (Parrott, 1980).

Along with the accessibility inventory, an evaluation of the historical and architectural significance of the building must be made, to determine the preservation value of the various architectural elements of the building,

with particular attention given to features that might be likely to be adversely effected by accessibility modifications. Also important, Parrott notes, is the idea that a building's historical integrity is not simply limited to the preservation value of the original architectural materials, but also can include alterations made later which may have historical value of their own, and need to be considered.

Parrott (1980) next discusses the procedures for determining the needs of the historic building's users with physical disabilities. While his report focuses on the mobility impaired, he notes that several types of disabilities fall into this group: non-ambulatory disability (wheelchair user), semi-ambulatory (require assistance to walk), and coordination disabled (have impaired balance or muscle control, and can walk unaided, but with some difficulty).

Parrott (1980) describes the basic needs of the user with disabilities as follows:

- site access up to and around the building
- building access and egress
- movement through the public portions of the building
- accessible rest rooms
- correction of dangerous conditions
- directional and instructional signs
- historic interpretation of the building

Parrott's next step, after the evaluation of the background information, is the selection of the appropriate means of addressing both the requirements for accessibility and the preservation of the building. Parrott then identifies three general approaches to providing access: program or activity changes, portable architectural devices, and architectural changes.

Program or activity changes can consist of moving an inaccessible activity to an accessible part of the building, or allowing the disabled user to enjoy the experience of an inaccessible area through the use of interpretive materials, such as audio-visual aids, or models or dioramas. It also is possible to bring non-interpretive functions housed in historic buildings directly to the disabled person in their home, or to provide aids, scheduled access, or special equipment such as narrow wheelchairs (Parrott, 1980).

Portable Architectural Devices are building components of a temporary nature that can be removed without damage to the historic fabric of the building, most commonly, portable ramps that can overcome barriers of a few steps, about 15 vertical inches. While they usually do not result in permanent damage to the historic materials, due to their portability, they often detract from the buildings appearance (Parrott, 1980).

Architectural Changes can be either reversible, which involve little or no removal of, or damage to, significant historic materials, or non-reversible, which often involve the removal of significant historic fabric or spatial characteristics. Architectural changes can be broken down into several categories. Building site changes can consist of designated parking spaces, curb cuts, the re-texturing and regrading of walkways, provision of alternate walkways, etc. Grade changes at the building can allow for accessibility

through regrading and repaving the exterior of a building. Overcoming a barrier of more than one or two steps, however, could compromise the building's historic character or cause damage to historic materials (Parrott, 1980).

Ramps are another common architectural change. When done well, a ramp can often be installed with a minimum impact on the historic character of the building. Parrott suggests that principal entrances other than the main historic entrance are the preferred locations for ramps, in part because the addition of a ramp at the main entrance elevation can often detract from its architectural character. He also suggests that less architecturally imposing entrances often pose less of a barrier, as they are usually closer to grade. Certain situations can lend themselves better to the use of a ramp, For example, in a building with surrounding pedestals, a ramp parallel to the building could be easily and effectively screened. Unfortunately, the intrusion of a ramp at the primary entrance can also disrupt the normal flow of traffic (Parrott, 1980).

Parrott proposes the consideration of below grade ramps, as they can be located in existing window wells, etc., and can be installed with little negative impact on the building facade. He writes, "Below grade access to a building may enter maintenance or basement storage areas but, in such cases, thought must be given to providing a dignified link between the exterior ramp and an interior elevator through such unfinished service areas." (Parrott, 1980)

Another option Parrott proposes is the vertical wheelchair lift, which can be used when ramps cannot be easily used. But while most lifts can be

used without assistance, they often need to be locked when not in use and supervision is not practical. Also, when not protected from the elements, bad weather can make the use of such lift an inconvenience or a hazard. Thus, while the lift can provide a better solution from the standpoint of accessibility, people with disabilities usually prefer to use a ramp (Parrott, 1980). The above recommendations predate the ADA and are based on old thinking. While they may have been accepted under an earlier standard, they were never appropriate or acceptable solutions.

Inclined stairway lifts are installed on existing stairs. They require little alteration. But because they require an inordinate degree of assistance, and can be an obstacle and an eyesore, they are of little use in a historic building.

The provision of an elevator can often solve problems of accessibility in a manner that is more sensitive and requires less space than ramps or lifts. However, the location of the elevator within the historic building is of critical importance. It should be located conveniently, but should not negatively effect the historic nature of the building. Parrott (1980) offers several suggestions for the placement of elevators in historic buildings:

- the elevator should be placed in an area of lesser significance and in a concealed shaft, even if it requires a new shaft to penetrate existing floor space
- it should be located adjacent to existing circulation areas in the building
- the elevator should be located away from exterior walls so that equipment required at the roof can be concealed by a pitched roof or cornice

- it should be located so that the need to alter the buildings existing structural system is minimized.

Historic doorways often present barriers to accessibility. Widening a historic doorway is difficult at best, and usually will result in the loss of historic materials and character. While it is sometimes possible to widen the door opening without a significant loss of historic materials, this does not usually hold true with the actual doors. The high cost of replacing numerous doors of inferior width could prove prohibitive. The use of extension strips along the edge of the stiles or of offset hinges are possible solutions, but can detract from the character of the doors. Other aspects that warrant consideration are door opening pressure and hardware. While it may be possible to leave many interior doors open during business hours, this is often not possible with exterior doors, thus necessitating the installation of automatic door openers. While historic doors often require modification to meet current codes and accessibility requirements, they can be successfully retained with proper respect to their historic material and character (Parrott, 1980).

While standards for stairs are generally determined by emergency and general safety codes, and not by accessibility standards, a stair that adheres to the current standards will probably meet accessibility requirements. The problem is that stairs in many historic buildings do not meet prevailing standards. An alternative accessible entrance could solve accessibility problems, and an accessible elevator would eliminate the need for an accessible stair. Stairs that are not particularly significant can be modified, but not much can be done without completely rebuilding them.

Proper protective railings are required on all stairs and ramps. In a historic building, care must be taken to insure that railings both meet accessibility and safety requirements, and properly respect the historic building. Where it is not possible to reuse historic railings, new railings should be in keeping with the character and fabric of the building. Often, custom designs are required as stock railings are not always appropriate (Parrott, 1980).

Accessible restrooms must be available to people with disabilities. While it is often possible to rebuild restrooms to be completely accessible, it is important to attempt to preserve and reuse historic fixtures and materials such as marble and slate. When such a redesign is not practical, an accessible unisex restroom is often a suitable solution.

No matter how accessibility is achieved in a historic building, whether through architectural or program changes, proper informational and directional signage is necessary. In a historic building, the manner in which this information is presented is of critical concern. Signage should be installed in such a way as to minimize the damage to historic materials. Freestanding signs are usually an acceptable alternative on the exterior, and often can be used in the building's interior as well (Parrott, 1980).

Parrott concludes by noting that to successfully make the historic building accessible to all, it is critical to always be cognizant of the potential for conflict inherent in this issue.

Summary

It is noted in the review of literature that most historic buildings have inherent accessibility problems, and building owners are required by the ADA to remedy them. While there are certain cases in which the ADA allows for so-called minimum standards to be met, these cases are quite rare, and most all historic buildings will be expected to comply with the American's with Disabilities Act Accessibility Guidelines (ADAAG).

The ADA and preservation guidelines are, in fact, very often at odds. The ADA states, for example, that the primary entrance to a building needs to be accessible. The National Park Service guidelines, on the other hand, require that "character defining" features of a historic building should be preserved. Since the primary entrance to a historic building is typically character defining, alteration of the entrance would often compromise, if not destroy, the character or historic materials. Similarly, if a secondary or side entrance is made primary, thus preserving the original primary entrance, and the organization of the interior functions of the building were changed to accomplish this, often the sequence or procession of entry is compromised, diminishing the experience of the visitor. Thus, we arrive at a dilemma: the often conflicting goals of protecting the integrity of the historic structure, allowing access to the historic environment for people with disabilities, and preserving the quality of experience of all visitors.

The literature reviewed above offers a number of procedures to reconcile these goals. They can be simplified into three basic steps:

- identify the significant architectural and historic features

- identify accessibility requirements and deficiencies
- reconcile the two lists.

This is fine, but these issues are still at odds. The literature reviewed above tends to propose solutions which deal with preservation issues and accessibility issues independently, as though their respective goals were mutually exclusive. What appears to be suggested, is a thoughtful way of splitting the difference between a well preserved and an appropriately accessible building. The procedures outlined above do little to achieve a synthesis of the two issues, and speak little of the quality of an intervention.

CHAPTER III: STATEMENT OF THE PROBLEM

How a designer views the American's with Disabilities Act will directly affect how he or she responds to it. If the ADA is viewed as a further restriction by the federal government, or an infringement of legal rights of ownership, the designer's response will be different than if it is viewed as an extension of civil rights, or an end of discrimination based on disability.

When the building in question is historically significant, also at issue are values of the preservation community and the standards and regulations of the Secretary of Interior's Standards for Rehabilitation. The values of historic preservation are often at odds with those of the ADA, and many provisions of the legislation are contradictory as well. The Department of Justice's American's with Disabilities Act (ADA, 1990) and the Secretary of Interior's Standards for Rehabilitation (1990) offer only prescriptive solutions to the accessibility and preservation dilemma. Each has its own set of regulations and standards that must be closely followed for compliance. When applied individually to a building, i.e., addressing accessibility and preservation problems separately, there is often a very limited range of possible appropriate solutions, and little room for the evaluation or examination of options.

Strict compliance with Americans with Disabilities Act Accessibility Guidelines (ADAAG, 1991) is always a difficult task. However, dealing with the specifics of the ADA requirements, while at the same time preserving historic material and character, and considering the experience of the user can be a much more difficult undertaking. This is where the danger lies. In

trying to deal with accessibility and preservation as separate issues and becoming too preoccupied with the specifics and small parts (is a ramp too steep or not wide enough, etc.), we tend to lose sight of the greater issues -- the protection of the civil rights of the building's users, as well as the protection of the historic nature of the building, and the experience of all of its users.

It is critical that accessibility be considered simultaneously, or integrally, with preservation. Otherwise ADA interventions can be unwittingly detrimental to both the experience of the user and the integrity of the building as historic artifact. In actuality, one cannot appropriately address either accessibility or preservation issues to the exclusion of the other. A building made accessible should not sacrifice its historic fabric or character. Similarly, a well-preserved or restored building should not be inaccessible.

While all historic buildings ought to be accessible to everyone, there exists within the preservation / ADA issue a paradox: the value of a historic building or facility is limited if it cannot be used, but if modifications made to remove barriers to accessibility compromise the historic character, the value is similarly diminished. The solution, then, must be found in the thoughtful, respectful consideration of the needs of both the historic building and of all the building's users, disabled or otherwise. It must then be determined which steps can be taken to remove barriers while at the same time preserving the integrity of the building. There must be an appropriate and acceptable solution to this dilemma in each historic building. By providing for free access to all people, its value to the

community is enhanced. An architectural artifact is of little value if people cannot interact with it. Ultimately, buildings are built to be used by people.

CHAPTER IV: METHODOLOGY

Introduction

It is the intent of this thesis to develop and propose a process to aid in making sense of the conflicting and contradictory goals set by the ADA and Secretary of Interior's Standards for Rehabilitation. It will bring together the different ethics and evaluative criteria of both the accessibility and preservation points of view into a single, coherent process that would then open up the range of possible solutions available. Accessibility and preservation standards are generally prescriptive. They mandate what is to be accomplished, but offer little in the way of how to reconcile conflicts with other goals. Going down a checklist is not a very reliable means of generating options, and does not reveal much about the quality of an intervention.

Selection and Analysis of Case Studies

Critical to this investigation is the determination of what is being done to provide accessibility in historic buildings, and what has been done in the past: through the examination, documentation, and analysis of buildings that are either listed on the National Register of Historic Places, or are eligible for listing, and which have in some way been modified to provide accessibility.

Philadelphia, perhaps more than any other city in America, represents the history of architecture in the United States. As the leading city of the Colonies, and the nation's first capital, Philadelphia was the center of cultural, scientific, and civic leadership in the 18th century. In the 19th century, the city's important scientific community placed it on the leading edge of industrial change. Philadelphia was the largest manufacturing center in the country. New building types and thousands of houses built for the city's rapidly growing population made the 19th century one of the richest periods in the city's architectural history. In the 20th century, Philadelphia was one of the first American cities to focus on the problems of urban development and historic preservation. Major civic projects were begun in the early decades of the century, and after the Second World War, the city was an acknowledged leader in urban renewal, architectural design, and education.

Thus, the architectural history of the past 300 years is visible on every street in the city; Philadelphia is quite literally a museum of American architecture. With such a rich and diverse architectural heritage, Philadelphia is a logical place in which to examine the impact of accessibility modifications on both the historic building and the experience of all its users, whether with or without disabilities.

There are innumerable historic buildings in the Philadelphia area which have been adapted for accessibility. Many of these were examined in the course of this study. In many cases, however, the buildings and their modifications were so similar to others, that inclusion of all cases would

have been repetitive. Consequently, not all of the examined buildings are included in this study.

Evaluation of Findings

The following analyses will determine a process for evaluating the quality of the intervention in terms of both providing accessibility and preserving the historic character and material of the building. This process will be comprised of two continua, one that describes and evaluates the experience of the user, the other that describes the impact of the intervention on the building as a historical artifact. Individual case studies will then be evaluated through this process. Collectively, these case studies will be analyzed for evolving patterns that will further inform the design process and future intervention. The evaluative process evolved from research in the form of both literature review and building case studies. The idea of the synthesis is crucial. Without it, one may be still looking at individual issues in a linear way, rather than at the relationships of how an issue effects (or is effected by) any number of others.

Application of Findings to Test Case

The first step of this investigation is to document the impact of accessibility modifications on historic buildings already made accessible. The next step is to use what is learned from that documentation and analysis of the findings, to determine the impact such a process would have

when applied to a historic building which had not yet been modified for accessibility. The Public Library in Leon, Iowa was selected as a test case for several reasons. It is quite small, and it is an unusually intact example of the Carnegie Library. There are no plans, nor is there any perceived need, for any expansion of the library. The people of Leon are concerned primarily with preserving their library, and making it accessible to the entire community.

CHAPTER V: FINDINGS

Introduction

Through the investigation, documentation, and analysis of historic buildings, in Philadelphia, Pennsylvania, and the modifications, if any, which have been made to achieve accessibility, it should be possible to develop a process by which to evaluate the protection of the building as artifact, and the quality of the experience of the user. This should offer a way of providing for a quality experience without sacrificing the historic fabric of the building.

Case Studies

Case Study #1

Second Bank of the United States
420 Chestnut Street
William Strickland
1818-24

The Second Bank (Figure 1) was founded in 1816. Nicholas Biddle, its influential president, was a Champion of Greek architecture. When the bank held a competition for the design of the new building, he required all the architects to use the Greek style. Strickland's design is one of the first Greek Revival buildings in the country. Modeled on the Parthenon, it features plain Doric columns and little ornamentation except for the triglyphs and metopes on the entablature. It appears to be built of solid

marble, but is actually brick faced with marble. In contrast to the Greek exterior, the interior is Roman. A barrel-vaulted ceiling covers the banking hall. Andrew Jackson's veto of the bank's charter in 1832 led to its demise. In 1844, Strickland altered the building for use as the United States Customs House, which it remained until 1935. It now maintained by the National Park Service and houses the National Portrait Gallery (Gallery, 1984).

The Second Bank is not an accessible building per se; no modifications whatsoever have been made to improve accessibility to the building. It sits on a raised platform, and one must climb a number of stairs to enter. Wheelchair access is provided through the use of a StairTrak, which has tank treads capable of climbing stairs. The wheelchair is secured to the back of the vehicle, it rolls up the stairs, and then waits to take the wheelchair user back down when his or her visit is complete. All visitors are thus able to enter the building by the same route, but the experience of entry is quite different and diminished for the disabled visitor because of the great degree of stigma involved with the use of the apparatus. The degree of stigma involved in being tied on to the back of a cart and driven up a dozen steps is unacceptable to many people.

Preservation has clearly been the priority in making this building accessible. It is only through the use of apparatus that many disabled visitors are able to get inside the building. While there are no readily apparent answers to the accessibility problems faced by the Second Bank, the creation of a second primary entrance at grade on the buildings side could offer a more desirable experience of entrance to people with

disabilities. Clearly, as in this case, all visitors following the same route of entry is no guarantee that an acceptable solution has been found. Rather, it is the quality of the experience of any visitor which ultimately will determine whether or not an intervention has been a successful one.

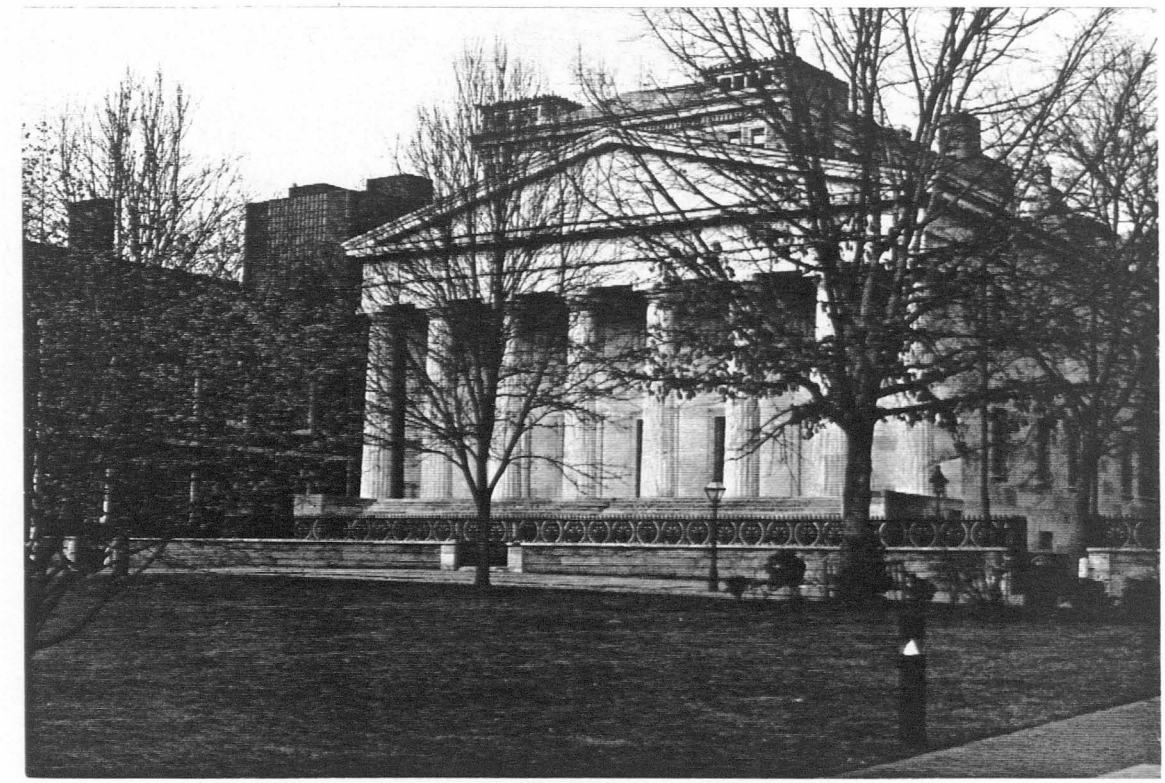

Figure 1. South view of the Second Bank of the United States

Case Study #2

Free Library of Philadelphia
Vine Street Between 19th and 20th Streets
Horace Trumbauer
1917-27

In the 18th and 19th centuries, Philadelphia's libraries were privately owned. The first free library began operating out of City Hall in 1894. The Library's rapid growth made it a logical choice to occupy one of the sites on Logan Circle, designated for civic buildings in the plan of the Benjamin Franklin Parkway. The Parkway was inspired by the Champs-Elysees in Paris. The Library, along with the Philadelphia Family Court Building, took its form from the twin palaces on the Place de la Concorde, which occupies a similar position on that boulevard (Gallery, 1984). When completed, the library was one of the largest and most modern in the world. It was considered to be the ultimate in fireproof construction, with steel and aluminum furnishings and trim throughout.

Access is achieved at the primary entrance by climbing a number of stairs at the center of the Logan Square side of the building (Figure 2, 3). Due to the nature of the building type and the requirement for controlled access, this is the only public entrance to the library. It is not barrier-free. The library's barrier-free entrance (Figure 4) is located at the rear of the building, off a narrow alley that also serves the loading docks and garbage dumpsters, and is also home to members of Philadelphia's homeless community. A ramp leads down from street grade to the main level of the building. One enters the library through a storage room behind the reference desk. People with disabilities must then follow a circuitous route

to reach the main circulation areas or the elevators. Very little modification was required to accomplish this, but it is by no means an appropriate solution. What is achieved here is a very minimal form of accessibility. There is no equality of experience, and it is a very secondary entrance that is provided.

While little preservation is evident here, clearly the accessibility modification has been impacted by preservation ethics. Little modification has been made to accommodate people with disabilities. There has been no alteration of the primary entrance, the accessible entrance is at the rear of the building, and there is at least a lack of concern for the quality of the experience of the disabled library patron. While this modification predates the passage of the ADA, by any standard which takes into account the experience of the user, it is not acceptable.

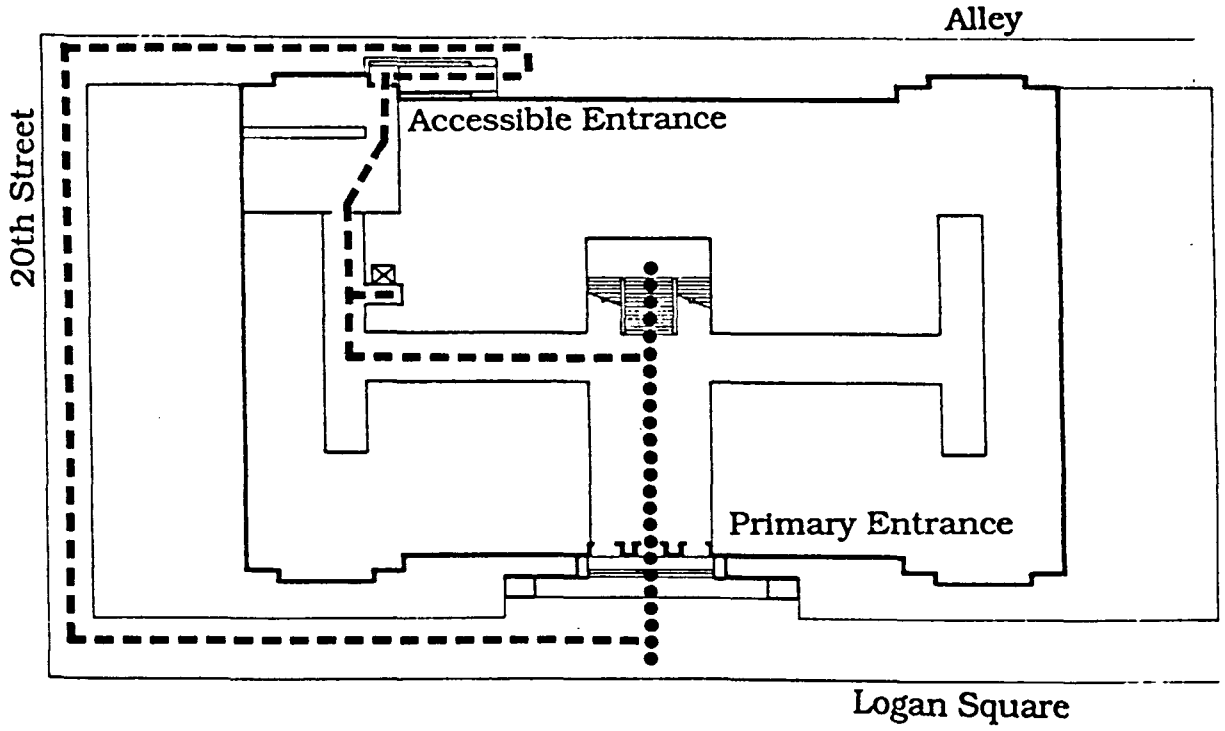

Figure 2. Plan of Free Library of Philadelphia

Figure 3. Free Library of Philadelphia, main entrance

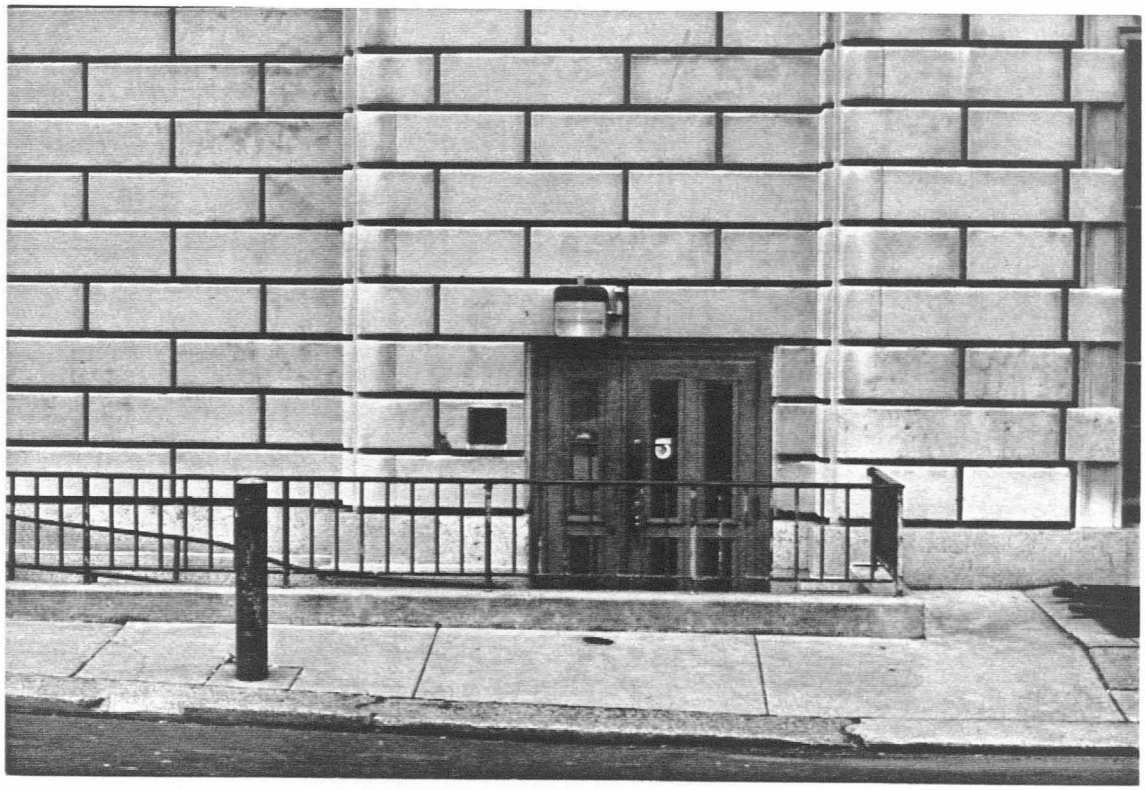

Figure 4. Free Library of Philadelphia, accessible entrance

Case Study #3

The Curtis Center
6th Street between Walnut and Samsome Streets
Stewardson and Page
1925

Long the home of the Curtis Publishing Company, publishers of the Saturday Evening Post, Ladies home Journal, and other magazines, the Curtis Center was a working building. It housed the editorial and managerial offices, as well as the printing and distribution facilities.

In the mid 1980's, the Curtis Center (Figure 5) has been rehabilitated as a commercial office building. The interior court has been transformed into an atrium, which is often used for civic and public events, and is one of the grand interior spaces of the city.

The building's main entrance (Figure 6) is located on 6th Street, facing Independence Square, and was not modified for accessibility, and the original procession of entrance has been preserved. Rather, the old loading docks on the Washington Square side of the building were rehabilitated as a new primary entrance (Figure 7). An interior ramp leads from the street level up into the interior of the building. While the new entrance does not lead into the lobby, as does the original entrance, it is equally proximate to the elevators and retail spaces, and leads directly into the atrium. The use of this building has changed, and the atrium, now the principal interior space in the building, is often the main destination of many of the buildings users.

The designers, in this case, have succeeded in providing an appropriate entrance to serve people with disabilities. At the same time,

they have preserved the most important interior and exterior features of the building. While everyone may not share the same route or experience of entry, the barrier free entrance is a primary entrance. It provides for a comparable experience of entrance and quality of route for all users.

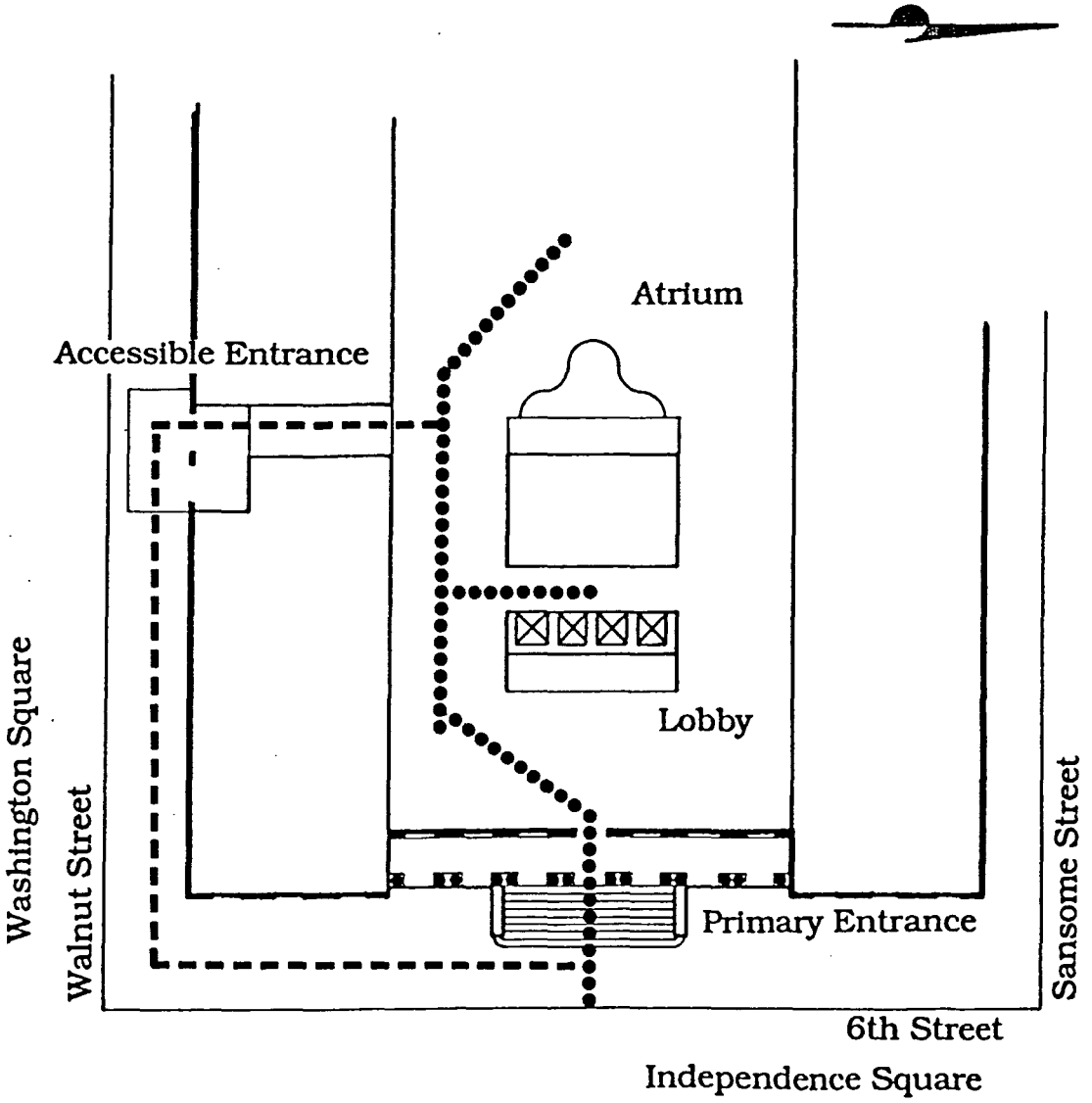

Figure 5. Plan of the Curtis Center

Figure 6. The Curtis Center, main entrance

Figure 7. The Curtis Center, accessible entrance

Case Study #4

Thomas Jefferson University Hospital
10th and Walnut Street
Horace Trumbauer
1909

The main building of the Jefferson University Hospital (Figure 9, 10) was recently altered to provide a means of vehicular and pedestrian access to the emergency and trauma units, relocated within this building. This was achieved by removing the first several bays from the first floor of the building. In doing so, they have created a driveway (Figure 11) that allows for ambulance and visitor access proximate to the front desk of each unit. The facade is retained as a screen for the drive.

While much of the historic fabric of the interior has been destroyed, this was necessary to allow this building to continue to function as a modern teaching hospital. For the most part, however, the facade has been preserved. Some materials have been removed (e.g. windows, doors, etc.), but the rhythm and character of the building's primary facade have been preserved.

The creation of an accessible entrance was, in this case, a product of the hospital's need to better utilize its space. The single, primary, accessible entrance allows for all people to share the same route and experience of entry, but at the expense of much of what made the building special. The shared experience is diminished for everyone.

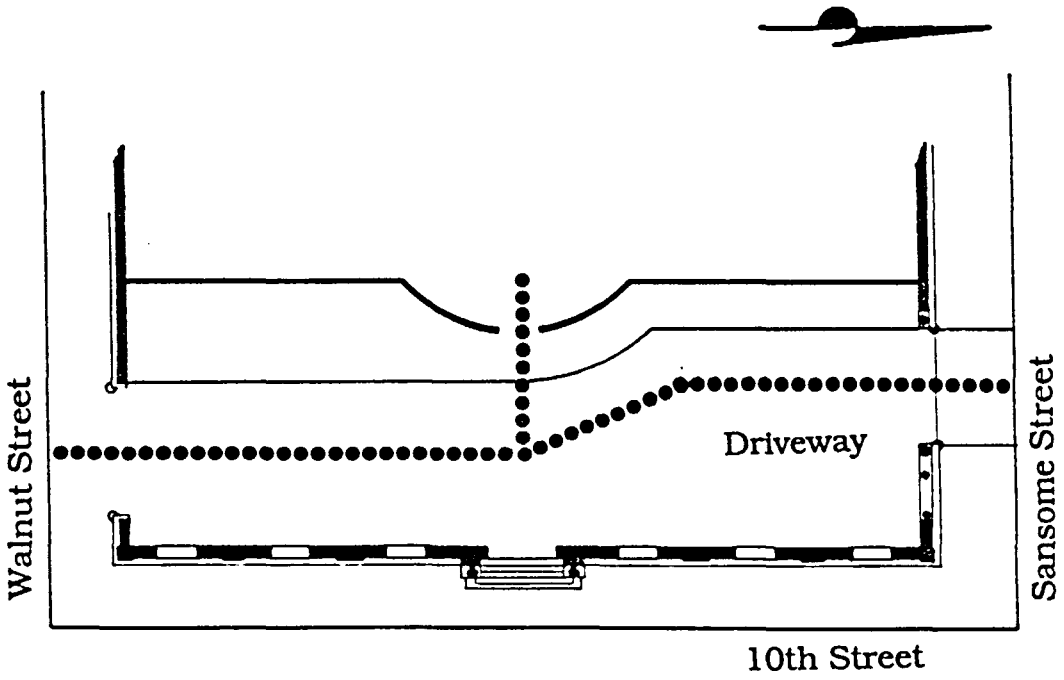

Figure 8. Plan of Thomas Jefferson University Hospital: Main Building

Figure 10. East View of Jefferson Hospital

Figure 11. North Entrance of Jefferson Hospital

Case Study #5

The Bourse
11 South 5th Street
G. W. and W. D. Hewitt
1893-95

The Bourse was developed by George Bartol, and it originally accommodated a number of financial institutions, including the Maritime exchange, the Stock Exchange, as well as grain-trading activity. Modeled after the European bourses, it was at the time the only institution of its kind. The block long building is of steel frame construction, with bowed steel trusses above the trading floor. The exterior is clad with red sandstone and Pompeian brick. The facade is enlivened with terra-cotta decoration and topped with a large cornice. Giant columns and piers define the entrances on 4th and 5th Streets. The trading area was a two-story interior court, framed by eight stories of offices (Gallery, 1984).

After the Stock Exchange moved and the financial district relocated to the city Hall area, the Bourse declined. In 1982, it was extensively rehabilitated to create a three-level retail shopping court with offices above. The skylight above the trading floor was removed, and replaced by a new structure at the top of the interior court. Ornate plaster work, iron and brass fittings, and colored floor tiles were carefully restored, and a modern glass curtain wall sheathes the offices overlooking the interior court. Like the Curtis Center, the use of the Bourse has changed. The main public space of the building, and primary destination is now the retail space of the atrium.

The Bourse was the one case found where the primary entrance has been successfully made accessible (Figure 12). It is possible, however, that the site offered some opportunities. Stairs were removed and the entry regraded to take advantage of the sloping site. A level plaza was created at the main entrance: it meets the street at grade at the south end of the site (Figure 13), is slightly ramped at the center (Figure 14), and is accessible by stairs at the north end (Figure 15). In this case, the character of the building and the sense of entry are preserved. Accessibility is provided for everyone, and the shared experience of entering the building is undiminished.

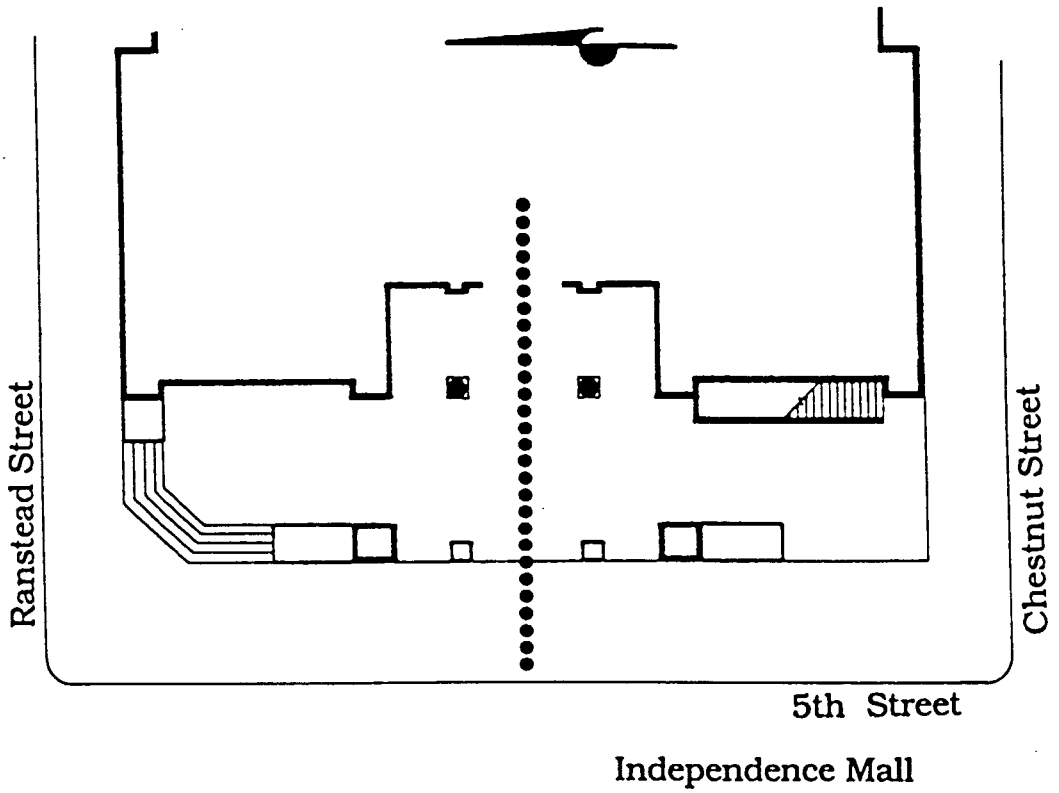

Figure 12. Plan of the Bourse

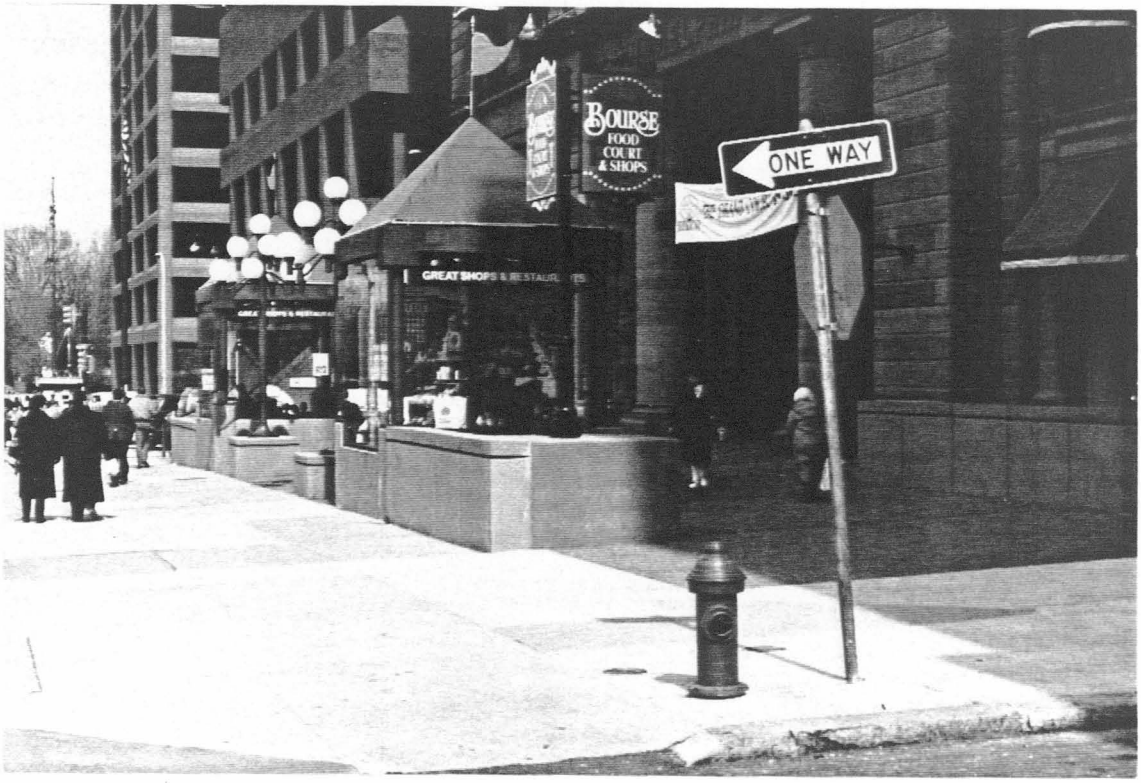

Figure 13. South approach to the Bourse

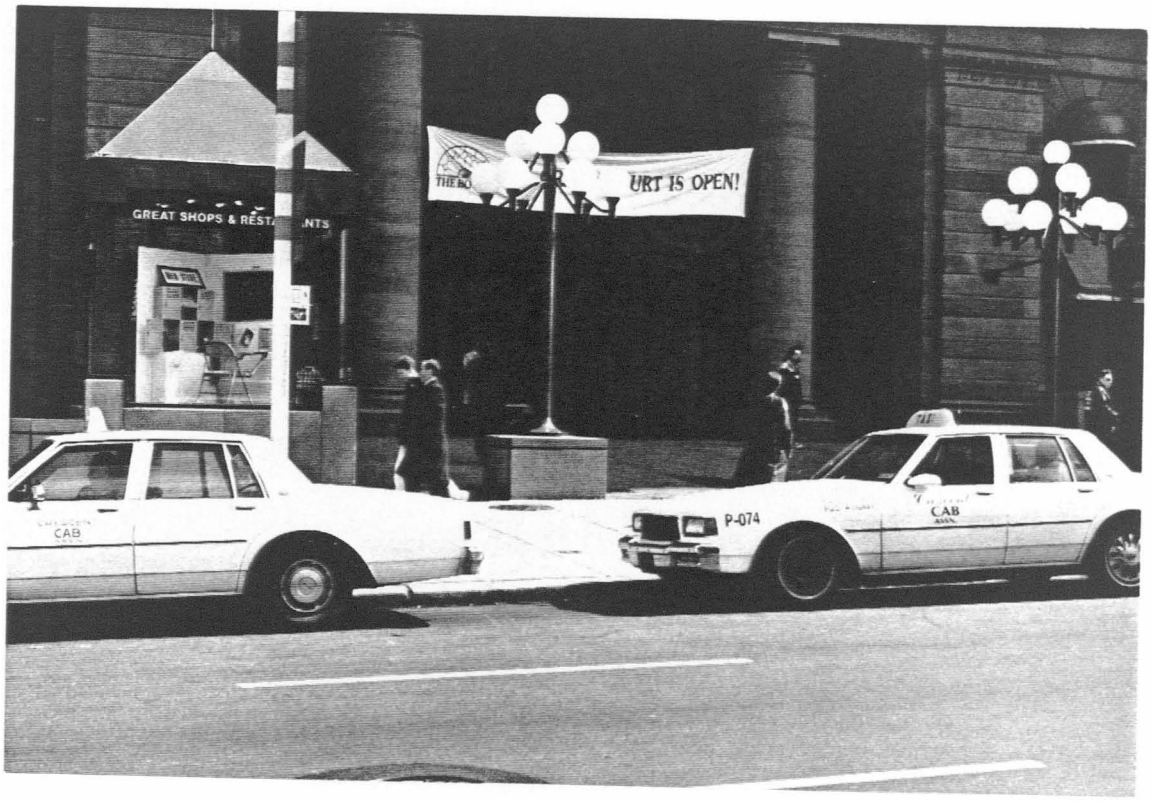

Figure 14. East approach to the Bourse

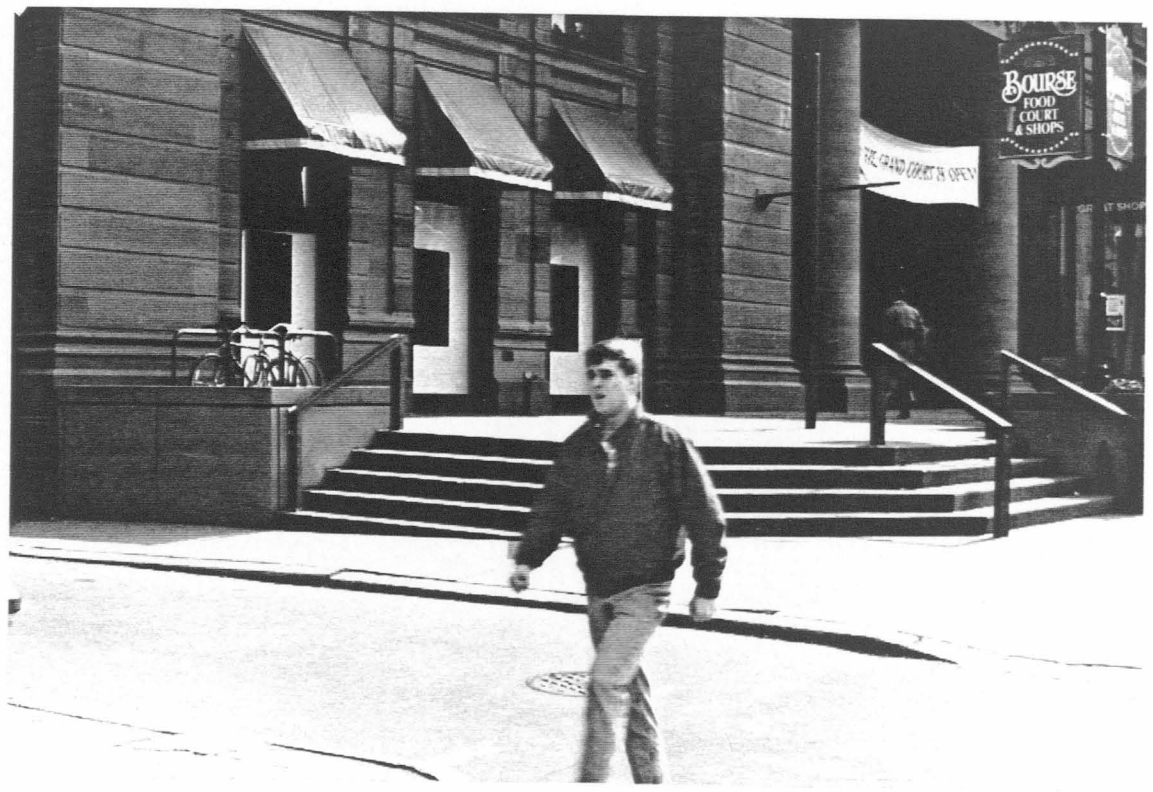

Figure 15. North approach to the Bourse

Case Study #6

Merchant's Exchange
143 South 3rd Street
William Strickland
1832-33

When Philadelphia businessmen became too numerous to meet in coffee houses and taverns, merchants formed the Philadelphia Exchange Company. Strickland designed their building (Figure 16), now the oldest stock exchange in the country, which was considered to be one of the most beautiful structures of its kind. The building consists of a rectangular main structure with a semicircular portico. Strickland used the Corinthian order on the colonnade, reflecting the evolution of a more elaborate Greek revival style. He crowned the building with a lantern, meticulously copied from the Choragic Monument of Lysicrates, one of the most copied monuments of the period. The Exchange Room was elaborate and luxurious. Located in the curved portion of the building, it had a mosaic floor, a domed ceiling supported by marble columns, and frescoes on the walls. Real estate dealings, auctions, and business transactions of all kinds took place in this room, where shipping news and newspapers from all over the world were posted (Gallery, 1984).

The Exchange dissolved during the Civil War. When wholesale food markets took over the area, sheds were erected around the east end of the building. These remained until the National Park Service purchased the building in 1952. The building now houses park offices and is not open to the public.

Since there is only a single step at the main entrance, accessibility has been achieved by carving a curb cut into the central bay, and installing an automatic door (Figure 17). This allows anyone to use the primary entrance, the only public entrance to the building. The use of the curb cut in the single step destroys little historic material, preserves the character of the entrance, and greatly improves accessibility. Thus everyone is able to share the same route and the same experience of entry.

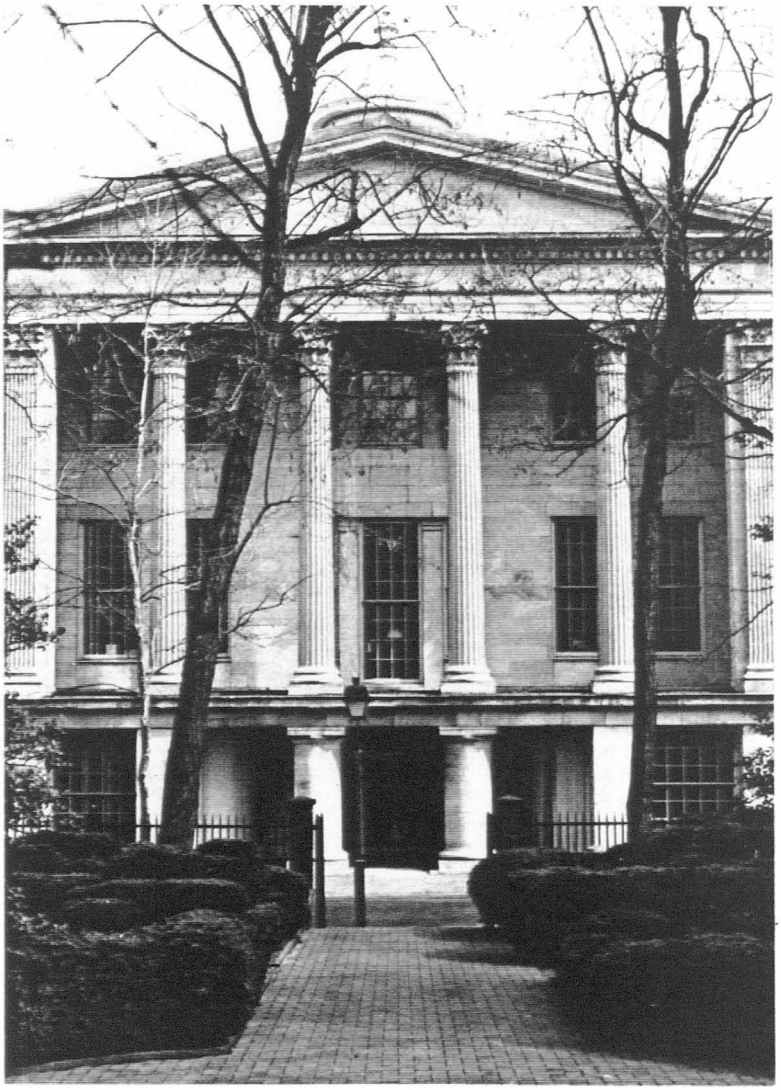

Figure 16. Entrance to Merchants Exchange

Figure 17. Detail of curb-cut in step at entrance of Merchant's Exchange

Case Study #7

United States Customs House
2nd and Chestnut streets
Ritter and Shay
1933

The U. S. Customs House (Figure 18) was built to replace the Second Bank of the United States building, which had housed the Customs offices since 1844. The increased traffic in the Port of Philadelphia and the need for other Federal office space required a much larger building. A beaux-arts structure of brick and granite, the building is entered through three arched doorways at the center of the block. They are reached after mounting four steps from the street grade (Figure 19).

During a major restoration of the building completed by the Federal Government in 1993, a ramp was added at the primary entrance to allow access for people with disabilities (Figure 20). While the addition of a ramp at the primary entrance can often compromise the character of a historic building, in this case, the design shows sensitivity to the goals of both accessibility and preservation. It is clearly an addition to the building, but it uses compatible materials and is respective of the historic fabric of the building. It gives a primary, shared entrance to the building, without interrupting existing traffic patterns.

All visitors enter the building at the same point. They do so, however, by different yet comparable routes. People with disabilities do not share the same route or experience with most of the building's visitors, but the quality of both experience and route is similar.

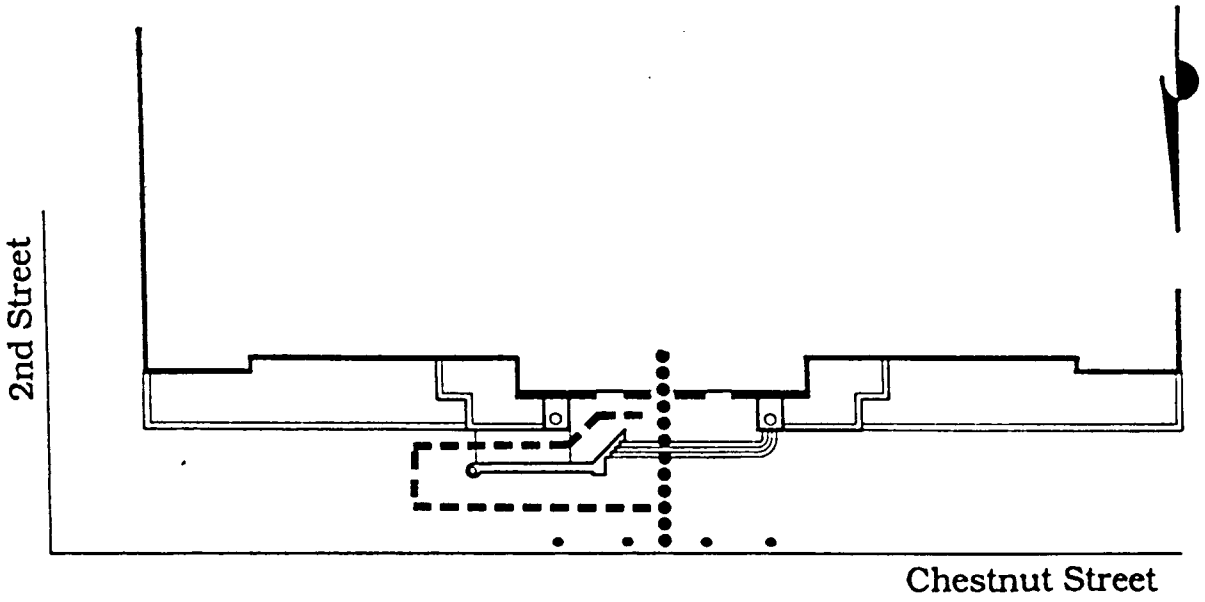

Figure 18. Plan of United States Customs House

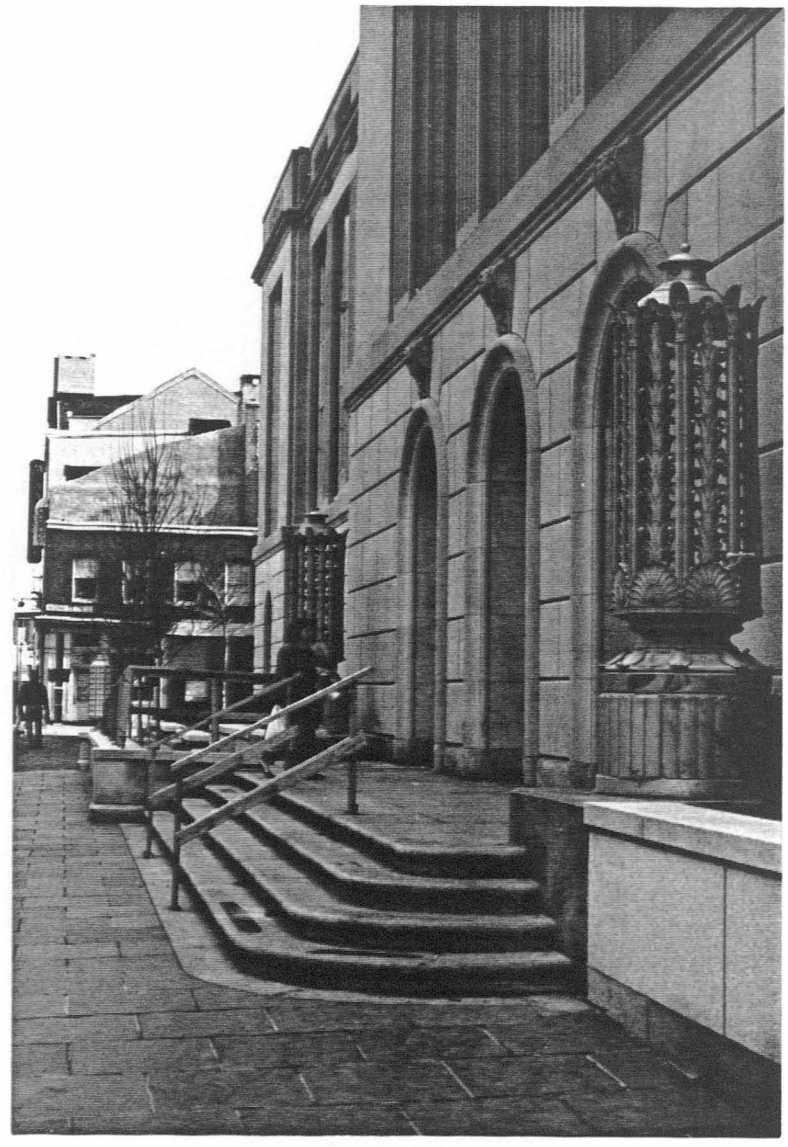

Figure 19. West approach to U. S. Customs House

Figure 20. East approach to U. S. Customs House

Case Study #8

Independence Hall
Chestnut Street between 5th and 6th Streets
Andrew Hamilton with Edmund Wooley
1732-48

Perhaps the most sacred of American historic buildings is Independence Hall, the old Pennsylvania State House. Conceived in a five-part plan based on the Palladian principle of linking two secondary buildings to the main block by arcades, the State House is an outstanding example of Georgian design. The exterior is of brick, and is domestic in scale and character. All that could distinguish its street facade from near-by houses were its length and the marble panels between the first and second story windows. When completed in 1748, the State House was the wonder of Philadelphia, and the most elaborate complex of government buildings in the colonies.

The high point of the buildings history was during the turbulent years preceding the American Revolution. The Assembly Room was the setting for the dramatic debates on independence, and is the room in which both the Declaration of Independence and the Constitution were signed. The State House also served as the nation's capitol from 1790 to 1800.

In 1830, John Haviland, the Greek Revival architect, was hired by the city to restore the building. It was to be the first of many restorations. In 1950, the National Park Service undertook an archaeological study of the buildings, which provided the information necessary to restore it to its 1776 appearance (Gallery, 1984).

Independence Hall is not an accessible building. There have been no alterations made to accommodate people with disabilities. Wheelchair access to the building is achieved by means of a portable plastic ramp, which gets people up the three steps at the rear entrance. This ramp is truly portable, as it is removed when not in use. The second floor is totally inaccessible to anyone incapable of climbing the stairs. Photographs of the second floor rooms are available, however.

Access to Independence Hall is limited to the guided tour (Figure 21), which takes visitors into the rear entrance of one of the side buildings, out the front, and into the front entrance of the main building (Figure 22). People with disabilities who cannot use the stairs, however, are taken back out the rear entrance, and then in the rear entrance of the main block (Figure 23). While it is unfortunate that there must be a separate experience of entry for people with differing abilities, the symbolism of Independence Hall precludes almost any alteration.

However, there is a high degree of stigma involved in having to follow a different route than everyone else, and the experience of visiting Independence Hall is diminished for many people with disabilities. This could be easily remedied. Since access to the building is "tour oriented", one possible alternative would be to redesign the tour so that everyone entered at the accessible entrance. That way, everyone could share the same experience and route.

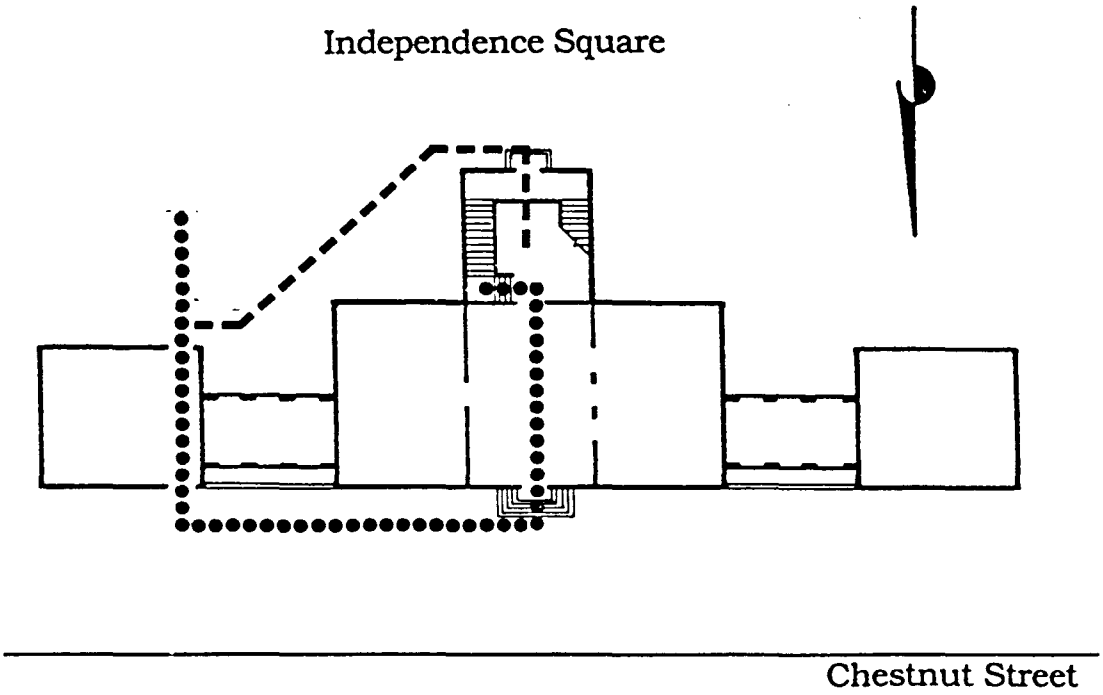

Figure 21. Plan of Independence Hall

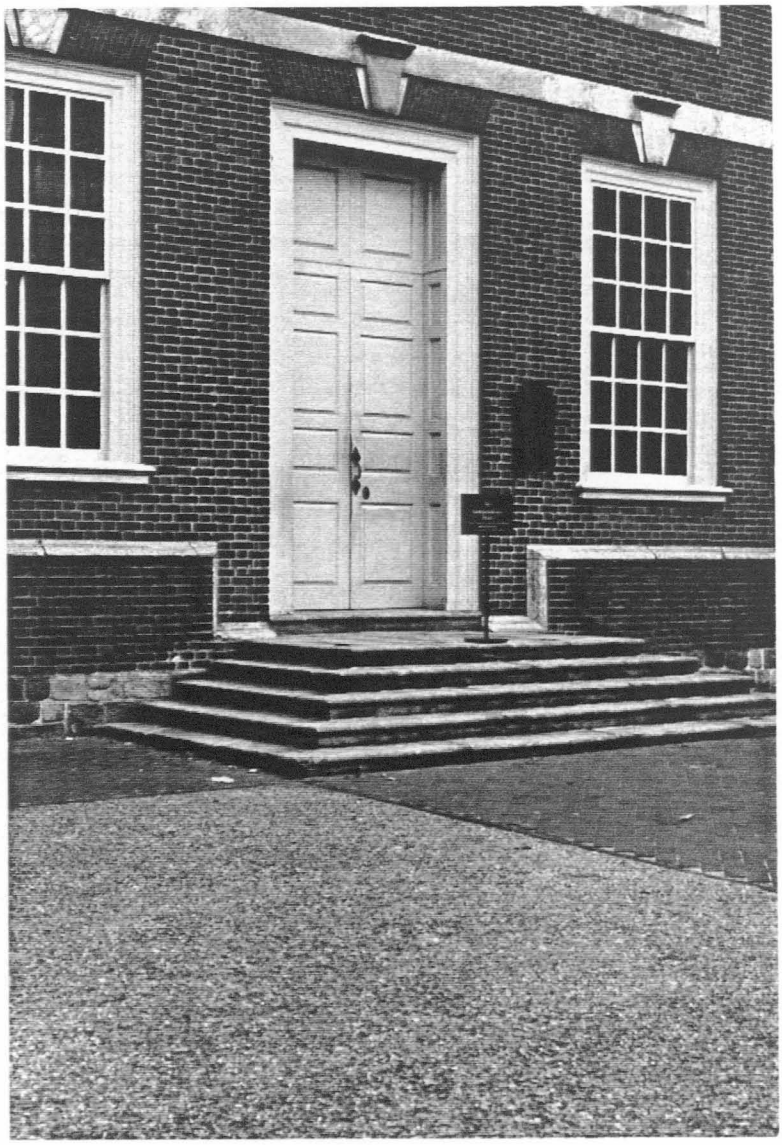

Figure 22. South (main) entrance to Independence Hall

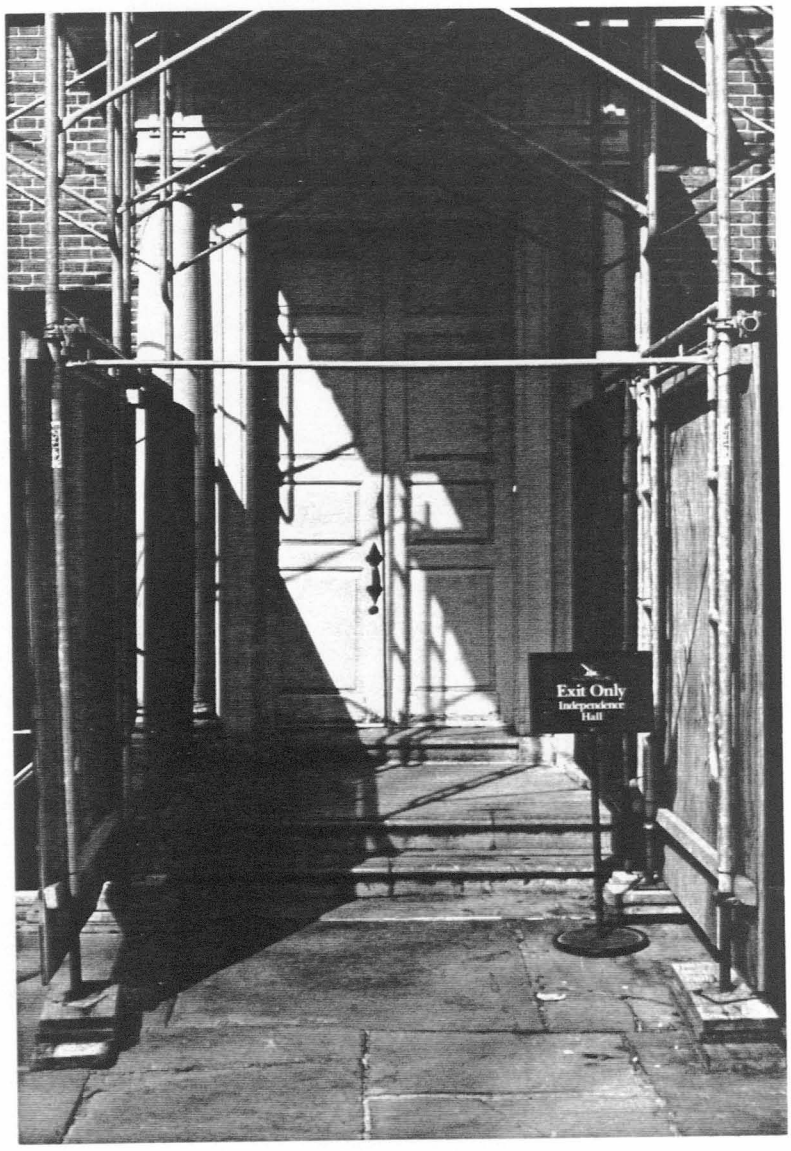

Figure 23. North entrance to Independence Hall

Case Study #9

The Academy of Natural Sciences
Race Street between 19th and 20th Streets
1892

The Academy of Natural Science (Figure 24) is located on Logan Square, and is part of the great complex of museums and other cultural institutions that line the Benjamin Franklin Parkway from City Hall to the Art Museum. The building is of brick, and is quite different from its marble and granite neighbors. It is modest in scale and character.

The main entrance (Figure 25) is unpretentious, yet it makes its presence known on the Square. There are a number of steps that prevent the disabled visitor from using this entrance. The group entrance (Figure 26), located on 19th Street, is at street level and is barrier-free. While there is little difference in scale or style between the two entrances, the group entrance does not feel as important. It is off the beaten path, and not proximate to Logan Square, an important landmark. Once inside the building, people often find the route to the main areas confused. While the group entrance provides a secondary experience of entry, it is not so clearly "second rate" as the Free Library, for example.

The experience of entering by the group entrance suffers from its location on the street, but also from the fact that upon entering the building, people with disabilities find themselves downstairs from the museum's main level, in a dark corridor between the snack bar and other areas not open to the public. Thus there is no shared route or experience, and the quality of each is seriously lacking.

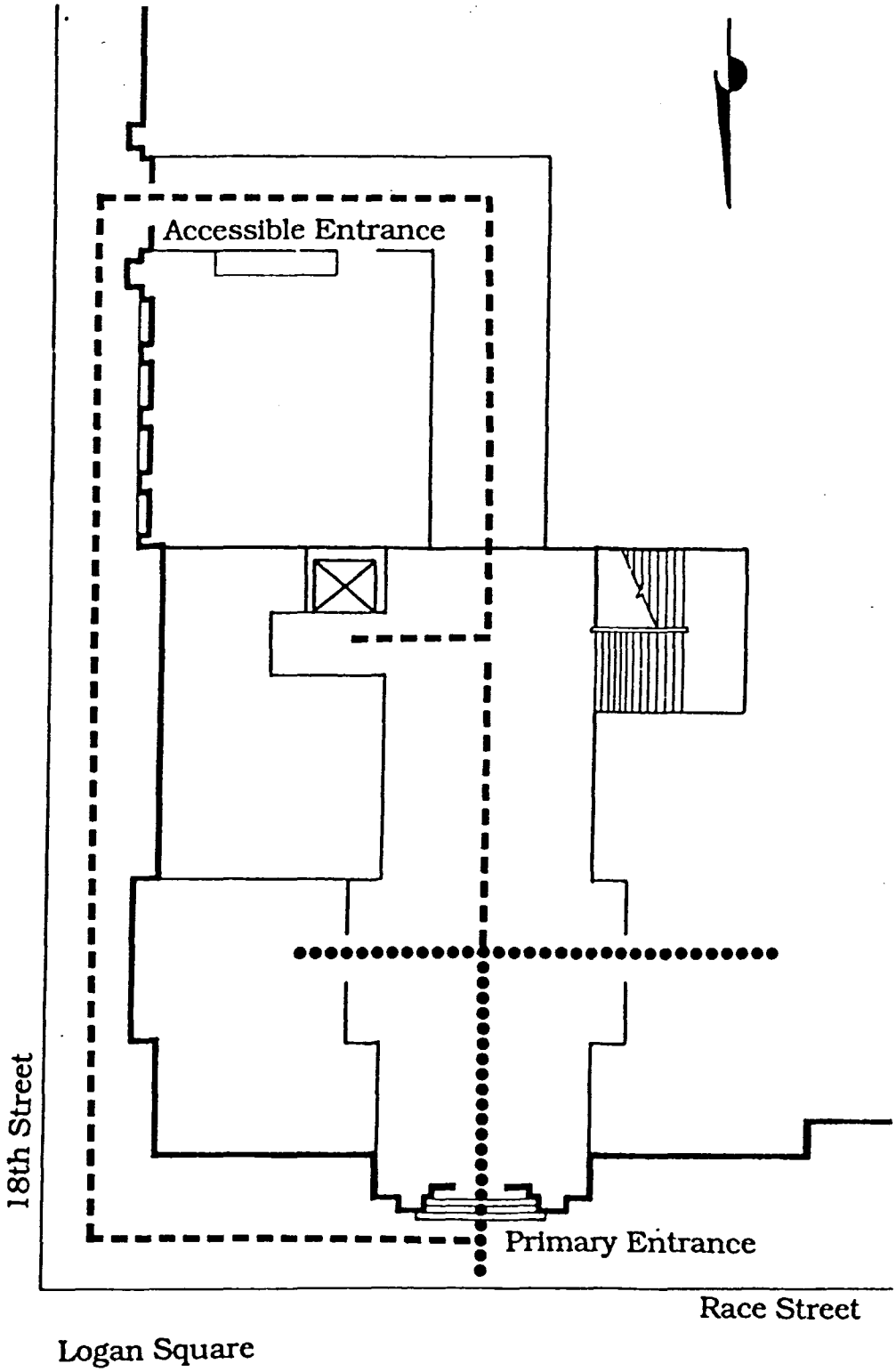

Figure 24. Plan of Academy of Natural Sciences

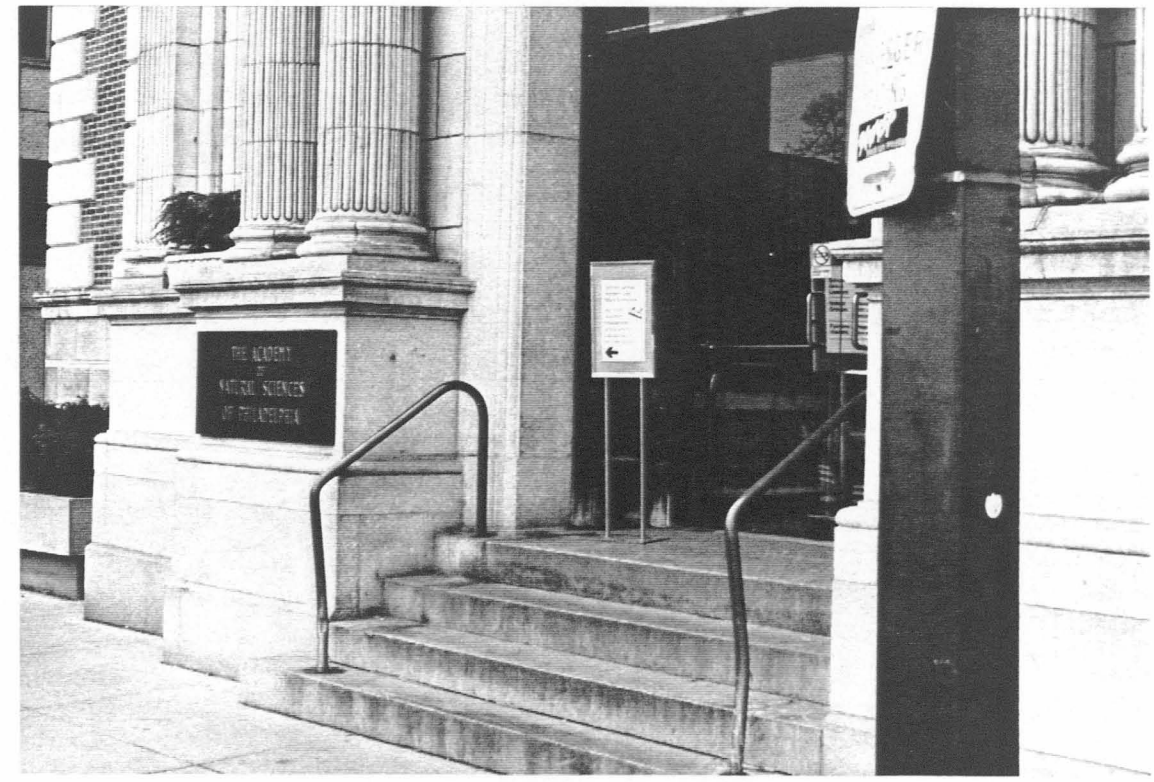

Figure 25. North (main) entrance to Academy of Natural Sciences

Figure 26. East (accessible) entrance to Academy of Natural Sciences

Case Study #10

The Franklin Institute
20th Street and the Benjamin Franklin Parkway
1930

The Franklin Institute, one of the oldest and most popular science museums in the country, is located on Logan Square, one of the most important civic spaces in the city. It is home to the Benjamin Franklin National Memorial, a public space dedicated to the memory of Philadelphia's most famous citizen. The Memorial, a series of rooms, open to the public, and free of charge, is the heart of the museum (Figure 27). All other parts of the museum require an admission fee.

Access to the memorial, and the museum spaces, is by way of a monumental stair on the Logan Square side of the building (Figure 28). People with disabilities must use a ramp to enter the staff entrance (Figure 29) on the northern side. While the barrier-free entrance is on a primary side of the building, facing the Parkway, it remains a secondary entrance. The ramp itself diminishes the experience of the person who uses it, and detracts from the character of the building The barrier-free entrance does not address the important interior spaces. From the staff entrance, people with physical disabilities must follow a long, circuitous, and complicated path to reach the elevators and the main public spaces upstairs.

It is unfortunate that in a 1988 addition to the museum, which is barrier free, the designers did not address the issues of accessibility to the entire museum, creating a new primary, barrier-free entrance in the new wing, and thus providing access into and through the building, while at the same time eliminating the need for the ramp at the staff entrance.

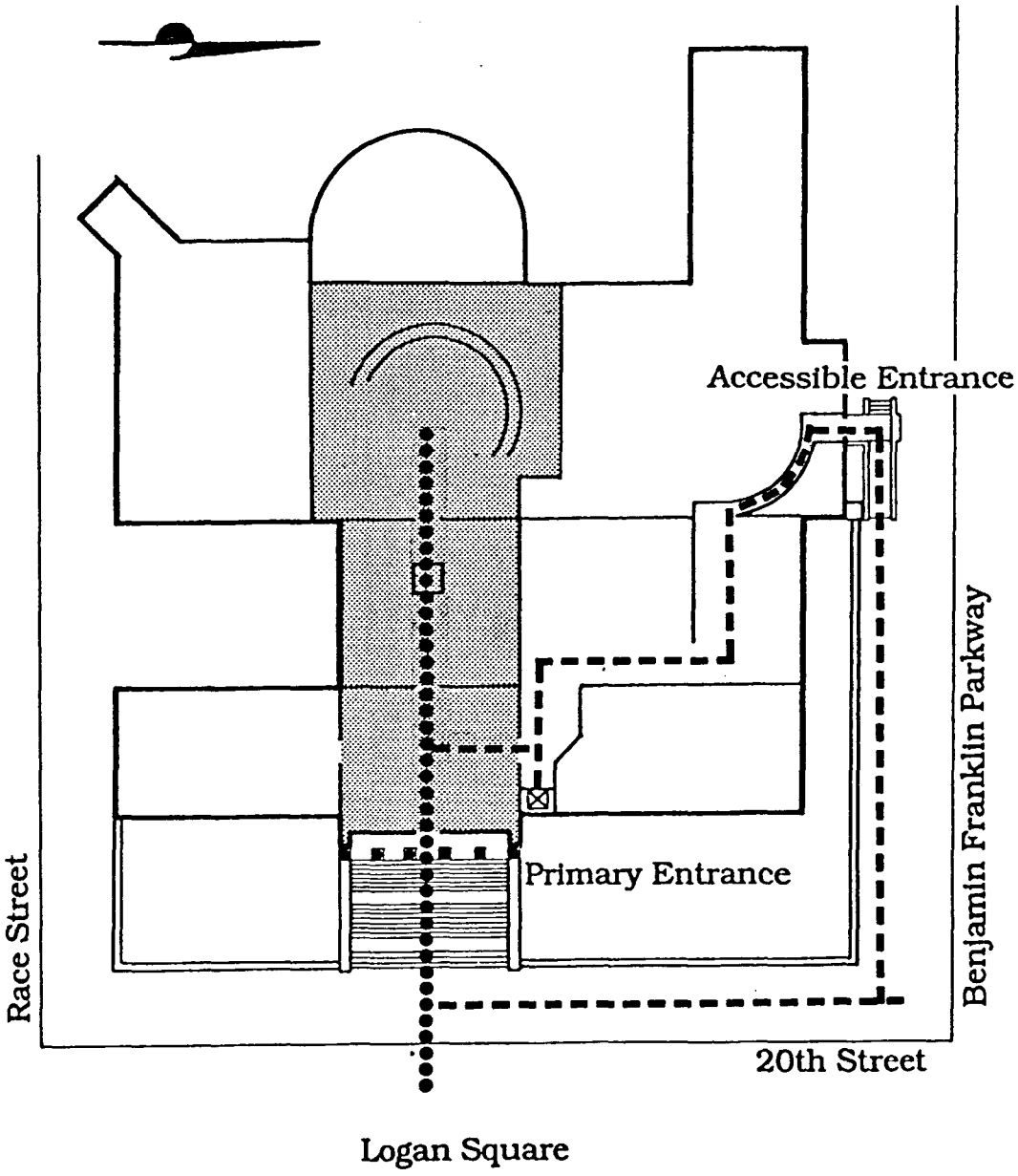

Figure 27. Plan of the Franklin Institute

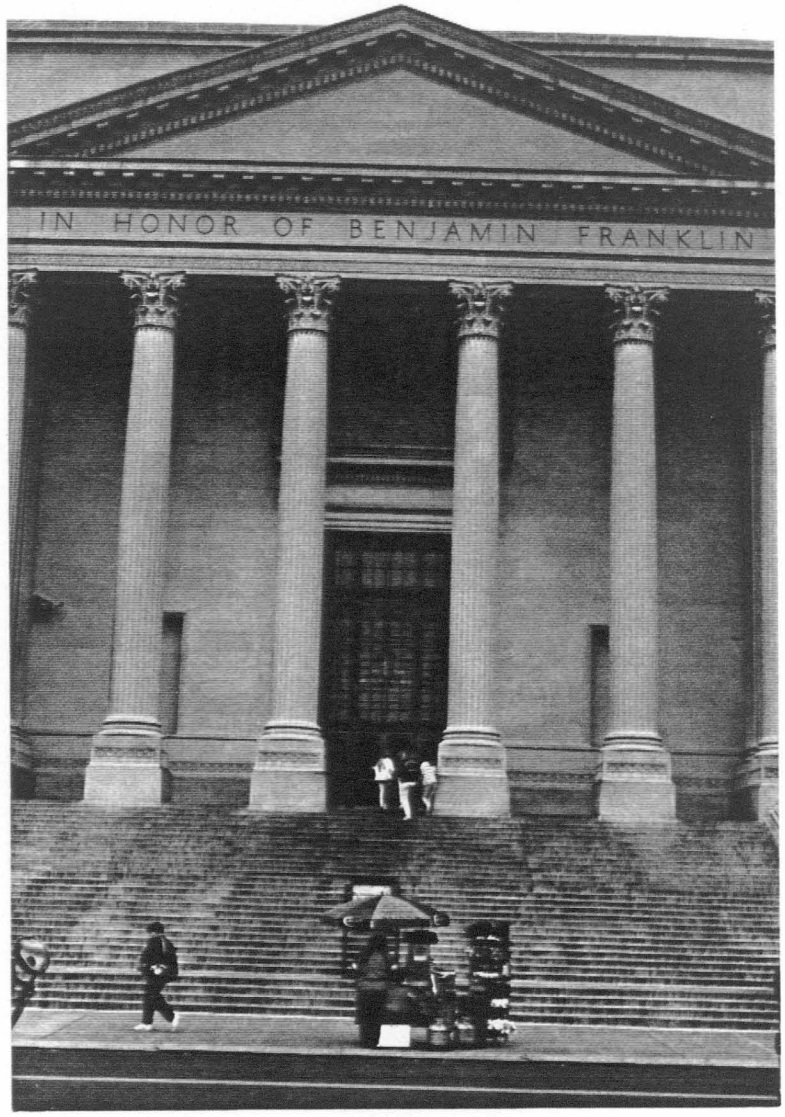

Figure 28. East (main) entrance to the Franklin Institute

Figure 29. North (accessible) entrance to the Franklin Institute

Case Study #11

Cathedral Basilica of Saints Peter and Paul
18th and Race Streets
Napoleon LeBrun/John Notman
1846-64

The Cathedral (Figure 30) is the oldest building on Logan Circle, one of the original five squares of William Penn's plan for the city. It was one of the most elaborate churches in the country when completed, and remains the center of Catholic life in the Philadelphia. The interior was designed in the grand Italian Renaissance style. The original plans, drawn by the Reverends Mariano Maller and John B. Tornatore, were reworked by LeBrun. Notable features include the domed canopy over the altar, the giant Corinthian pilasters surrounding the nave and transept, and the deeply coffered barrel vault over the nave. Notman added the dome and the Palladian facade in 1850 (Gallery, 1984).

The primary entrance (Figure 31) is at the west end of the church and faces Logan Circle, and is inaccessible due to a series of stairs. The creation of an accessible entrance was recently achieved by adding a ramp at the transept entrance (Figure 32). Here again is a situation in which the secondary entrance, while somewhat accommodating, does not offer the same quality of experience as does the main entrance.

Central to the failure of the solution used at the Cathedral is that the processional experience of entering a church is ignored, thus relegating people with disabilities to a secondary experience of entry.

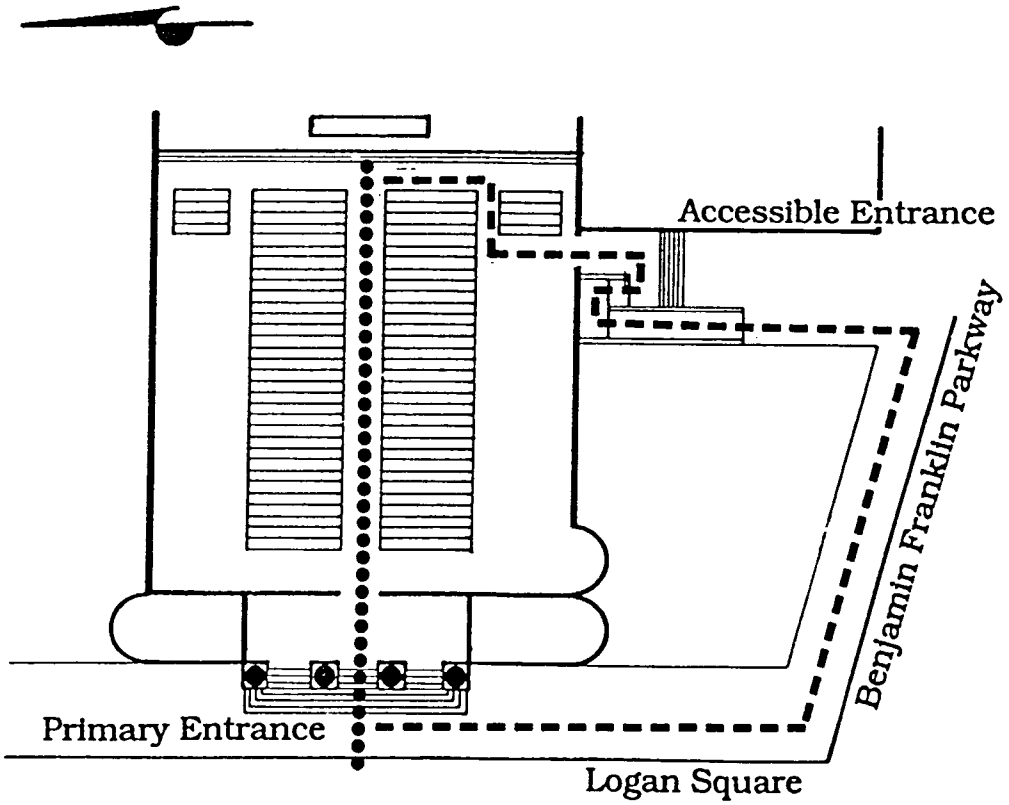

Figure 30. Plan of Cathedral Basilica of Saints Peter and Paul

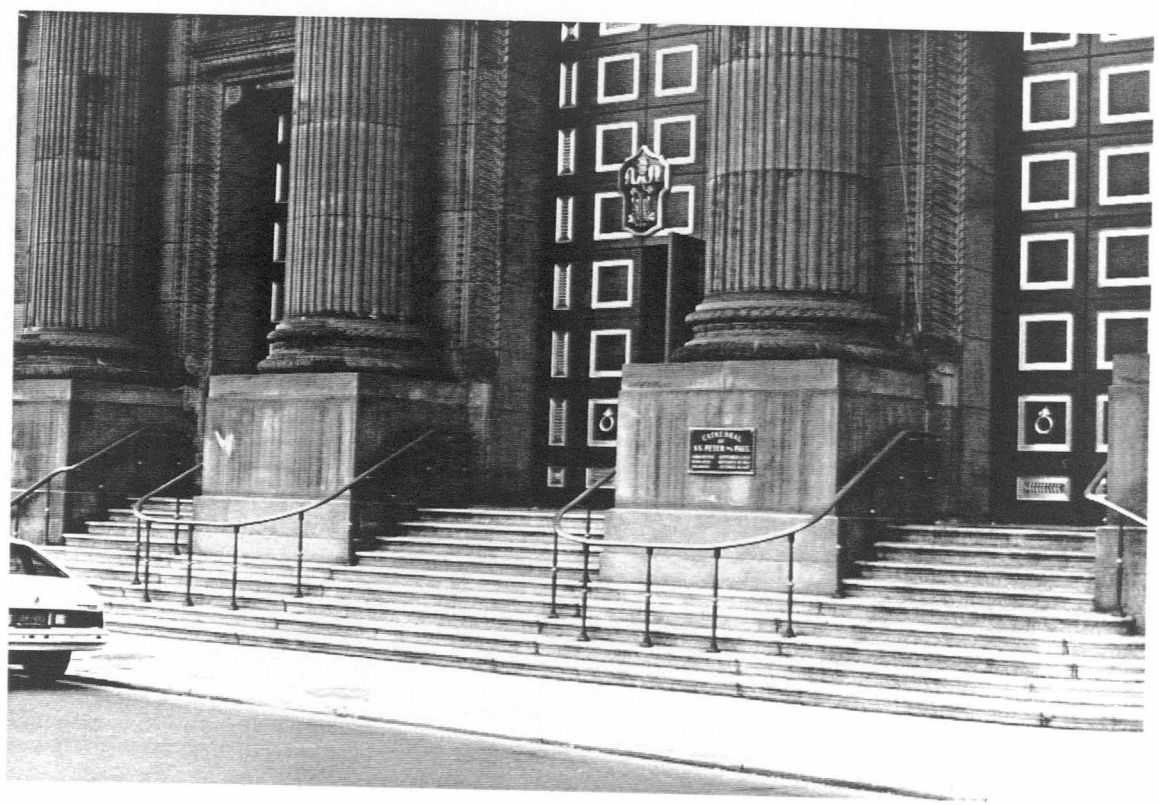

Figure 31. West (main) entrance to Cathedral of Saints Peter and Paul

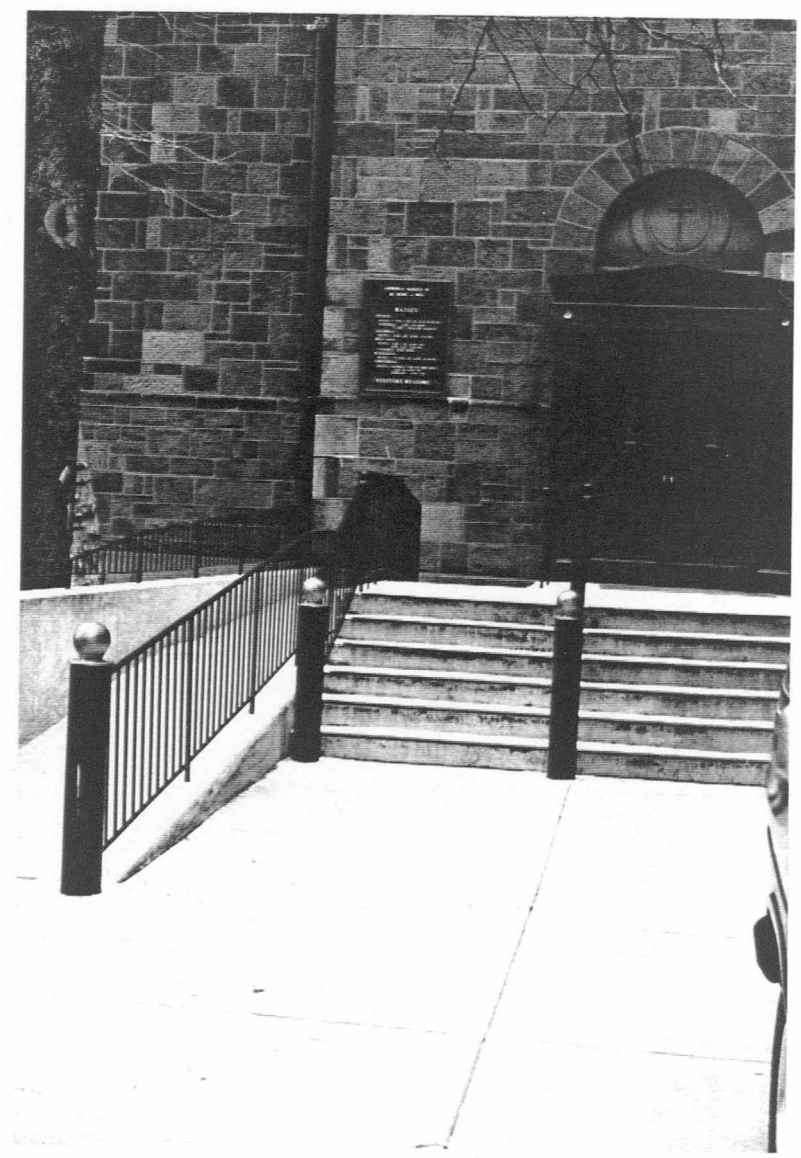

Figure 32. South (accessible) entrance to Cathedral of Saints Peter and Paul

Evaluation of Findings

Having examined eleven historic buildings as case studies, and the modifications that have made them accessible to the disabled, a number of issues arise. The type of accessibility a building offers, the means by which such accessibility is achieved, and the intent of the modification all are critical to the evaluation. There are many conflicting priorities involved in any modification of a historic structure, particularly those aimed at improving the building's accessibility, or bringing it into compliance with the ADA. It is important to consider the context of the work done. Such modifications as the Academy of Natural Sciences or the Franklin Institute, predate the ADA. While they may have been acceptable by the standard of the day, they may not meet today's standards, and in fact may never have been an appropriate solution. As in the case of the Free Library, the Family Court Building, or other government buildings, alterations can be part of large scale accessibility project involving other buildings. This can result in an expedient design, in which the solution neither gives proper respect to the historic building, nor adequate consideration to the disabled user. More often, issues of accessibility are addressed during larger restoration or rehabilitation projects, e.g. the Bourse or the Curtis Center. There are many other variables. For example, building owners may have limited resources at their disposal. The site can often place limitations or offer alternatives as to how accessibility can be achieved, as with the sloping site at the Bourse. Also, certain building types, such as theaters, may lend themselves to accessibility, as the aisles tend to be ramped.

In the analysis of the case studies and the reviewed literature, it becomes apparent that there are many problems with how this issue is being addressed. All too often, the emphasis seems to be on the achievement of accessibility or preservation, as opposed to the attainment of a quality solution. It is in the consideration of quality that the appropriate synthesis can be found.

In evaluating a building, it is first necessary to determine if the building is accessible. If it is, what sort of modification, if any, was made to provide accessibility? From the readings and on-site evaluations, an intervention could be classified as one of several types:

- Architectural modifications
- Program or activity changes
- Introduction of apparatus or assistance.

While the goal of such interventions is to alter the quality of the building's accessibility, they must be considered simultaneously with their impact upon the building as a historical artifact. The quality of preservation can be understood as the conservation of the historic materials and character, but also by the building's ability to be used in a meaningful way. A building that is made accessible is of greater use, and as such, the quality of its preservation is enhanced.

Critical to the evaluation of an intervention is an assessment of how it respects the user. The quality of the experience is at the heart of the issue.

The quality of the disabled visitor's experience can be described in terms of the following criteria:

- Equality of Route: Do all visitors, regardless of ability, use the same route through the site, into and through the building?
- Quality of Route: How does the length of the accessible route compare to the route for the majority of users, and what is its proximity to beginning and destination points?
- Equality of Experience: Do all visitors, regardless of ability, share the same experience of entry?
- Quality of Experience: Is the quality of the experience comparable? Do visitors with disabilities have a second rate experience?
- Degree of Stigma: To what extent is there a stigma attached to the use of the accessible entrance?

How the intervention specifically addresses the historic nature of the building, or rather, how it is reconciled with the character and materials of the original structure, can be described as its discernibility. The range of discernibility of an intervention includes the following:

- No changes: No physical change has been made to the historic building; accessibility may be achieved through the use of apparatus or assistance, or through program changes.
- Non-discernible changes: The intervention is intended not to be apparent. It is done in such a way that any change is unnoticed, perhaps through the use of camouflage, or the replication or emulation of historic features.
- Discernible changes: The intervention is distinct from the original. These can be either respectful or unsympathetic to the original structure.

The decision to make no change is usually a safe one from the preservation standpoint, but when accessibility enters the equation, it is not always an appropriate choice. Both the Second Bank and Independence Hall could be considered to fall under the classification of "No Changes", though the choice to make no intervention was arrived at for different reasons in each case. Independence Hall is too sacred a building to alter in any way. The historic value of the building is determined to a large extent by the events that took place there, and any change in the fabric would only detract from its character. Thus it was decided that the use of a portable apparatus, a ramp, was the appropriate solution from the standpoint of preservation. However, since the ramp is not located at the building's main entrance, and not along the route of the tour, it does not provide an equality of route or experience, and there is a high degree of stigma involved. A more acceptable solution would have been to revise the tour so that all visitors would follow the same route, thus sharing the same experience, and eliminating the stigma.

In the Second Bank, no changes have been made because the design of the building poses some difficult problems. Modeled after the Parthenon, its main level is a full flight of stairs above the street. No architectural change to the exterior could make the primary entrance accessible without considerable sacrifice to the historic character of the building. While all visitors share the same route of entry to the gallery, they do not share the same experience or quality of experience. The degree of stigma from the use of the StairTrac is considerable.

The changes made to make the Curtis Center accessible are not apparent from the exterior of the building. The former loading docks have been detailed in such a way that they seem to be original. On the interior, however, it is a different situation. The original lobby and entrance have been preserved and restored to their original condition. The rest of the main floor was extensively remodeled, and it is clear that the accessible entrance is not original.

There is not an equality of route in the Curtis Center. The original primary entrance is not accessible. However, the accessible entrance has been made primary, and thus the quality of the experience of entry and of the route is comparable to that of the original entrance. As the accessible entrance is primary, and more proximate to the main public spaces of the building, many share the same experience of entry.

The Merchant's Exchange is another case where non-discernible and discernible changes both occur. The single step in the center bay at the main entrance was cut to provide a short ramp to the entrance. This intervention is not apparent, however, the installation of modern, automatic doors is clearly a modern modification. All visitors to the Merchant's Exchange share the same route and experience of entry.

The Academy of Natural Science is another example of non-discernible changes. The group entrance on the side of the building required little modification to be accessible. The single step was removed and the floor level of the lobby was lowered. Thus the primary entrance could be left alone. In the Academy of Natural Sciences there is no equality of route or

experience. The quality of entry is poor, as is the quality of the route. There is a high degree of stigma involved in the use of the group entrance.

The Secretary of Interior's Standards for Rehabilitation suggest that any intervention in a historic building be distinguishable from the original, but sensitive to the scale, materials, and character. The Bourse is a good example of this sort of intervention. The entrance has clearly been altered, but the alteration is respectful to the original. By manipulating the grade of the plaza in front of the entry, the removal of the exterior stairs is not obvious. The introduction of kiosks and low walls minimizes the effect of the grade changes, and eases the transition between street and plaza.

There are three points of entry to the Bourse's plaza: from the north via a set of stairs, from the south at grade, and straight on up an incline. All visitors to the Bourse use the same entrance. While the route through the plaza may differ for the individual, all visitors enjoy the same quality of route and share the same experience. There is no stigma for the disabled visitor at the Bourse.

The United States Customs House similarly altered the primary entrance for accessibility, and was similarly successful. While the site did not offer the same assistance as it did at the Bourse, the addition of a sensitively designed ramp to one side of the entry did the job well. There was no effort to hide the ramp, but rather to integrate it with the existing configuration through the use of detail and ornament. All visitors do not follow the same route, but the quality of both the route and the experience of entry is comparable for people of differing abilities. There does not seem to be a considerable degree of stigma from the use of the ramp.

When an alteration is made to a historic building that is discernible from the original, it is not always a success. There are many cases in which discernible changes to an historic building can detract from the character and fabric of the original, without proving much in the way of an appropriate accessibility.

This is the case of the Free Library of Philadelphia. No effort was made to provide any accessibility at the primary entrance. The accessible entrance, a below grade ramp at the building's rear, is second rate in that people with disabilities must pass through service areas before entering the public areas of the library. The case of the Philadelphia Family Court is similar. The buildings are nearly identical, and the same solution to the accessibility problem was used. The only difference is that the Family Court had an at-grade entrance at the rear, so no modification was required to achieve the inappropriate means of access.

There is no equality of route in the Free Library or Family Court buildings. The quality of the accessible route is lacking. Outside, the disabled patron must follow a long, unpleasant path halfway around the building, and inside, a confusing route must be followed to reach the main circulation areas of the library. An important part of the quality of the route is its length, and in this case the person with disabilities must follow an exceedingly long path to use the library. The experience of entering off a dirty rear alley, and through interior service areas, carries with it a totally unacceptable level of stigma.

The Franklin Institute also made no alterations to the primary entrance to provide accessibility, and while the accessible entrance is not

primary, it is also not as bad as the Free Library. As in the Academy of Natural Sciences, an entrance associated with other uses was modified to serve as the accessible entrance. In this case, however, the addition of a ramp is intrusive and detracts both from the character of the entrance, and disrupts pedestrian traffic. Compounding this is the fact that the quality of experience and route is less than acceptable. The route is long and circuitous, and special provisions must be made to allow the disabled person access to the free public areas upstairs. This, along with the accessible entrance's separateness from the main entrance, causes an unacceptably high degree of stigma.

The Cathedral Basilica of Saints Peter and Paul again modifies a secondary entrance for accessibility. In this case, a ramp is added at the transept entrance. The ramp itself neither adds nor detracts from the character of the building's character. It is clearly new, but it is very utilitarian.

There is no shared route or shared experience in entering the Cathedral, and the entry experienced by people with disabilities is very secondary. The user of the accessible entrance loses all sense of the processional nature of entry into the church. Also, the quality of the route is lacking, as the accessible entrance is much further from the street, giving people with disabilities a longer walk. There is also a degree of stigma.

The modification to the Main Building at Thomas Jefferson University Hospital is a unique case. Most of the interior of the first floor was demolished and removed to create an accessible pedestrian and vehicular entrance to the building. Little more than the facade was retained, and

much material was lost there as well. This is a very discernible intervention, but it is more or less successful. The character of the exterior has been preserved, if not all of the materials, and the building has been able to continue to function as a modern hospital. All visitors use the same entrance and follow the same route.

Summary

Having analyzed the accessibility modifications made to a number of historic buildings in Philadelphia, Pennsylvania, and developed continua with which to evaluate both experience and artifact, the case studies were then each individually reevaluated with the criteria the initial investigation had generated. When grouped according to these criteria (see Table 1), it becomes clear that successful modifications considered the quality of the experience of the users. These modifications were appropriately accessible and well preserved. The quality of experience is dependent upon issues of both preservation and accessibility. A poorly preserved building detracts from the users enjoyment just as surely as does a building that is inadequately or inappropriately accessible.

Table 1. Summary of Findings

Degree of Intervention	Building	Equality of Route	Quality of Route	Equality of Experience	Quality of Experience	Stigma
No Changes	Case #1: Independence Hall	No	Fair	No	Poor	Yes
	Case #2 Second Bank	Yes	Same	No	Poor	Yes
Non-Discernible Changes	Case #3: Academy of Nat. Science	No	Poor	No	Poor	Yes
	Case #4: Merchant's Exchange	Yes	Same	Yes	Same	No
	Case #5: Curtis Center	No	Good	Similar	Comparable	No
Discernible Changes	Case #6: The Bourse	Yes	Same	Yes	Same	No
	Case # 7: US Customs House	No	Good	Similar	Comparable	No
	Case #8: Jefferson Hospital	Yes	Same	Yes	Same	No
	Case #9: Free Library	No	Poor	No	Poor	Yes
	Case #10: Franklin Institute	No	Poor	No	Poor	Yes
	Case #11: Cathedral of Ss. Peter & Paul	No	Poor	No	Poor	Yes

Test Case: Leon Public Library

When the Carnegie foundation sent out information to grant recipients in the early part of this century, they included a set of six example floor plans to promote more efficient use of interior space. Carnegie favored the idea of bringing the books and reader together, and recommended open access. A bi-level plan emphasized the public areas of the library: reading rooms, children's space, reference spaces, and lecture halls. Reading rooms were to be visible from the street level, so that passers by could see people reading in the library. The interior of the typical library was an open-plan with bookshelves dividing the space so that the librarian could oversee the entire floor from a central location. The Carnegie Library in Leon, Iowa (Figures 33, 34, 35 & 36), is a classic example of the small community library. It also has the classic accessibility and preservation problems inherent in Carnegie libraries. The building is quite small, with a footprint occupying approximately 1600 square feet. The community has little need or desire to expand the library. However, there is a need and a desire to bring the building into compliance with the ADA.

Entrance to the building is possible through the primary entrance at the front of the building,(Figure 34) or by a secondary entrance at the rear of the building (Figure 36), near the parking lot. The primary entrance is typical of Carnegie libraries: half a flight of steps to the door, and then another half a flight up to the main floor, or down to the children's library. The secondary entrance is also inaccessible: down several steps, and through a storage/workroom and into the children's library. This was never

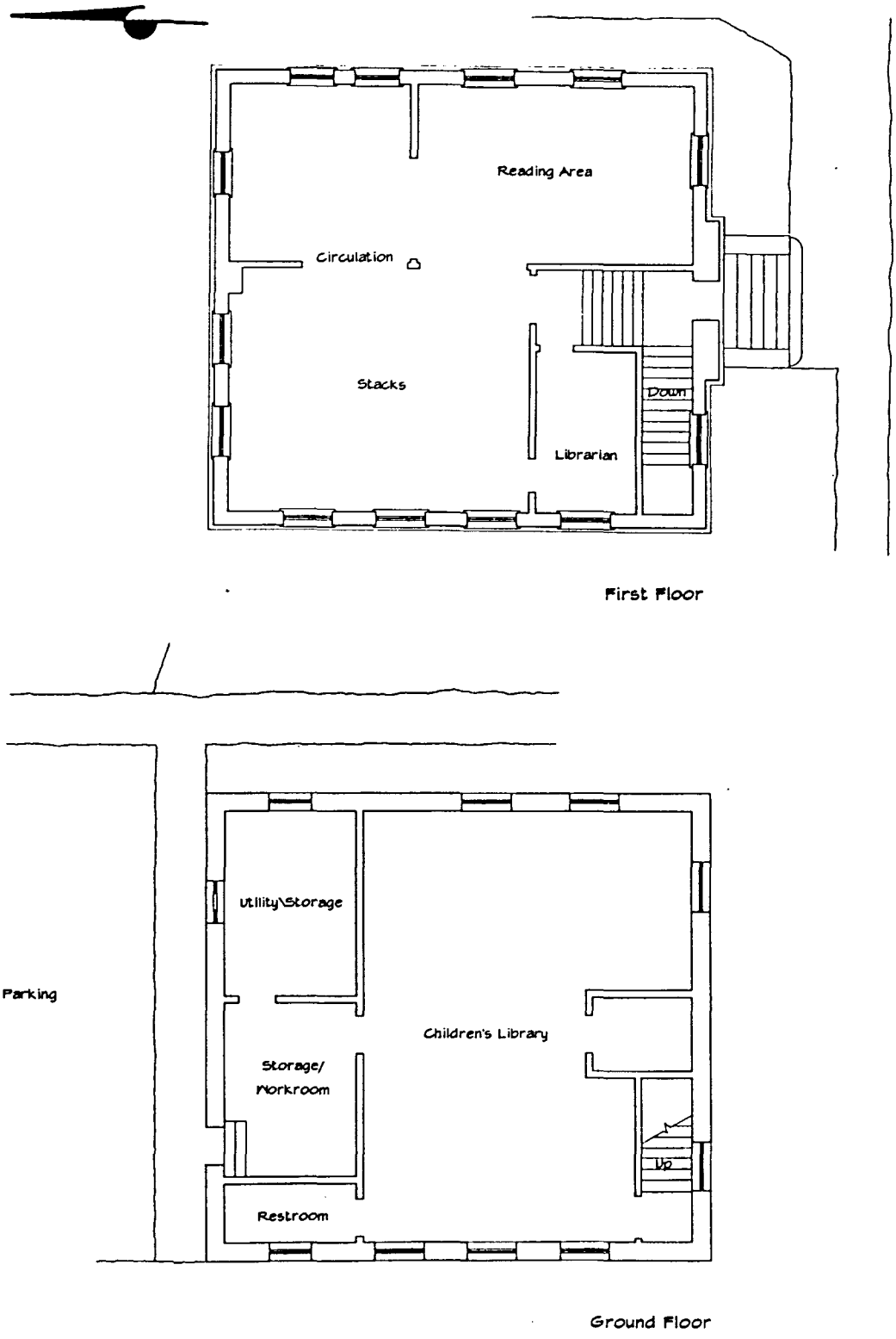

Figure 33. Plan of Leon Public Library

Figure 34. South view of Leon Public Library

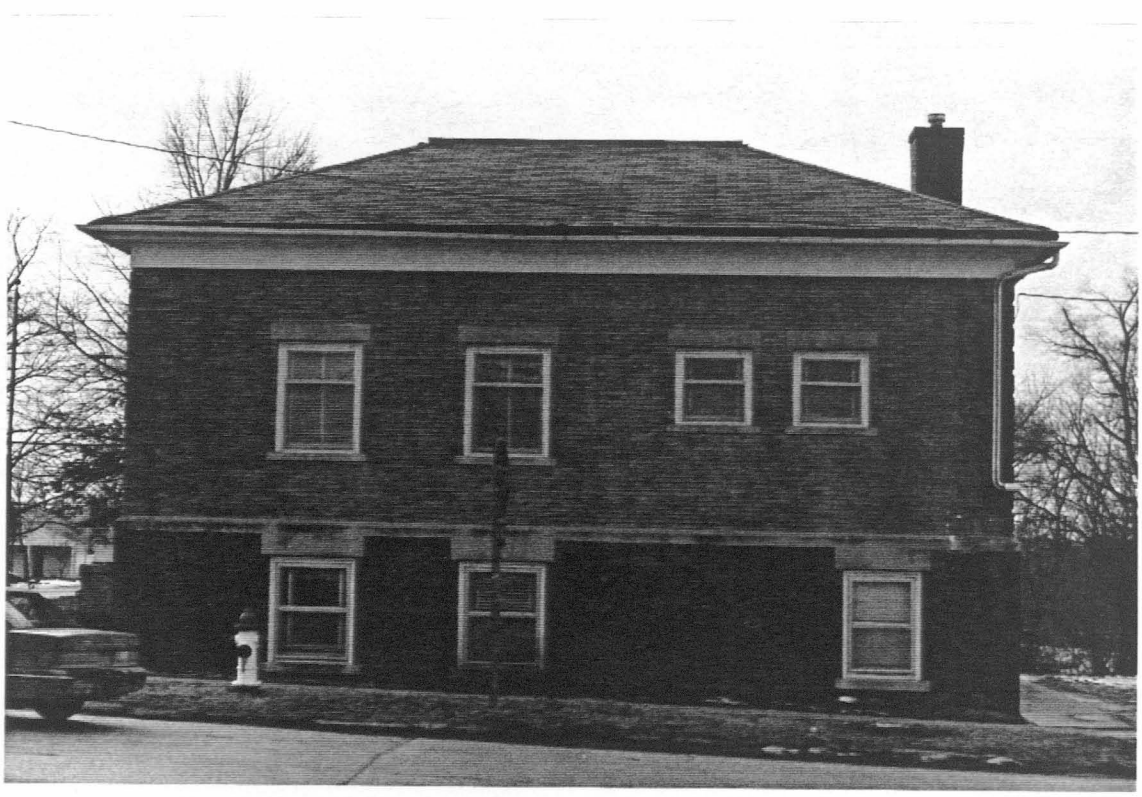

Figure 35. East view of Leon Public Library

Figure 36. North view of Leon Public Library

meant to be used as a public entrance, but over the years, it has been used because of its proximity to parking, and the lack of a need for control over access to the library.

The lot is tight, with no room for intervention on either of the street fronts or the side. What room there is at the rear of the building would be at the expense of the library's small parking lot. There is not on street parking on either of the streets.

Having developed continua which evaluate and attempt to synthesize the goals of accessibility and preservation, and applied them to the case studies which generated them, it is critical to use these criteria in the generation and evaluation of design options. The Carnegie Library in Leon is appropriate for this for several reasons. First of all, the library is small and intact: little has been done to the basic organization or detailing of the space. This library operates very much as it did when it was built. Secondly, the Library Board is concerned solely with the preservation of the building, and the provision of accessibility.

The analysis of the case studies demonstrated that it is key to the success of an accessibility modification that everyone enjoys the same quality of experience when entering and using a building. The best way of achieving this is for the primary entrance to be accessible, as is required by the ADA. The existing primary and secondary entrances of the Leon Public Library being inaccessible, several options present themselves:

- Option A: bring the existing primary entrance into compliance with ADA
- Option B: bring the secondary entrance into compliance and make "more primary"

- Option C: create a second primary entrance.

Option A (Figure 37), making the existing entrance accessible, would maintain the street entrance as the primary entrance, but would also require the demolition of both the exterior and interior stairs. It would necessitate the removal of a door, and the addition of a new door at street level, and an elevator where the existing stairs lead down to the children's library. There would be equality of route and experience, but it would be a greatly diminished experience. These highly discernible changes would negatively impact both the experience of the user and the character and material of the building.

Option B (Figure 38) would make the existing secondary entrance both accessible and more primary, and would have less dire consequences. The secondary entrance is already used by many of the library's patrons because of its proximity to the parking lot. The existing primary entrance would be preserved, and little modification of the exterior of the building would be required. There would be discernible changes only at the rear of the building. The small workroom behind the children's library would be converted into a small lobby, and an elevator would be inserted at the rear of the building, directly across from the main entrance. All library patrons would not share the same route or experience of entry. Option B has little impact on the exterior of the building, but the elevator would detract from the historic character of the main level. Also, the rear entrance still feels secondary, and there could be stigma attached to using the rear entrance.

Option C (Figure 39) would create a new accessible, primary entrance. An addition, containing a new entry, lobby, and elevator, would be built at the rear of the building. This option would again preserve the existing street entrance. It would also leave the interior of the existing building virtually intact. All visitors may not share the same route or experience, but the quality of the experience of entry would be the same.

On the basis of the criteria set out above, Option C would be the preferred solution. It provides a quality experience of entry, free of stigma, to all the building's users. The intervention is clearly discernible, but without compromising the historic character or fabric of the existing building.

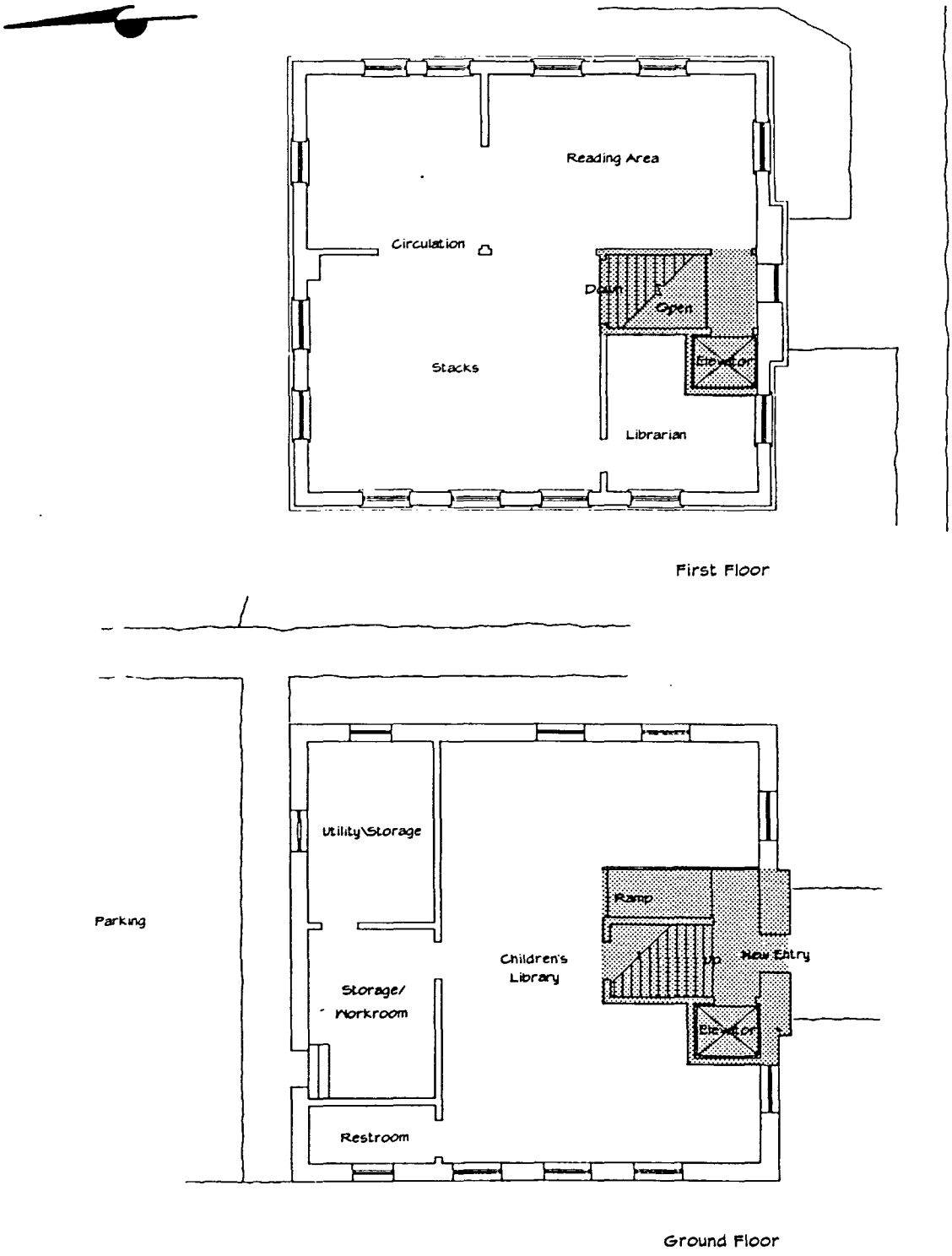

Figure 37. Proposed accessible entrance for Leon Public Library: Plan A

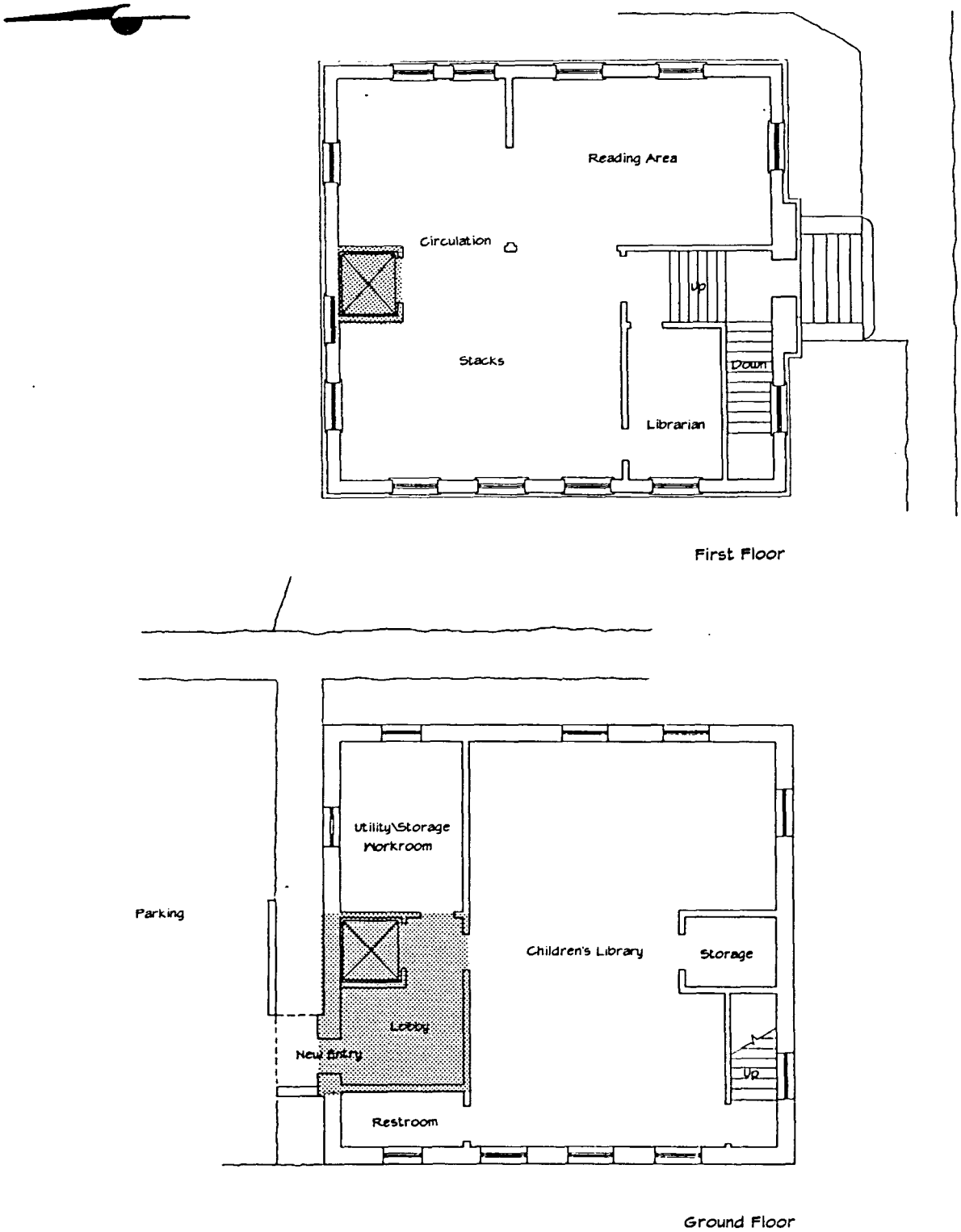

Figure 38. Proposed accessible entrance for Leon Public Library: Plan B

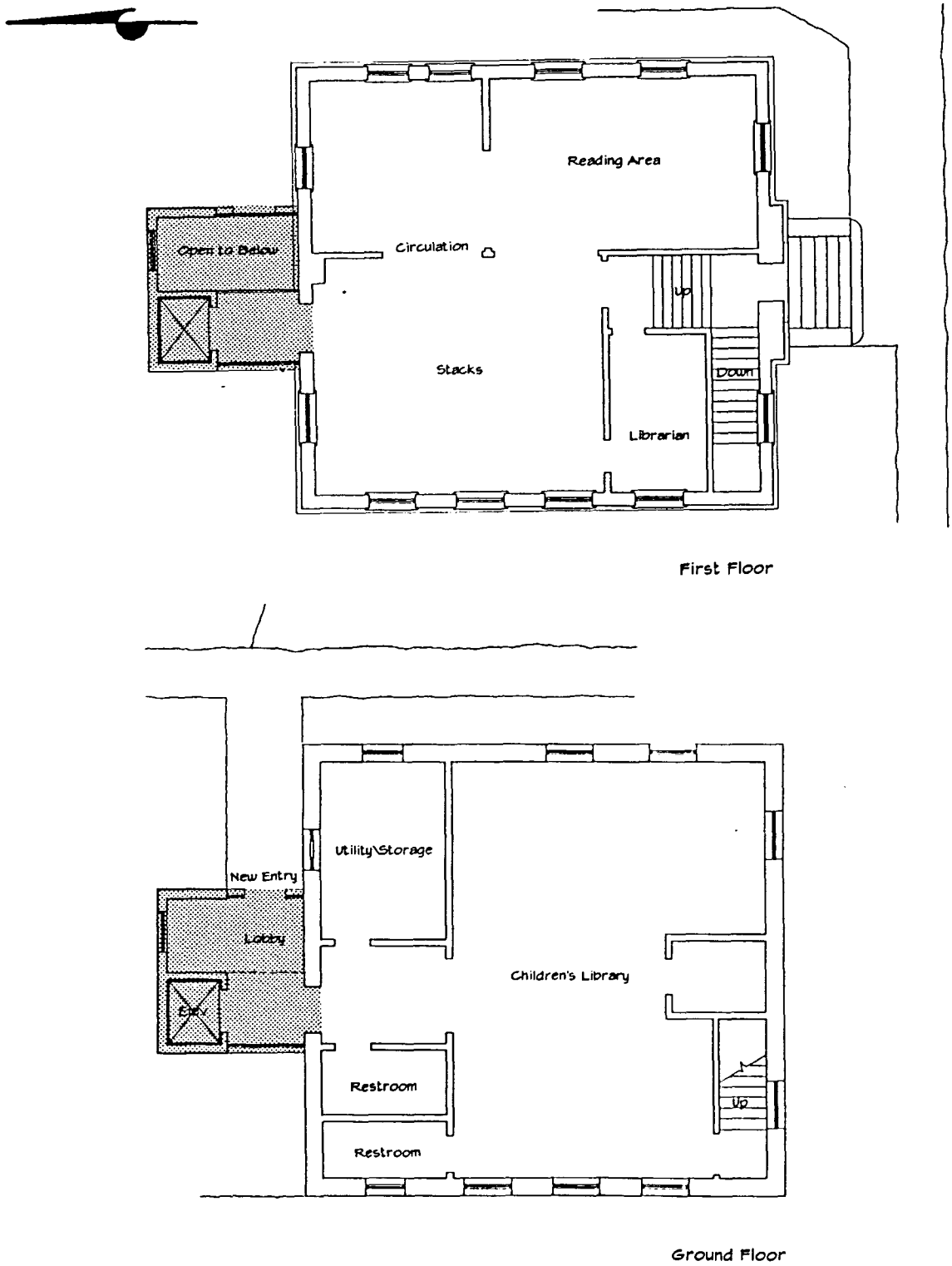

Figure 39. Proposed accessible entrance for Leon Public Library: Plan C

CHAPTER VI: CONCLUSION

It has been the purpose of this thesis to develop an integrative process that synthesizes two linear ways of thinking. The Literature Review focused on two areas: a review of the historical background of the Disabilities' Rights and Historic Preservation Movements, and an investigation of what design professionals have written in the past, and are now writing, as to how to reconcile the goals of these two issues. This understanding of the background of the two movements provided the necessary context in which to analyze the theories and ideas put forward.

This analysis seemed to identify a general process for adapting a historic building for accessibility: the evaluation of the building and its components for historic significance, the evaluation of the building's level of accessibility and compliance with ADA, and the evaluation of proposed accessibility modifications for conformance with the Secretary of Interiors Standards for Rehabilitation. As this Literature Review illustrated, even when dealing with both accessibility and preservation in the same project, we have tended to deal with each issue independent of the other.

The documentation and analysis of cases where historic buildings have been made accessible generated a set of criteria which simultaneously describes the quality of experience and the integrity of the building as historic artifact. In applying the criteria to the case studies themselves, it was then possible to reevaluate the degree to which the interventions reconciled the experience of the users with the preservation needs of the building.

As a test case, these criteria were applied to a building which had not been modified, so that the evaluative process could inform the design process for some future intervention. Three options were generated as a response to the criteria, and then reevaluated, determining that the option which best responded to the quality of experience was the better preserved and most appropriately accessible .

The ethics of the preservation and accessibility communities need not be contradictory, and their respective goals need not be mutually exclusive. While the regulations may often seem prescriptive, their purpose is not to generate designs. Rather, they are there to set the standard.

The goal of preserving or restoring a historic building should always be to enhance and maintain its value to the community. The goal of any accessibility modification ought to be the same. In making a building accessible to the whole community, we ought to increase the value of the building. If accessibility is achieved at too great a cost to the historic character of the building, we diminish the experience of using the building, and hence its value to the community. Few would disagree that it would do more harm than good to place a ramp at the front steps of Independence Hall, or insert an elevator in its interior. However, it is also inappropriate to discount the obvious solutions as harmful, and then do nothing.

In trying to achieve universal accessibility, and in attempting to preserve our historic buildings, we strive to provide for a better quality of human life. The accessibility and preservation communities may approach it from different points of view, but they share the same ultimate goal: to enhance the experience of the built environment for everyone. The focus

must thus be on quality. Guidelines and standards are never an appropriate means of generating good designs. It is in creativity that the synthesis of the two issues lies. Good design is a product of the creative talent of the individual designer. Appropriate accessibility solutions, that are considerate of the experience of the user as well as respectful of the preservation needs of the historic building, are simply good design.

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