THE LAWN AND THE FOREST:

Architecture and Landscape in the Work of Thomas Jefferson and Frank Lloyd Wright

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ABSTRACT

The architectural work of Thomas Jefferson and Frank Lloyd Wright has often been linked on the basis of their common desire to "break out of the box" and engage the American landscape. This thesis is an investigation of the relationship between architecture and the landscape in the work of both architects. It focuses on site planning and landscape design as the expression of personal and cultural attitudes toward nature and the American landscape.

The thesis begins with a discussion of the character of the landscape as the temporal, physical manifestation of the forces of nature. Several critical models for looking at architecture and the landscape together are discussed. The literary form of the pastoral is proposed as the most appropriate and useful because it is a form in which art and nature are equally important and interest is created by the unresolved tension between them. A simple analysis of pastoral designs and writings by Jefferson and Wright indicates that they are correctly linked on the basis of shared values regarding the importance of the landscape and use of the pastoral form. Closer examination of their work, however, reveals significant differences. Jefferson favored open, orderly landscapes, most often in the form of a central lawn symbolic of human ability to control nature and expressive of Enlightenment ideals. Wright favored closed, wild landscapes, most often in forms that created the effect of a forest or other natural landscape, symbolic of a desire to retreat into the natural environment away from modern, technological society.

The thesis concludes with a discussion of the concept of type in the landscape. The lawn and the forest define a spectrum of types that helps to clarify the significance of design in the American landscape as well as the historical shift in American attitudes toward the environment.

Thesis supervisor: Stanford Anderson
Title: Professor of History and Architecture

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PREFACE

This thesis is an investigation of the relationship between architecture and the landscape using the works of Thomas Jefferson and Frank Lloyd Wright as historical examples. It is based on the belief that the landscape is as powerful as architecture in its effects on human life; that both natural and designed landscapes have meaning that can be identified and discussed; that some architects and buildings deliberately engage the landscape; and that criticism of these works should be based on awareness of the landscape's power and significance.

I emphasize the distinction between architecture and the landscape to clarify several issues. My own affection for the landscape is the result of a personal philosophy that grows from childhood exposure to, and interaction with, the natural world, while my efforts to write about the landscape are inspired by current events in architecture. As the architectural profession moves toward the "post-modern," revisionist histories of modernism abound and subjects that have been overlooked in the recent past, including the landscape, are receiving greater attention. As architects become more interested in gardens and the landscape, it is particularly important to understand how the landscape may relate to architecture without losing sight of the incommensurable differences between architecture and the landscape. I applaud this interest in the landscape on the part of architects and hope, through this investigation, to achieve a better understanding of contemporary landscape work.

One goal of this thesis is to clarify the connection between complex cultural notions about the natural environment and the design of that environment. Ideas grow out of a lineage and context of thought, and are transformed by an individual's creativity. Completed artifacts do not just "happen," but are the result of a series of decisions that consciously or intuitively express the designer's attitudes and intentions. Because so much of the landscape does "just happen," it is easy to overlook the significance of conscious landscape design, especially when it is not confirmed with a label such as "garden" or "park." Many historians have discussed the significance of the landscape at the scale of the city, but these studies have focused on the philosophy and writings of designers more than on their actual designs, and none of them have addressed specific buildings.[1]

More significantly, in a society in which fewer and fewer people experience natural landscapes and technology provides an illusion of power over natural forces, many would question whether there is any need for the landscape at all. The current rebirth of interest in the landscape suggests that this is not the case. It suggests that the landscape is important, not just for biological survival but for psychological health and cultural continuity as well. In addition, this concern with the landscape may be one way of enriching late twentieth-century architecture, not by reviving historical landscape forms, but by trying to understand the significance of nature and the landscape in late twentieth-century life.

The first step in such a program must be to look at the landscape itself and develop some way of discussing it. We know the world through language and part of the difficulty in discussing the landscape is a lack of concepts and vocabulary for doing so. Despite the current interest in gardens and the landscape, many of the terms we must use to discuss them are borrowed from art and architectural history and do not adequately address landscape issues. The main goals of this thesis are to identify the major issues that define the landscape and give it character, and to propose a small cluster of critical, theoretical terms to stimulate discussion of those issues.

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CHAPTER I

LOOKING AT ARCHITECTURE AND THE LANDSCAPE

The relationship between architecture and the landscape is more complex and more difficult to analyze than architectural critics and historians have acknowledged. At issue is the meaning of the word landscape, which appears in as many different forms and guises as the landscape itself. To a painter the landscape is a unit of scenery that can be encompassed in one glance, a concept that was transferred to the real landscape during the development of the picturesque (or "picture-esque") landscape movement in the eighteenth century. To the cultural geographer the landscape is a composition of man-made spaces on the land, a very broad definition implying a wholistic view of the world that subsumes architecture and all other artifacts into the category of landscape. In this essay I am primarily interested in a definition of landscape in conjunction with, or in contrast to, architecture. A complete division is impossible but some distinction is necessary in order to address the relationship between the disciplines. The existing professional labels of architecture and landscape architecture suggest serious differences but do not identify them. More meaningful distinctions may be found by investigating the materials and methods of design in architecture and the landscape.

One way of defining architecture is as that part of the visible world that is built or designed and crafted by humans. An equally broad definition of landscape is that part of the visible world that is not

built or created by humans, that has some independent existence alongside man and his efforts. To the extent that architecture is human intervention in a pre-existing world it must deal with the landscape and the conditions imposed by it. At the same time architecture addresses many issues in addition to the landscape, from function to cultural expectations to aesthetic values. When I use the term landscape in this essay, I wish to exclude all that is purely architecture, in order to isolate the landscape as an independent, pre-existing entity with its own character and meaning.

The landscape may be distinguished from architecture because of its size, age, and ability to grow as well as decay. The landscape is much larger and more extensive than any human creation, and by its very size demands attention and respect. In addition, the landscape is older than any human creation and is the most visible, physical embodiment of age and time.

The character of the landscape as the oldest thing most people encounter is acknowledged by Kurt Forster and Diane Ghirardo in a footnote to their translation of Alois Reigl's essay "The Modern Cult of Monuments." They note that a

> characteristic trait of modern culture, particularly in Germanic countries, which arises from the same root as the appreciation of age-value, is the protection of animals and of the environment. The notion of preservation extends to individual plants and forested areas and even demands legal protection for 'monuments of nature,' and thereby raises organic and inorganic materials to the status of entities deserving protection.[1]

The expanded recognition of "age-value" has led to the recognition of

nature as the oldest organism or object in existence. The landscape, as the temporal expression of the forces of nature, thus acquires the same extensive age-value.

In addition, the landscape is the most direct expression and embodiment of forces that humans, despite their intelligence and efforts, have still not succeeded in fully explaining. The most important of these is life--the force that is responsible for human existence and that places humans in a special category of living things on the earth that also includes animals and plants. Humans are part of this spectrum of living things, but because of their self-conscious ability to analyze and shape the world also perceive themselves as separate from it. Many theories of the origins of architecture, such as Laugier's hut and Viollet-le-Duc's "First Building" are based on structures partially constructed of living trees, suggesting that architecture at one time had some closer link with the living world, but it has long since been lost.[2]

The landscape is the largest, oldest, and most visible aspect of the living world. These pre-existing, controlling forces are what we call nature. The natural landscape is the primary means through which these natural forces are manifested in ordinary life. Vegetation, because it grows and changes more rapidly than the rate at which geological and evolutionary changes occur, is the most obvious expression of these powers. Man-made artifacts have their most perfect form at the time of their creation and can only deteriorate from that point on, unless additional human effort is expended to maintain them. The landscape is a

natural phenomenon with the power of growth and regeneration in addition to decay, and rather than having a singular perfection is constantly moving through cycles of change that repeat and replicate themselves.

One of the clearest examples of the power and order of nature is natural succession, the process by which plant communities grow and change until they reach a stable, self-sustaining condition. The nineteenth-century naturalist George Perkins Marsh eloquently described the process of natural succession in his book on man's effect on the land, Man and Nature: "[W]henever a tract of country, once inhabited and cultivated by man, is abandoned by him and by domestic animals, and surrendered to the undisturbed influences of spontaneous nature, its soil sooner or later clothes itself with herbaceous and arborescent plants, and, at no long interval, with a dense forest growth."[3] The landscape architect Nan Fairbrother described the significance of natural succession for landscape work of all kinds.

> As every gardener knows, uncut short grass soon becomes long grass with its associated flowers, and as every farmer knows, unmown long grass soon becomes scrub, which will be gradually invaded by trees and grow up to woodland. For all vegetation strives towards a balanced 'climax' which is relatively stable, and in our climate this is forest. In the natural landscape herbs and shrubs seldom occur alone as permanent vegetation as they do in our man-made landscapes, but are either plants in woodland or stages in the regrowth of woodland destroyed by tree fall, fire, flood, landscape, or other natural hazards. These intermediate vegetation types therefore are unstable and can be maintained only by man's interference.[4]

This "interference" is the basis of all landscape design.

The essential characteristic of the landscape and the aspect that distinguishes it from architecture and other artifacts is the ability of

landscape materials to grow. Growth and change in the landscape are affected by many conditions and often appear, to the untrained or uneducated eye, to be inexplicable or even random. This potentially indeterminate and uncontrollable character of the landscape is often viewed merely as an unfortunate inconvenience for those who design the landscape. This character may also be considered the unique source of meaning in the landscape and the incentive for working with it. The independence of the landscape in this way suggests that control versus cooperation is one of the major issues in landscape design. Recognition of the landscape as living material is usually unarticulated, but may be partially responsible for the increasing concern for the preservation of both natural and designed landscapes. If Riegl had considered the landscape in his discussion of monuments, he might have added a category of "life-value" to those of "age-value" and "use-value" to account for the importance now accorded not only to natural areas such as the Yosemite Valley, but to designed landscapes such as Central Park.

Despite the robust nature of the landscape, the common uses of the term landscape in conjunction with architecture leave the landscape in a limited and subordinate role. "Landscape" most often refers to something that is around or near a building but is not part of it, a category which includes not only landforms and vegetation but other buildings, monuments, and man-made artifacts. This is particularly clear in the phrase "urban landscape," which is usually interchangeable with "urban context," and has no specific landscape component. At other times "landscape" refers to what can only be called landscaping: that is, the small-scale

decorative use of earth and vegetation around a building, usually to hide some unsightly part of it. This is a useful technique, but has little value as a critical category and does not adequately encompass the forces at work in the larger landscape. The landscape is not just a neutral background for architecture, nor an inert substance to be manipulated as an ordinary building material. It is an understandable, orderly, independent, natural organism. Walter Burley Griffin, who worked as both an architect and a landscape architect, expressed these sentiments in 1935. "Land planning [is] . . . the most fundamental sense of arranging for that use to which the terrain is most suitable. Land in this sense is accorded the respect due to a highly developed and perfected living organism not to be exterminated nor treated as dead material, or as a mere section of the map."[5] It follows that the relationship between architecture and the landscape is not just the architectonic design of the landscape, but encompasses a more complex set of possibilities engendered by the interaction between two powerful disciplines.

Few architectural historians have specifically addressed the relationship between architecture and its non-urban context. One of the few who has is Vincent Scully, who has always looked beyond the buildings he has studied to consider their siting and the significance of the siting in explaining the architecture. In The Earth, The Temple and the Gods he looked at Greek temples in the Greek landscape; in Pueblo he investigated native American architecture of the Southwest; and in his writings on nineteenth-century American architecture he placed the buildings in the context of American space and attitudes about the continent.[6] Scully's

conclusions are sometimes questionable, but he has succeeded in directing attention away from the built object as autonomous and purely architectural. His work shows an understanding of architecture as inextricably linked to the natural landscape in general as well as to the characteristics of specific sites.

Scully's book The Earth, The Temple and the Gods is a study of Greek temples in which he attempts to show that their location and orientation was a response to Greek perceptions of the form and character of the natural landscape and the association of particular gods with sacred places in the landscape. Scully prefaces his analysis by noting that "Modern culture has little connection with the earth--or, rather, normally fails to perceive a connection with it. But for the Greeks, the earth embodied divinity."[7] Thus, for Scully, in "a study of Greek temples as physical embodiments of the gods in sacred places . . . as much space must be given to the landscape as to the buildings, and the latter must normally be treated in broadly sculptural terms."[8] He treats the architecture in sculptural terms because his analysis of the landscape focuses on its natural sculptural forms as the major influence on the location of sacred precincts and the siting of temples within these areas. Earth, sky, and sea set the stage for Greek religion and culture, while natural features of the earth such as mountain peaks, clefts, and caves were believed to be the locus of specific powers and suggested specific siting decisions.

Scully's view of the temples acknowledges site influences as far more significant than previous studies of Greek temple architecture had allowed, and his sensitivity to land forms and meanings illuminates important aspects of the architecture. For all of his success in looking at the landscape, however, The Earth, The Temple and the Gods remains an architectural analysis: that is, a study of architecturally conceived sculptural form and space expanded to the scale of the landscape. "The landscape and the temples together form the architectural whole,"[9] Scully writes, indicating that, in his mind, the landscape has no independent significance. Scully does not address any aspects of the landscape that are fundamentally non-architectural, even those that might be relevant to his topic, such as the religious importance of springs or groves of trees. Although the Greek landscape was once heavily forested, it has been relatively bare of major forests for several thousand years, and it is not surprising that a study of that landscape should focus on the revealed landforms themselves. At the same time the extensive and prolonged deforestation of the land suggests that the remaining vegetation might be of some special value. According to Paul Shepard, landscaped open spaces with religious significance were especially important to the Greeks. "The larger gymnasium, with its turf and trees, was a gaming field often in the environs of a sanctuary and sacred grove. The heart of the sacred grove was a spring, sometimes flowing from a cave or grotto. Even during the centuries of deforestation of Greece the trees of these shrines were spared."[10] Because Scully's interests are primarily architectural, he confines his attention to those landscape elements which are suitable for conventional

architectural analysis. These elements elucidate the objects of his concern--the temples--but his analysis remains within the scope of architecture.

Another architectural historian who has looked at the relationship between architecture and the landscape is Charles L. Franck, who studied a group of villas near Rome. In The Villas of Frascati Franck addresses not only the individual buildings but their gardens and the rules of siting and landscape development common to all the villas in that area.[11] The basic unit is what Franck calls the "Canon of the Renaissance." The Canon was the ideal model of the villa and its immediate landscape, which included, in addition to the palace itself, a parterre and a bosco, or grove of trees. The fundamental elements of this Canon were very simple. In the center of the site was located the parterre, an even plain covered with flowers like a carpet. To the north of the parterre was the bosco of high trees, in which wild animals could be kept. To the south of the parterre was a beautiful palace, located so that shadow could be enjoyed in its vicinity and the view into the garden not dazzled by the glare of the sun. The internal organization of this palace/parterre/grove group was consistent in all the villas of the area even when the nucleus of basic elements became enlarged or elaborated[12] (fig. 1).

After defining the nucleus of the villa Franck analyzes how this plan type was affected by the conditions at Frascati. The main elements of the site were the hill itself and the plain at its foot, beyond which the city of Rome could barely be seen. The earliest villas at Frascati

were sited with the axis between the palace and the grove perpendicular to the contours of the hill, allowing two very important external elements to reinforce the internal structure of the group: the bosco could be continuous with the wooded hill, and the major view from the building could be toward Rome, "the center and source of culture and the power and splendour of those who created their summer palaces in the Tusculum hills."[13] The orientation of the villas relative to the hill was adjusted to accommodate the curve of the landscape without losing the relationship to Rome (fig. 2).

The desire for the ideal internal relationship of the villa elements on a level site required the architects to create large terraces on the hillsides. In most cases the palace was placed on the edge of the terraced hillside facing Rome, while the grove occupied a semi-circular cut into the slope, merging into the naturally wooded hillside above. The basic idea behind the organization of villa parts established the need for a terrace, while the arrangement of the parts enabled the entire ensemble to have a strong relationship to the various elements of the landscape. "Thus, on the one hand the terrace enhances the apparent unlimited vastness of the natural plain; on the other hand, in the form of its own considerable vastness it transfers the intangible vastness of the plain tangibly into the sphere of man. It becomes a tangible symbol of the wide plain behind, and as such draws Nature as a constituent element into the architectural composition."[14]

According to Franck, the resulting orientation affected even the interior planning and architectural detailing of the villas. The location in plan of the major rooms in villas on different sides of the hill was adjusted to facilitate the view toward Rome. Because Rome is to the north the typical relationship of the villa to the parterre and bosco was reversed. The ornamentation of the villa façade was far more elaborate on the south side facing the parterre, where the sun would create dramatic shadows, than it was on the north side which was usually in shadow and viewed primarily from a distance. Franck even goes so far as to characterize the villas on the ridges of the hillside as extroverted and dramatic because of their prominent positions and commanding views, while those in the lower-lying valleys are introverted, quiet, and reflective.

Franck moves considerably beyond Scully in considering a wider range of landscape elements as important for understanding the architecture he is analyzing. He looks not just at topography and views, but at gardens and natural vegetation as well. He also acknowledges the landscape as an entity that has an existence independent of the architectural ideas with which he is concerned. In his discussion of the villas of Frascati he perceives the power of the landscape to be a dynamic counterpart to the architecture, capable of increasing the significance of the entire landscape/architecture group.

> At Frascati, the closed regularity of the group according to the Canon, meets with a situation of larger scope: with the landscape itself and with a number of relationships which directly emanate from it. In confrontation with the inherent order of the Canon, the landscape stands revealed as the Superior Law, as the more comprehensive order. It extends far beyond the individual sites, and where conflicts arise--and these do arise--it is the landscape

> that has the final decision. In such cases of conflict, however, the inner independence from external conditions which characterises the Canon, reveals its true value. As the coherent and comprehensive entity which it is, it can be swung into any necessary direction, like a ship to the compass, without any detriment; perhaps to the contrary.[15]

C. L. Franck's ability to see and comprehend the landscape at Frascati not only does not detract from the architectural issues of interest, it explains some of them in a more coherent and logical manner. Franck's understanding of the site conditions at Frascati and the landscape component of the villa type enable him to explain the architecture of the villas in a comprehensive way that a purely "architectural" analysis would have missed.

The work of both Scully and Franck demonstrates that an awareness of the landscape can be instrumental in developing a broader and more complete understanding of some works of architecture. Scully may consider the landscape "architecture," but he uses it to help explain the temples; Franck's approach acknowledges the powerful role of the landscape in such a way as to clarify the subservient and independent aspects of the architecture. The benefits of this kind of analysis are balanced by several drawbacks and difficulties. The historian or critic's general critical framework must be broader in order to include a wider range of information and ideas. The observer must know the history and theory of the landscape as well as that of architecture, and beyond that, be able to identify and analyze the interaction between the disciplines. Furthermore, an expanded analysis of any artifact requires additional evidence

and information which may be difficult to obtain, or in the case of historical landscapes, impossible to reconstruct.

Despite the difficulties, several models for looking at architecture and the landscape together do exist. The most wholistic of these is the discipline of cultural geography, in which architecture and the landscape are both considered as part of the broader study of human effect on the land. The usefulness of this model is limited, however, because cultural geographers look primarily at common, vernacular artifacts and landscapes rather than at self-consciously designed or "artistic" ones, the category that includes many works of architecture and landscape design. But designed landscapes and buildings exist in a context of vernacular artifacts and ideas, and the perspective of cultural geographers can be of great help in understanding this context. Among the geographers who have looked at artistic and architectural works, J. B. Jackson and Jay Appleton have been especially insightful in their discussions of the cultural context of landscape attitudes in which designed objects are created.

Another way of looking at the interaction between architecture and the landscape is through the idea of "garden," an idea that has been as important for cultural history as for the history of architecture and landscape work. Garden has been a common metaphor for the American landscape since the first European explorers arrived.[16] To the extent that the notion of garden symbolizes an attempt to humanize the landscape and create an ideal relationship with nature, this metaphor is

extremely valuable. In other ways the analogy raises as many questions as it answers, for garden is simply too general a concept to fully explain the complicated issues of landscape perception and meaning. There are as many different kinds of gardens as there are people who have imagined or made them, and beyond the impulse to create an ideal relationship with nature, the simple identification of a landscape as a garden does not help elucidate what those ideals are. The French formal garden, the English picturesque garden, and the Japanese tea garden are all attempts to create some ideal relationship with nature, but it is hardly the same one, and the idea of garden by itself does not address these differences.

Garden has also been a rich source of ideas and images for design. Gardens are traditionally associated with architecture and are where the most intimate relationship of architecture with the landscape may occur. The confluence of architecture and landscape provides the opportunity for a garden to embody an ideal relationship between man and nature in the form of a truly humanized landscape created and tended by a conscientious proprietor, working in harmony with the natural conditions. Some current investigations of gardens and the ideas associated with them admit the landscape's natural character as a living, growing organism, but too many treat the garden simply as an opportunity to cover a larger area with architectural ideas. Michael Graves has often been praised for his concern with the landscape, but his work is a good example of this "expansionist" attitude. The knife-edged keystone-shaped hedges defining the garden of the Crooks House (fig. 3), for example, are clearly just vertical extrusions of a plan form that exists primarily to reinforce

the shape of the house. The treatment of the landscape in Graves' more recent projects, such as the vacation house in Colorado (fig. 4) and the library in San Juan Capistrano (fig. 5), shows a clearer understanding of landscape materials but no fundamental shift in attitude. To Graves, the garden is an opportunity for decorative extension of the architecture onto the site rather than the expression of any more complex conception of how architecture and the landscape might interact. The idea of garden is a rich, historically loaded concept that has great value in both its transformation into a literal place in the landscape and as a metaphor for humanized nature. Unfortunately the common use of the word garden as an uncritical label for any landscape design is not only inaccurate but obscures many of the important issues the idea in its clearest form seeks to address.

Another model that is more useful in looking at architecture and the landscape is the idea of the villa. As C. L. Franck's discussion of the villas of Frascati elegantly demonstrates, the villa is an architectural type in which the pleasurable and productive aspects of nature are just as important as the architecture of the built elements. Villas have been developed for agricultural purposes as well as for recreation and relaxation but both kinds are dependent upon some aspect of the natural world for their existence. The villa also functions as a retreat from the city, a place for the jaded and exhausted urbanite to relax and recuperate surrounded by the benefits of rural life--fresh air, quiet, exercise, and the beauties of nature--without giving up the refined pleasures of fine food, music, the visual arts, and the company of educated companions.

As a result, villas throughout history have had elaborate pleasure gardens and villa life has been focused on the gardens and other outdoor activities. The letters of Pliny the Younger in which he describes his Laurentine and Tuscan villas are among the most famous villa descriptions in history. In both letters Pliny's discussion of the surrounding countryside, the views, the gardens, and the outdoor spaces is far longer and more detailed than any references to the buildings themselves.[17] In all cases the villa has been the product of the city-dweller's fascination with the countryside and idealization of country life. The ideal villa life is never the dirty, hard life of the peasant or small farmer; rather, it is an elegant fantasy born in the city and based on the contrast between the city and the countryside.

The idea of villa acknowledges the landscape as a significant part of the architectural ensemble and contains within itself the need to balance the opposing tendencies of nature and the city. The major drawback to villa as a critical model for looking at architecture and the landscape, however, is just this focus on the balance of these forces and their reconciliation in the architectural object. Art-historical villa studies usually focus on the singular architectural object as the finite solution to an architectural problem, an attitude which may obscure the complex philosophical motivations behind the creation of a villa. These motivations may, as at the villas of Frascati, be expressed in some non-architectural material, and thus be overlooked.

Perhaps the most useful model for looking at architecture and the landscape is that of the pastoral. Pastoralism is a way of looking at the world in which human society and invention are seen in opposition to individual human nature and the natural world, and the possibility of some harmonious coexistence of art and society in the natural world is postulated. Pastoralism is based upon the "ruling motive of the good shepherd, leading figure of classic, Virgilian mode," whose activity was "to withdraw from the great world and begin a new life in a fresh green landscape."[18] A pastoral is a literary or artistic work in which this conceptual framework favoring the natural world is presented and criticized. A pastoral in the traditional sense is a literary work dealing with shepherds or rural life and typically draws a contrast between the innocence and serenity of the simple life and the misery and corruption of city life. Within this general framework the pastoral may take different forms: the pastoral in which the superiority of rural life close to nature is demonstrated by the rejection of the attributes of society and the city might be called the traditional pastoral; that in which the impossibility of a serene rural life apart from the city is presented might be called the reverse or inverted pastoral; and that in which the benefits of both city and countryside happily coexist in some "middle landscape" might be called the suburban pastoral.

The pastoral as a critical framework has the advantage of focusing on the dialectical tension between opposing forces as much as on the final result of their interaction. This makes it a particularly good model for looking at architecture and the landscape, for it acknowledges the

independent character of the disciplines involved. The pastoral is also an improvement on the model of the villa, for although the idea of villa is based on a pastoral view of the world, the pastoral focuses attention on the dynamic interaction of two independent entities rather than on the static solution into which they are resolved. The pastoral idea leads beyond the building or single artifact to the motivations underlying not just the building or the landscape, but a building in a landscape, and the relationship between them.

All four models--cultural geography, the garden, the villa, and the pastoral--suggest that the landscape is a valuable, sometimes essential source of information for analyzing architecture. All admit the independent character of the landscape and the importance of both its physical attributes and cultural associations. The history, theory, and criticism of the landscape is not just the history, theory, and criticism of architecture applied to the landscape, although much may be learned from that. It must acknowledge the fundamental character of the landscape as a natural phenomenon with the power of growth and regeneration, and its association with concepts of time and scale that go far beyond those appropriate to the discussion of most humanly created artifacts. The chief benefits of the pastoral model are twofold--it functions as an entrée to the mythic and poetic associations of the landscape, and it shifts the analytical framework away from architecture as the primary concern to architecture and the landscape as subjects of equal concern. Once this shift has occurred it is not only possible to use the landscape to understand architecture, as Scully and Franck have done, but to

use architecture to understand the landscape. A building's presence in the landscape and the details of its interaction with that landscape are an expression of both individual and cultural attitudes toward nature.

CHAPTER II

PASTORALISM: ARCHITECTURE AND LANDSCAPE IN AMERICA

Thomas Jefferson and Frank Lloyd Wright are the two American architects who most directly addressed the landscape in their work. They valued the physical and mythical characteristics of the American land and incorporated these values into their writings as well as their buildings and unbuilt projects. Both considered the natural landscape the proper arena for life and the inevitable context for their most important architectural works. Thus their work must be considered in light of their personal beliefs and attitudes about the landscape in which they were working, as well as the pervasive cultural notions associated with that landscape.

Vincent Scully has eloquently linked the architecture of Thomas Jefferson and Frank Lloyd Wright on the basis of their common desire to "break out of the box" and "leap toward freedom" into the vast horizontal space of the American continent. Both Jefferson and Wright tried to establish continuity between the architectural space of their buildings and the expansive space of the larger environment, and in this attempt "embodied some of the liveliest strains of American feeling in directly symbolic terms."[1] Jefferson's home, Monticello (fig. 6), was about owning and controlling the earth and reaping its moral and physical fruits, the place "where the decisive stance was taken on the continent, when all of European memory and civilization that a single brain could encompass were shaped to provide the foothold for the step to the western sea."[2] Wright's home, Taliesin (fig. 7), was the culmination of this move out

of the box to embrace the land. "Taliesin . . . was the expression of a return, beyond the suburb, not only to the land of the only ancestors Wright would acknowledge and to a house named 'Shining Brow' in their tongue, but also to his beloved Jeffersonian tradition of the moral strength to be derived from the earth. In its own way, Taliesin was the successor of Monticello."[3]

Scully's analysis of this aspect of the work of Jefferson and Wright is, like his discussion of Greek temples, based on an architectural concept of space expanded to the scale of the landscape. This link between the two architects is accurate, but their common interest in America went far beyond its purely spatial aspects. Jefferson and Wright both observed the American landscape, not just its abstract space. They wrote about it extensively, glorifying its diversity and vitality. They both went out into it, to farm it and to occupy it, in elegant villas they designed themselves and which expressed their love for the landscape and their vision of its ideal state. In doing so they helped establish and refine the pastoral vision in America, and transform it from a literary ideal to a political philosophy and an architectural form.

The pastoral form is based on an attempt to reconcile the opposing forces of the city and the country, art and nature, technology and humanity, into a balanced, sustainable condition that partakes of the best of both worlds. As a literary concept the pastoral was created by the Greek poets, who idealized the life of the shepherd and his flock, peacefully roaming the "green field" between the city and the wilderness. This had

long since become a conventional literary form by the time Europeans found the New World, but it became an especially fecund and important metaphor during the discovery and settlement of North America.

The importance of the pastoral framework can be fully understood only in the context of the early perceptions of the American continent on the part of explorers and settlers. The discovery of America by Europeans was the cause of great excitement and interest. Compared to Europe, America was seen as a new world full of the virtues and pleasures of the Garden of Eden, and it seemed to present an opportunity to create the perfect society in an unspoiled context. This excitement was summarized by Leo Marx in The Machine in the Garden:

> The pastoral ideal has been used to define the meaning of America ever since the age of discovery, and it has not yet lost its hold upon the native imagination. The reason is clear enough. The ruling motive of the good shepherd, leading figure of the classic, Virgilian mode, was to withdraw from the great world and begin a new life in a fresh, green landscape. And now here was a virgin continent! Inevitably the European mind was dazzled by the prospect. With an unspoiled hemisphere in view it seemed that mankind actually might realize what had been thought a poetic fantasy. Soon the dream of a retreat to an oasis of harmony and joy was removed from its traditional literary context. It was embodied in various utopian schemes for making America the site of a new beginning for western Society.[4]

This "fresh, green landscape" offered abundant space, fruitful nature, and freedom from want and tyranny.

But this attraction to the land was tempered by a fear of its primitive character and the possibility of losing one's humanity in it. The completely primitive life was not an acceptable option. As Leo Marx explains, "On a higher plane of sophistication, Jean-Jacques Rousseau

was drawn to the spontaneity and freedom he associated with primitive life; but he too had to face the undeniable fact that 'natural man' was, by European standards, amoral, uncreative, and mindless."[5] The treacherous attraction of America's native condition could be overcome through efforts to subdue and tame it, a task for which agriculture was admirably suited. Only with human work, cultivation, and the imposition of order would the true beauty and meaning of the landscape be revealed.

Americans rejected primitivism, but also disliked and mistrusted its opposite, urbanity. The "luxury, urban vice, and monarchism"[6] of the European city prompted prominent American writers and politicians to reject this model as inappropriate for the purity and edenic potential of the New World. George Washington wrote that "the tumultuous populace of large cities are ever to be dreaded,"[7] and although Jefferson enjoyed many aspects of life as an ambassador in Paris, he continued to resist the intrusion of cities into America. "I view great cities," he wrote to Benjamin Rush in 1800, "as pestilential to the morals, the health and the liberties of man. True, they nourish some of the elegant arts, but the useful ones can thrive elsewhere, and less perfection in the others, with more health, virtue & freedom, would be my choice."[8]

Wary of both extremes, Americans looked for a third alternative. Their desire to "steer between primitivism and what they considered the over-civilization of Europe"[9] led to a clear preference for an intermediate condition, cultivated and rural rather than urban or wild. Americans believed the best life was to be found close to nature and in the "middle

landscape,"[10] a condition that encompassed the best of both "wild" nature and the city while excluding their unpleasant elements. The virgin continent seemed destined for such a harmonious resolution of opposites, and this "landscape of reconciliation, a mild, agricultural, semi-primitive terrain, was soon to become a commonplace in the rising flow of descriptive writing about America."[11] The ideal of the middle landscape functioned in part as a planning tool guiding the settlement of the land and the dispersal of settlers across it, but its importance did not stop there. As one of the elemental notions underlying the perception of America as a nation, the idea of the middle landscape has pervaded American culture. In the end, however, "the physical attributes of the land are less important than its metaphoric powers. What finally matters most is its function as a landscape--an image in the mind that represents aesthetic, moral, political, and even religious values."[12]

Thomas Jefferson and Frank Lloyd Wright believed in this ideal of the middle landscape and in their own ways sought to create and occupy it. As a lawyer, politician, and scientist, Jefferson wrote extensively on many subjects, including natural history. His single book-length work was Notes on the State of Virginia, originally written as the answer to a series of questions about the state posed to Jefferson by Francois Marbois, a French diplomat, in 1787.[13] Leo Marx described this book as the most "appealing, vivid . . . thorough statement of the case for the pastoral ideal"[14] in American literature. From the descriptions of Virginia's geography to the discussions of political and economic institutions Jefferson reiterates his passionate attachment to the pastoral

ideal. Marx's analysis highlights Jefferson's writing style, in which the seemingly effortless shifts from scientific to poetic language emphasize the dual appeal and meaning Jefferson found in the American landscape. This is especially vivid in his description of the Natural Bridge, a rock formation Jefferson considered one of Virginia's greatest natural wonders. He first describes the Natural Bridge in mathematical terms. "45 feet wide at the bottom, and 90 feet at the top . . . Its breadth in the middle, is about 60 feet, but more at the ends . . ." Then, with hardly a break he changes to poetic language. "It is impossible for the emotions, arising from the sublime, to be felt beyond what they are here: so beautiful an arch, so elevated, so light, and springing, as it were, up to heaven, the rapture of the Spectator is really indiscribable!"[15] These "repeated movements from fact to feeling"[16] emphasize the importance of both fact and feeling, precision and emotion, in Jefferson's conception of the natural conditions of the American landscape.

Leo Marx eloquently links the "doubleness" of Jefferson's approach to the dual nature of the "basic design of the literary mode" of the pastoral. However, Marx's analysis of Jefferson's literary output shortchanges other aspects of Jefferson's work. "Not being an artist," Marx says, "[Jefferson] never had to get all of his feelings down in a single place. As a result we have to piece together his 'version of pastoral.'"[17] The linear character of literary works inevitably results in this division of ideas over space and time. But architecture--a three-dimensional, spatial medium--can address and resolve some of these ideas in a way that literature cannot. As an architect if not an

artist, Jefferson's built works do accomplish the task of "getting it all down in one place," and present us with a different, and no less significant, version of the American pastoral vision.

Even a cursory review of Thomas Jefferson's architectural works reveals the pastoral basis of these projects. Jefferson's home, Monticello, was a large farming estate located near Charlottesville, Virginia (fig. 8). On the far side of the Rivanna River from Charlottesville, Monticello occupied the crown of a low hill with a view of the river valley, the town, and the surrounding mountains. Neither in the town nor in the wilderness, Monticello occupies the middle ground between them and in close proximity to them. It was meant to be a real middle landscape.

At Monticello Jefferson indulged both his interests in agriculture and his fondness for the fine arts. The design and construction of Monticello occupied him from his mid-twenties until his death. In 1806, before the end of his first term as President, Jefferson wrote longingly of his hope to return to Monticello and concentrate on its improvement. "Having decisively made up my mind for retirement at the end of my present term, my views and attentions are all turned homewards. I have hitherto been engaged in my buildings which will be finished in the course of the present year. The improvement of my grounds has been reserved for my occupation on my return home."[18] While enjoying the culture of the earth. Jefferson did not neglect the culture of the mind. The house was full of books, paintings, and fine silver, and a steady stream of distinguished visitors enlivened the days of walks over the

farmland and evenings of music and dancing. Life at Monticello was meant to be a retreat from Jefferson's public life although one gets the impression that it was seldom very quiet or serene. On occasions Monticello became so overrun with visitors that Jefferson would travel with one of his daughters to his other house, Poplar Forest, to work, sometimes staying there for several months at a time.

The embodiment of Jefferson's pastoral vision at Monticello has been noticed by many historians. "Difficult as it was to form Jefferson's varied qualities and activities into a single design," wrote Merrill Peterson in The Jeffersonian Image in the American Mind, "the cultural image best presented itself at Monticello, 'portico facing the wilderness.' Here was luminously preserved for the inspiration of men in search of their own cultural identity the two heritages discovered in Jefferson--pioneer and aristocrat, American and world citizen, the values of nature and of civilization--which, fruitfully joined in him, signified the common heritage of America."[19]

A century after Jefferson's proposal of the American version of pastoral in architectural form Frank Lloyd Wright was expressing the same ideas in his own words and architecture. Wright was a prolific writer and while many of his writings were polemic and repetitive they provide a great deal of insight into his attitudes toward architecture, landscape, and the relationship between nature and civilization. One of the most interesting documents Wright produced was his Autobiography. This book was first published in 1933, when Wright was over sixty years old. The

writing of the Autobiography was Wright's opportunity to look back over his life and present it perhaps not exactly as it had happened, but as he remembered and wished others to remember it. The narrative of Wright's life is based on a pastoral literary structure. The three sections--Family Fellowship, Work, and Freedom--each begin with a short description of an event that occurs in a natural setting, and the final section closes with a similar device. These landscapes and the events that occur within them establish the subject and the tone of each "Book" within the Autobiography.

In the beginning of the first book Wright introduces Family Fellowship by recalling a winter walk as a child with his Uncle John. "A light blanket of snow fresh-fallen over sloping fields, gleaming in the morning sun. Clusters of pod-topped weeds woven of bronze here and there sprinkling the spotless expanse of white. Dark sprays of slender metallic straight lines, tipped with quivering dots. Pattern to the eye of the sun, as the sun spread delicate network of more pattern in blue shadows on the white beneath." Uncle John's stern disapproval of the nine-year-old Wright's random path of weed-gathering instead of straight progress to the intended destination were to be a lesson that "NEITHER TO RIGHT NOR TO THE LEFT, BUT STRAIGHT, IS THE WAY," but did nothing to dampen Wright's enthusiasm for the beauty of the natural world.[20]

Wright introduces the second book--Work--with an episode from the routine of farm labor. "Midsummer sun floods the field of rippling grain. The swath of yellow stubble left by the reaper shows undertone of living

green as the red-gold square of grain standing at the center of the field grows smaller each time the gaily painted reaper, pulled by the three white horses, cuts its way around. The stubble field is lined by the big wheel of the reaper, patterned in regular order by grain-shocks . . . the entire field is become a linear pattern--a plan of routine. Work." To Wright work was what revealed the pattern and order inherent in the principles of nature and the appearance of the landscape.[21]

The third book, entitled Freedom, opens with images of autumn. "The scarlet sumac runs like a forest fire along the hills. All nature is visible song . . . Boy-gaze wanders to the many-colored hills--sweeps the yellow rolling stubble fields from which the grain is garnered now--the glittering herd of black and white grazing the broad, still green meadows . . ." This time the landscape suggests fulfillment and freedom through its expansiveness, a "flood of being" that "carries him, a song on its tide, over the colored hills afield in the farthermost spaces of the gleaming crystal sky."[22]

The final entry in the Autobiography concludes the sequence with a discussion of the principles behind the natural systems and landscapes Wright so admired. "The order of change is limitless and profound. And the nature of this order I have sought as a natural order. I have seen it as a quality. I am learning to see it as a principle. So far as change is by law of natural growth, change is beneficent. Our life on earth should be blessed, not antagonized, by this beneficence of natural growth." Wright saw these underlying principles of natural, organic

order as "the very quality of life itself--vaguely felt by the boy as 'left out' in the early lesson preached by familiar feet in the snow in the Valley."[23]

When Wright wrote the Autobiography he considered Family Fellowship, Work, and Freedom the basic elements of his philosophy and the major phases of his life. The lyrical passages in the Autobiography effectively bracket the controversial events of Wright's life with the soothing and restorative concept of nature that actually sustained him through many difficult times. They also demonstrate Wright's interest in the principles of order and pattern found in nature which had so much influence on his architecture. The book as a whole takes on the rhythmic pattern of Wright's life, alternating between the beauty and harmony Wright found in the natural landscape and the frustrations and difficulties he found in the "civilized" world. Just as in Jefferson's writings, the "doubleness" of Wright's life and thought are expressed through the pastoral form.

The role of the landscape as a source of physical and moral sustenance was extremely important at Taliesin, Wright's home near Spring Green, Wisconsin (fig. 9). Taliesin provided the same kind of retreat for Wright that Monticello did for Jefferson. On the far side of the Wisconsin River from Spring Green, Taliesin, like Monticello, occupies the crown of a low hill with a view over the river valley, the town, and the mountains. Although Taliesin is at a greater distance from Spring Green than Monticello is from Charlottesville, Wright's home is also located at the

edge of the nearest hills, between the cultivated valley and the wilder land beyond.

Wright was anti-urban in many ways but still believed in the possibility of living a civilized life in nature. Taliesin was neither rustic nor primitive. It was a refined and elegant farm and home combining the best that Wright knew of architecture, music, and the arts with his love for nature.

> Taliesin quite literally grows from Wright's native hillsides both in the choice of most of its materials and in its close adaptation to the site. But it reaches out as well to the whole world and it would be as incomplete without the great works of Oriental art incorporated in its walls as without the great music of the European past which continually sounds from its innumerable musical instruments.[24]

What Jefferson created at Monticello, Wright re-created at Taliesin.

Monticello and Taliesin were both conceived as elegant sub-urban villas incorporating residential and agricultural functions. Both occupied hilltop sites with commanding views of dramatic pastoral landscapes. Both were based on the courtyard plan type and were designed to accommodate a country life that was not rustic or primitive, but urbane, filled with art and music. These remarkable similarities between Monticello and Taliesin are not just coincidence but indicate the continuing power of the pastoral framework in American culture and the potential for its expression in architecture as well as the other arts.

Within the pastoral framework the most important attitudes that Thomas Jefferson and Frank Lloyd Wright held in common were their belief in the

superiority of rural life, their conviction that agriculture was of primary importance in that life, and their anti-technological bias. Anti-urban sentiment in American thought and history has been extensively discussed in books such as Morton and Lucia White's The Intellectual Versus the City and Thomas Bender's Toward an Urban Vision.[25] Jefferson's eloquent statements against the city have earned him special recognition on this score, but Wright was no lover of the city either; Morton and Lucia White's description of him as an "irrascible, bombastic critic of the American city"[26] oversimplifies the truth but is fundamentally correct. Neither architect was totally opposed to cities in America but both preferred them to be relatively minor elements in the American scene.

The other side of this anti-urban sentiment is that Jefferson and Wright both strongly favored agriculture. One of Jefferson's most quoted phrases is about the moral value of agriculture and the superiority of farmers to other members of society. In Query XIX of Notes on the State of Virginia he declared that "Those who labor in the earth are the chosen people of God, if ever he had a chosen people, whose breasts he has made his peculiar deposit for substantial and genuine virtue. It is the focus in which he keeps alive that sacred fire, which otherwise might escape from the face of the earth. Corruption of morals in the mass of cultivators is a phenomenon of which no age nor nation has furnished an example."[27] Leo Marx points out that the motif of the virtuous farmer is in part a rhetorical device Jefferson used to oppose industrialization.[28] But this does not detract from Jefferson's real concerns for

American agriculture. In addition to the management of his own estates in Virginia, Jefferson was instrumental in the formation of a system of agricultural societies, established a program in the study of agriculture at the University of Virginia, and was himself responsible for a number of innovations including the invention of the metal-tipped moldboard plow and the introduction of many new plant species.[29]

Frank Lloyd Wright was also convinced of the value of farming, not just for himself but for all Americans. He felt that human life should be "based squarely on the fruitful ground."[30] Agriculture provided economic independence and closeness to nature, and was furthermore the proper organic expression of the earth. Especially in Broadacre City, Wright's utopian town planning scheme, he insisted on a minimum of one acre of ground for each inhabitant, in part to encourage farming by large numbers of individuals. It was Wright's plan that in this new city intensive small-scale farming would gradually replace larger farms.

> It is therefore the Little Farmer who will, by intensive methods, gradually take the place of the Big Farmer as the civilization we are now calling the New City proceeds. The Little Farmer will need a greenhouse and less than one-tenth the land he tried to farm before he came to the City . . . This plan is a scheme for the integration of few or many small units into greater uses--that is inevitably destined, and soon, to take the place of the devastating back-and-forth haul distribution of present overgrown Centralization in all our cities and towns.[31]

Wright's writings on agriculture are no less polemic than Jefferson's but are considerably less detailed and practical. One suspects that for Wright farming was more important as an aesthetic idea and as a means of providing space and privacy for families than as the productive, scientifically based activity Jefferson had in mind.

Jefferson and Wright were both very wary of the intrusion of the machine into the pastoral American landscape. Jefferson's anti-industrial position was based on his belief in the superiority of farm life and the concomitant need to keep manufacturing in Europe. Jefferson actually did not object so much to machines as to the factory system as it had developed in the dark, grimy, crowded cities of Europe. He believed so strongly in the power of the land to transform the machine into an instrument of good that he could not possibly foresee what it signified for America. This simple perception of the place of technology is quite apparent in Jefferson's architecture. Despite his practical, scientific interests and mechanical ingenuity the many gadgets he created for Monticello, such as the cannonball clock for telling the days of the week and the dumbwaiter that carried an empty bottle of wine down while the full one was coming up, are either hidden behind the classical surfaces, or if they show, they are "hardly esthetic embellishments."[32] To the extent that Jefferson accepted the machine, he did not allow it to disrupt the harmony of its surroundings.

Wright welcomed the machine in the city and considered it the indispensable basis of modern architecture, but did not consider it necessary in country houses, especially in his own. Given the extensive concern he displayed for the machine in his writings in general, it is notable that he never mentions it in connection with Taliesin. Even in remarks about other villas he designed he refers to the machine only to acknowledge its lack of importance. "Conscience troubled me a little," wrote Wright about his work for Aline Barnsdall on Olive Hill in Los Angeles. "That

little voice within said 'what about the machine crying for recognition as the normal tool of your age?' Well, my critics, one does, often, weary of duty. Even of privilege--while young. I again told the voice to 'go to' for a time. Hollyhock House was to be another holiday."[33]

The settlement of North America was the expression of the transformation of the age-old literary convention of the pastoral into a political theory and a way of life. Jefferson and Wright succeeded in transforming this dual vision of city and country into physical reality through architecture. In addition to confirming the philosophical basis of pastoralism, their architectural works have a concrete, tangible existence in which complex ideas are embodied in spatial and material form. As pastoral works they include both architecture and the landscape to keep man and nature in a dynamically balanced but permanently unresolved tension.

These two great architects were also aware that the hope of reconciliation underlying the pastoral ideal is impossible to achieve. Leo Marx carefully distinguishes between the naive or sentimental kind of pastoral and the complex pastoral. Both types of pastoral are marked by a "symbolic motion away from centers of civilization toward their opposite, nature, away from sophistication toward simplicity, or, to introduce the cardinal metaphor of the literary mode, away from the city toward the country." The common or naive pastoral never transcends this basic desire and remains an attempt to escape from reality. "When this impulse is unchecked, the result is a simple-minded wishfulness, a romantic perversion of thought and feeling."[34] In the complex pastoral the romantic

compromise is rejected in favor of conflict and difficulty, which remain at the heart of the pastoral ideal. It is the presence of the "tragic thread that invariably runs through the fabric of complex pastoralism"[35] that preserves the pastoral form as a powerful generator of ideas and forms.

Neither Jefferson nor Wright was oblivious to the sentimentality of their own pastoral impulses. Despite their desire to retreat permanently to their respective hilltop homes, neither actually did so for any length of time; the villa remained a temporary respite from the world and a source of strength to return to the world. Furthermore, the pastoral mode applied to reality is always compromised by the passage of time. The deterioration of Monticello during Jefferson's long absences and after his death and the tragic fires and murders at Taliesin belie any hope of permanent serenity, even in such idyllic surroundings.

The unresolved character of the pastoral form and the tragic component of the complex pastoral suggest that the villa cannot be a successful model for development, a static solution to be applied to the world at large. It can only be an attempt, temporarily, to reconcile the opposites of nature and culture. The pastoral in architecture is in part nostalgic and ever hopeful that such a balance might be achieved. Yet in the work of Thomas Jefferson and Frank Lloyd Wright, unsentimental about its own sentimentality, the architectural form of pastoral provides an instant of harmony, a "momentary stay against confusion"[36] that cannot be sustained in the face of history.

CHAPTER III

PROJECTS AND BUILDINGS

Thomas Jefferson and Frank Lloyd Wright may be considered similar on the basis of philosophical positions they shared about the American landscape and the place of architecture in that landscape. On the other hand, even a superficial inspection of their architectural works reveals dramatic differences in the way they expressed and developed these themes. They worked in very different architectural styles which in themselves have implications about the relationship between architecture and the landscape. Beyond the common idea that architecture should relate to the landscape, the detailed planning and architectural development of their buildings indicates great differences in their basic beliefs about exactly how that relationship should be developed. Deeper understanding of these differences must be based on more detailed analysis of specific architectural projects and the ideas underlying them. In order to compare the multiplicity and diversity of Frank Lloyd Wright's buildings with the relatively few by Jefferson, I have grouped the relevant projects by type and scale into the categories of the house, the institution or small community, and the town.

THE HOUSE

The house has always been the laboratory for personal artistic exploration by architects. Free of an unruly client or public user, the designer has the greatest opportunity to experiment, investigate new ideas, and change the work in progress. Jefferson's and Wright's own homes,

Monticello and Taliesin, were designed, built, and continually changed over the long periods their owners occupied them, and both may be studied as the expressions of Jefferson's and Wright's most intimate beliefs about the relationship between architecture and nature.

THOMAS JEFFERSON

Thomas Jefferson acquired most of his early knowledge of architecture from architectural handbooks such as James Gibbs's Rules for Drawing the Several Parts of Architecture and Book of Architecture, Robert Morris's Select Architecture, and Palladio's Four Books of Architecture.[1] Palladio's work was especially important and his villas inspired much of the planning and design at Monticello. Palladio had developed his villa plans for the Venetian aristocracy of the 16th century who were reclaiming the "uninhabited deltas and swamp areas" of the countryside around Venice, Padua, and Vicenza.[2] Many of these landowners had several farms in addition to their city residences and traveled from one outlying property to another to supervise the farming activities at different times of year. The villas had to provide elegant accommodations suitable for the visiting owners while they were in residence, but the primary purpose of the compound was as the center of the agricultural activities of the estate.

Palladio begins his discussion of villas in the Four Books of Architecture by remarking that as the main purpose of the villa is for agriculture, it should be located in the best area for supervising the farm. "In the first place," he writes, "let a place be chosen as convenient as possible, and in the middle of the estate, that the owner, without much trouble,

may view and improve it on every side, and that the fruits thereof may be the more conveniently carried by the labourers to his house." Furthermore, it should be near a river, for its beauty as well as its convenience in transporting goods and supplying water for the villa and its gardens. Failing a navigable river he suggests any other running water; failing that, an elevated spot exposed to the sun and gentle breezes; and "above all to be at a distance from standing waters, because they generate a very bad air."[3]

Palladio proposed a courtyard plan type to accommodate the villa's different functions (fig. 10). At one end was the main block occupied by the owner from which all the comings and goings of the visitors and laborers could be supervised. On both sides long wings housed the animals and farm implements, with covered circulation areas connecting them to the main block and to each other. The courtyard itself was the main place of arrival at the villa and the main working area for farm operations. Pleasure gardens for the owner's recreation were located behind or to the sides of the main block in close proximity to the living quarters yet out of the way of the farm activities that provided the economic basis for the villa's existence.

Part of Palladio's genius was his ability to "design functional and utilitarian structures" with "a knowledge of the classical heritage such as would lend an air of cultivated grandeur to the country estate of gentlemen who still thought like city dwellers."[4] His discussion of the covered circulation of a villa demonstrates his ability to reconcile the

utilitarian and ornamental in one design component.

> The covertures for the things belonging to a villa, must be made suitable to the estate and number of animals; and in such manner joined to the master's habitation, that he may be able to go to every place under cover, that neither the rains, nor the scorching sun of the summer, may be a nuisance to him, when he goes to look after his affairs; which will also be of great use to lay wood in under cover, and an infinite number of things belonging to a villa, that would otherwise be spoiled by the rains and the sun: besides which these portico's will be a great ornament.[5]

Thus Palladio was an important model for Jefferson, who tried to achieve the same combination of utility and elegance on his own property.

Jefferson was very familiar with Palladio's writings and followed much of his advice, not by copying it, but by altering and adapting it to American conditions and to Jefferson's own way of life. With all of his father's enormous estate to choose from the first thing Jefferson did was pick a dramatic hilltop site for his home, at the north end of Carter's Mountain and to the southeast of Charlottesville, Virginia. This was quite in contradiction to Palladio's suggestions, but demonstrated an "enlarged American sense of space that translated Palladio's 'monticello' into a virginian mountain on a scale quite different from the small Italian hills Palladio had in mind when he wrote his treatise."[6] The site had spectacular views but was problematic in other ways as it required extensive clearing and road-building, and there was never an adequate water supply.

Jefferson's earliest studies for Monticello suggest that he had a court-yard scheme in mind from the very beginning. His choice of a hilltop

site necessitated or suggested several changes from the typical Palladian plan. The main house remained in the center of the structure at the head of the court, but the relationship of the courtyard to the site was very different (figs. 11, 12, 13). Jefferson suppressed the service wings into the earth, perhaps to preserve the views from the house in all directions. Because the house cupped the top of the hill inside, he then had to flip the plan so that the covered circulation ran outside the court rather than inside. As a result, the relationship of the functional and ornamental parts of the site is exactly reversed from that usually found in Palladio's villas. The central space is not the working farm yard but the pleasure garden, while the accommodation of circulation and farm activities is to the periphery.

These simple but fundamental transformations indicate Jefferson's conception of Monticello as a primary residence in which the pleasurable, symbolic, and ornamental components took precedence over the functional and utilitarian ones.

Nonetheless, agriculture was still very important to Jefferson and he used Palladio's villa model to integrate many of the farm-related functions of Monticello such as stables, laundry room, brewing room and storage areas underneath the house and in its service wings. Other functions such as the joinery, nailery, and slave quarters remained nearby, located along Mulberry Row, part of the first "roundabout" at the summit of the mountain (fig. 14). The basic symmetry of the plan extended beyond the architecture to the surrounding landscape. The courtyard garden, although

composed of curvilinear paths and oval planting beds, was roughly symmetrical along the main axis of the house (fig. 15). Even the productive gardens and fields were arranged symmetrically; the rectilinear vegetable plots along Mulberry Row to the southeast, and the curving grain and grass plots to the northwest.

Jefferson's work at Monticello was influenced not only by Palladio's Four Books of Architecture but by the English landscape theorists of the eighteenth century such as Lord Kames, William Shenstone, and Thomas Whately. Jefferson had read Kames's "Gardening and Architecture" (1762) and Shenstone's "Unconnected Thoughts on Gardening" (1764) by the time he moved from his father's home at Shadwell to Monticello in 1770.[7] By 1771 he had desdribed his first ideas for the landscape improvement of Monticello, which included proposals for a pebble grotto, open vistas of the surrounding countryside, and a park stocked with wild animals.[8] Of perhaps the greatest importance to Jefferson's thinking about the landscape was Thomas Whately's Observations on Modern Gardening, published anonymously in 1770, which Jefferson owned and used as a guide on his 10-day tour of English gardens with John Adams in 1786. It is clear from Jefferson's own notes that he had carefully studied Whately and absorbed his theories and vocabulary. Jefferson's description of Esher Place as a "most lovely mixture of concave and convex" is a direct application of Whately's classification of types of "ground," while Jefferson's comment that Hagley had "no distinction between park & garden. both blended, but more of the character of garden," is likewise a reflection

of Whately's categorization of landscape types into farm, park, garden, riding, and combinations of those four.[9]

Jefferson had already decided to design the grounds of Monticello in the English landscape style before this trip in 1786, and remarked in his diary that "my enquiries were directed chiefly to such practical things as might enable me to estimate the expense of making and maintaining a garden in that style."[10] His practicality was apparent first in his choice of the English style as his model. A picturesque garden might not have been less expensive to create and maintain in Europe than the formal garden styles that had been popular there earlier, but it was particularly well-suited to the American context in which Jefferson was working. The picturesque style enabled the garden proper to merge smoothly into the wider agricultural landscape beyond, and was especially appropriate for the landscape of an agricultural property in which the components for production and those for pleasure could coexist with relative ease. This potential overlap of farm and garden was one of Whately's concerns, and it was a point to which Jefferson was particularly alert on his visits in England. He noted that at Woburn the pleasure garden was "merely a highly ornamented walk through and round the divisions of the farm and kitchen garden"[11] and that the Leasowes "is not even an ornamented farm. It is only a grazing farm with a path around it. here and there a seat of board, rarely any thing better. architecture has contributed nothing."[12]

Jefferson was also impressed by the suitability of the picturesque landscape garden to the American landscape itself. Although the landscape gardens in England appeared "natural" they were not naturally occurring or unplanned. They were a result of centuries of changing land use patterns culminating in the Enclosure Acts and the Industrial Revolution. These changes had provided landowners with the opportunity to consolidate their holdings and the funds to improve them. Jefferson may have known this, but merely said that "in America the noblest gardens may be made without expense . . . we have only to cut out the superabundant plants."[13] It is ironic that while Jefferson abhored the effects of enclosure, which had driven the farming population of Britain off the land and into the cities, enclosure itself was one of the key factors leading to the creation of the gardens he so admired.[14] But his only complaints were stylistic; he was as critical of "old-fashioned" English gardens as he was of those that "showed too much of art" and said nothing about the circumstances of their creation. He was either not aware of, or did not choose to acknowledge, the extensive picturesque garden movement in France during the late eighteenth century, and concluded at the end of his trip that the gardening in England "is the article in which it surpasses all the earth. I mean their pleasure gardening. This indeed went beyond my ideas."[15]

Jefferson designed the buildings and grounds of Monticello to create his vision of the ideal American landscape. Margaret Smith, one of Jefferson's visitors, described the effect. "The sides of the mountain covered with wood, with scarcely a speck of cultivation, present a fine

contrast to its summit, crowned with a noble pile of buildings."[16] The approach road passed through the thirty-acre wood Jefferson had preserved at the summit, ending at the portico of the house itself. After passing through the house, the visitor would arrive at the heart of the entire composition, the "sunny south home lawn"[17] (fig. 16). This extensive but private lawn shared the level area of the summit with the house and "lofty weeping willows, poplars, acacias, catalpas and other trees of foreign growth, distributed at such a distance from the house, as neither to obstruct its prospect, nor that of the surrounding country of which it commands the view"[18] (fig. 17). The hierarchy of landscape elements clearly indicates Jefferson's landscape priorities, at least for his own use. The major rooms of the house extend out into the pleasure garden while the garden reaches out to the landscape beyond. The service wings support the house both formally and functionally, while they in turn are supported by the productive gardens to either side. The similar hierarchy and symmetry in the site planning of George Washington's home, Mt. Vernon (fig. 18), suggests that there may have been some influence or interaction between Jefferson and Washington's architect.[19]

Jefferson appropriated models from Europe, but only those which he felt were suited to America. His somewhat eclectic tastes occasionally contradicted each other. For example, Jefferson disliked English architecture, but lowering the service wings of his essentially Palladian plan at Monticello resulted in a building that looks more, rather than less, English. Despite the variety of sources for Jefferson's ideas, however, the consistency of his vision usually enabled him to synthesize

these varied elements into an elegant whole. The Palladian courtyard plan was appropriate for a fine country house with extensive agricultural lands; the English landscape garden was admirably suited for adaptation to the American situation, enabling ordinary agricultural activities to contribute to the harmonious appearance of the landscape. Monticello is the "heir of all without being heir of any one,"[20] an intelligent response to the realities and possibilities of the American context.

FRANK LLOYD WRIGHT

Frank Lloyd Wright's homes for himself are explicit statements of his attitudes about nature and the ideal relationship between architecture and the landscape. Even before his earliest architectural efforts he was aware of the landscape. His early encounters with the land were in the context of the summers he spent working on his grandfather's farm. Grandfather Jones had left Wales and settled in a Wisconsin river valley

> lying fertile between two ranges of diversified soft hills, with a third ridge intruding and dividing it in two smaller valleys at the upper end. A small stream coursing down each joined at the homestead and continued as a wider stream on its course toward the River. The lower or open end of the Valley was crossed and closed by the broad and sandbarred Wisconsin and from the hills you could look out upon the great sandy and treeless plain that had once been the bed of the mighty Wisconsin of ancient times.[21]

The family's early efforts were to subdue and civilize the wilderness by clearing and farming it. "On week days Grandfather believed in the gospel of hard work. Relentlessly he taught his children to add tired to tired and add it again, until the fountain of energy he himself was, working out through his offspring, began to cut away the forests and establish a human decency where the wilderness was. A human smile, where before had been the Divine Countenance."[22] Their first house was small

and simple, surrounded by Balm of Gilead trees and Lombardy poplars "planted by the Mother and her brood around the little house and along the lanes."[23]

It was within this protected valley with its powerful family associations that Wright began to learn about the landscape. He was clearly aware of the presence of landscape elements from an early age. He also began to link features of the landscape with certain building types and uses and continued to make these connections throughout his life. Wright took note not just of land form and land use but also vegetation, including the importance of trees and groves. Adjacent to the Lloyd-Jones chapel was a grove of fir trees, the site of Sunday picnics and religious meetings. The "sober, towering green mass of Uncle Thomas' fir trees" sheltered not only the little chapel but the "pine board tables . . . bountifully spread for the young and old of a united family," the "family gatherings of the clan."[24] Wright obviously felt that his inclination toward organic architecture was nascent at this early age, when he saw the trees in the field standing "like various, beautiful buildings, of more different kinds than all the architectures of the world. And the boy was some day to learn that the secret of all the human styles in architecture was the same that gave <u>character</u> to trees."[25]

Wright arrived in Chicago in 1887 and found it crowded, impersonal, and "murderously actual."[26] His mother came to join him eventually and they stayed in the Chicago suburb of Oak Park. By 1889 Wright was married and ready to build his first home for himself and his bride Catherine,

who had grown up in Oak Park. Wright's early landscape experiences asserted themselves in his choice of a site. He felt that the houses in Oak Park were "senseless" and "comfortless" but that the solid, respectable village was redeemed by its ample lots, many large trees, and generously shaded streets (fig. 19). Within this suburban milieu Wright chose as wild a site as he could find. This was a corner lot covered with "a tanglewood of all sorts of trees and shrubs and vines" that had, according to Wright, been owned by the Scottish landscape gardener who laid out Humboldt Park in Chicago.[27] The house grew along with Wright's family and private practice, and it eventually embodied the pastoral framework in its basic organization. Its location at the intersection of Chicago and Forest Avenues may have been accidental, but it accurately described the basic dilemma of Wright's life. The shingled suburban house was entered across the wide lawn on the Forest Avenue side, while the brick and stone studio was entered through a formal porch directly adjacent to Chicago Avenue. On the Forest Avenue side the house was set back about twice as far from the street as the other houses on the block. Though Wright despised suburban lawns, which he described as "shaven lots,"[28] he used the expanse of lawn in this case as a slightly defensive measure to emphasize the difference in architectural style between his house and the others, and to establish a larger space between it and the public street. A more explicit connection of architecture with nature was made in the corridor which connected the house and studio, "through which a great sprawling willow tree grew and covered the house with its spreading green."[29] Even the ornamental theme of

this house was a natural form, the oak tree, perhaps due to the location of the building in Oak Park.

Wright's first house for himself was a product of the most conventional part of his life, a period that lasted through twenty years and the birth of six children. Taliesin, his next home, was created under a very different set of circumstances. In 1909 Wright left Catherine and his family in Oak Park and spent a year in Europe with Mamah Cheney, the wife of one of his clients. The scandal surrounding this unorthodox behavior led him on his return to withdraw from his professional life in Chicago and retreat to his family's Wisconsin farm. "I had no choice would I keep my self-respect," wrote Wright, "but go out, a voluntary exile, into the uncharted and unknown deprived of legal protection to get my back against the wall and live, if I could, an unconventional life."[30] The move to Taliesin was a retreat from society's expectations and standards. But it was a retreat made in pride rather than in shame, to define a visible, defensible position rather than to hide. This unconventional life included building an extensive house and farm in which Wright could find privacy and solace close to nature and in the landscape.

The site Wright chose for Taliesin was a low hill protectively located between two larger hills where the Jones Valley runs north to meet the Wisconsin River (fig. 20). Wright built the house itself on the northern side of the hill just below the crown and wrapped around it. Wright always referred to this as the "brow" of the hill and said that Taliesin meant "shining brow" in Welsh, the language of his ancestors. The house

faces northeast, down the Wisconsin River and toward Spring Green, the nearest town. This location and orientation ensured Taliesin a pastoral view of the countryside and also provided visual control of the surroundings and approaches (fig. 21). The house itself was rambling and gentle, slipped between the clumps of native vegetation which remained on the crest of the hill above the house as well as on the slope below it (fig. 22). The more visible northern and eastern sides of the house were screened by the vegetation on the slopes (fig. 23). Wright eventually dammed the stream below the house to create a pond that looked almost like a moat. The result was that the most public side of Taliesin bore some resemblance, though on a very small scale, to one of wright's favorite buildings, the Potala, residence of the Dalai Lama in Tibet (fig. 24).[31]

Taliesin functioned as a year-round center for agricultural and architectural activities and originally included space for all of these functions within the main assemblage of buildings (fig. 25). The living areas, workroom, stables, and garage were dispersed along the hillside at one level and were connected by loggias, terraces, and gardens, creating a series of courts through which the driveway passed (fig. 26). Inside the driveway a series of low walls and steps enclosed more gardens and led to the top of the hill where a semicircular seating area enclosed several trees (fig. 27). The intimate relationship of Taliesin and its landscape was the expression of Wright's desire that the house would not be <u>on</u> the hill but <u>of</u> the hill, "belonging to it, so hill and house could live together each the happier for the other."[32]

Wright made changes at Taliesin continually and extensively rebuilt it after the fires of 1914 and 1925. By the rebuilding in 1925 he made the significant change of moving the entrance drive from inside the court, between the house and its central garden, to outside the house (fig. 28). By moving the drive from the inside series of courts to the outside, Wright enabled the house to have a more intimate, flowing relationship to the garden and the hilltop. At this time he also redesigned the garden, adding walls and steps to tie the house more directly to the hill. Wright's own words are the most elegant description of Taliesin and its gardens.

> Finally it was not so easy to tell where pavements and walls left off and ground began. Especially on the hill-crown which became a low-walled garden above the surrounding courts, reached by stone steps walled into the slopes. A clump of fine oaks that grew on the hill top stood untouched on one side about the court. A great curved stone-walled seat enclosed the space just beneath them and stone pavement stepped down to a spring or fountain that welled up into a pool at the center of the circle. Each court had its fountain and the winding stream below had a great dam. A thick stone wall thrown across it, to make a pond at the very foot of the hill, and raise the water in the valley to within sight from Taliesin. The stone reservoir built into the higher hill, just behind and above the hill top garden, to come down again into the fountains and go on down to the vegetable gardens on the slopes behind the house.[33]

With the hillgarden at its center and the indoor and outdoor spaces closely related through the use of terraces, loggias, yards, courts, and gardens, Taliesin exemplified Wright's conviction that house and landscape should nearly merge while saving the best part of the site for use in connection with the use of the house.

Many aspects of the landscape of Taliesin are consistent with Wright's earlier home in Oak Park and some of his later designs for clients. The

use of a central landscape element was one recurring theme in Wright's residential work. The willow in the corridor at Oak Park foreshadowed the hillgarden at Taliesin, in principle if not in extent. Occasionally, as at Hollyhock House, the central garden included a lawn (fig. 29); more often, as at Taliesin, it was a naturalistic composition incorporating the native vegetation of the site. The McCormick house project even appears to have had separate courtyards, one with a lawn and pool like that of Hollyhock House, the other much wilder, overgrown with shrubs and small trees (fig. 30). Wright also consistently preferred sites with some existing vegetation on them; from his choice of a "lovely old tanglewood" in Oak Park to his rejection of a treeless lot for the Millard House in Los Angeles in favor of a ravine in which stood two beautiful eucalyptus trees.[34]

THE INSTITUTION

To both Jefferson and Wright the institution was a type midway between the house and the town, and as a result the physical form of the institution was based on both models. The community and institutional designs by both men included individual residential units dispersed around the perimeter of a shared, although not necessarily public, space. The important buildings were located in prominent positions in or directly adjacent to this open space, while the service buildings and spaces were assigned to less visible positions.

THOMAS JEFFERSON

Thomas Jefferson's home Monticello was largely derived from the Palladian villa and Jefferson used many of the same principles in his design of the University of Virginia. The idea of the villa has been used at urban as well as residential scales, and Palladio himself had written that "the city is as it were but a great house, and on the contrary, a country house is a little city."[35] The University had to accommodate a range of administrative, residential, and service functions similar in kind to those at Monticello, and the basic organization of the two projects is very similar. Jefferson wanted the different parts of the institution to be easily accessible from one another, but without the expense and inconvenience of a single large structure. He proposed instead that it be in the form of "an academical village rather than one large building."[36]

Jefferson began to plan and discuss the proposed University around 1800 but little was accomplished for many years. Despite the delay, his basic concept of an "academical village" consisting of quarters for students and professors around the perimeter of an open area of grass and trees remained constant. Two sketches by Jefferson in 1817 are variants of the same basic plan for the University (figs. 31, 32). Each sketch shows a series of houses for professors symmetrically arranged around three sides of a square. The row of housing was lined with a continuous "covered way, to give dry communication between all of the schools."[37] Each pavilion occupied by a professor opened into a private, enclosed garden at the rear. This scheme took the hierarchical relationship spaces

inherent in the Palladian villa--court, circulation, residential space, and garden--and transformed it into a type that could accommodate many more occupants. With its covered circulation on the inside of the court rather than the outside, this early University of Virginia plan followed the Palladian type more closely than did Monticello. It did not, however, allow for any structure containing functions common to but separate from the individual schools, housed with each professor in a separate pavilion. The only common space in this initial proposal was the central landscape itself.

Jefferson is credited with these early proposals for the University's design but he also solicited and incorporated suggestions from other architects, including William Thornton and Benjamin Latrobe. The major change Latrobe proposed was an enlarged and elaborated central building with a dome and portico (fig. 33). This may have influenced Jefferson's later decision to replicate the Pantheon at half scale at the north end of the lawn as the University's library. Latrobe also sketched a more elaborate landscape plan than implied by Jefferson's description of "grass and trees," but Jefferson seems to have ignored it.

The topography of the actual site chosen for the University significantly affected Jefferson's early plans. The first purchase was on a low hill to the west of the town of Charlottesville. The summit of the hill was too long and narrow to accommodate the generous square of Jefferson's first sketches; instead, he elongated the open space and defined it with two parallel rows of buildings oriented northeast/southwest along the

axis of the hill (fig. 34). In its basic parti the University is a replica of Monticello--a courtyard plan on a hilltop, open to the southwest, midway between the town and the countryside.

By this time Jefferson had realized the need for communal architectural spaces such as the library and the hotels, or dining rooms, and added them to the plan. The library, as the repository and symbol of knowledge, took its place at the head of the lawn. The professor's houses, now increased to ten, stayed on the inside row of buildings facing the lawn. The hotels moved to the second row, facing out to the fields and woods. The shift from a single row of buildings facing inwards to a double row with each side facing inwards or outwards was not achieved without some effort. The narrow site precluded Jefferson's first desire to have all structures face the central lawn, and his response to the need for a second row was to place it directly behind the first row with a narrow space between (fig. 35). In this proposal the private gardens remained on the very outside, adjacent to the open countryside. Jefferson then conceived the idea of flipping this second row over, shifting it away from the first row, and placing the gardens between the two rows. Jefferson economically changed his drawing by cutting out the incorrect part and replacing it with another piece of paper on which he had drawn the new range of buildings with its covered circulation facing outward (fig. 36). This drawing also shows the new serpentine-walled gardens. Another drawing by Jefferson shows the four complete ranges and clearly indicates how the inner rows focused on the main lawn, the outer rows faced the countryside, and the

space between was divided up and assigned to the different pavilions (fig. 37).

The final plan of the University as shown in the Maverick engraving of 1822 shows the detailed development of Jefferson's ideals and the institution's needs into a complex but elegantly resolved form (fig. 38). The heart of the institution is its manicured lawn overlooked by the library and lined on both sides by the professors' houses and students' rooms (fig. 39). The internal layer of circulation emphasizes the public role of the central lawn within the institution and the functional and symbolic importance of the library at its head. The serpentine-walled gardens define a swath of controlled landscape running between the double rows of buildings and divided into sections assigned to the pavilions and hotels. The main lawn is a semi-public space serving as the garden of the library and of the institution as a whole. Though basically symmetrical along the axis of the library and the lawn, the depth of the enclosed gardens is different on each side because of the topography, which necessitated terracing to site the buildings (fig. 40).

One of Jefferson's achievements at the University of Virginia was the adaptation of his original architectural diagram to the characteristics, opportunities, and constraints of a real site. Of even more importance, however, was his success in transforming the basic Palladian villa plan that he had used at Monticello into one that could work at the scale of the institution, to accommodate the range of public and private buildings and landscapes that such an enlarged body requires. He maintained the

central lawn with the major building at one end and a pastoral view at the other, service wings to either side, and gardens behind. The greater variety of functions and the internal hierarchy of the spaces of the University resulted in a more complex plan that pushed the courtyard idea of Monticello toward a more public character without losing its organizational simplicity and pastoral attitude toward the landscape. The provision of public, semi-public, and private landscaped spaces and the gridded permeability of the University's plan even suggest ways in which the type could be further transformed for the design of larger and denser, more urban areas.

FRANK LLOYD WRIGHT

For Thomas Jefferson the organization of the institution was basically that of the house at a larger scale and with some added complexities. For Frank Lloyd Wright the development of the community or institution was not quite as simple. Wright felt that the architectural form of the institution should be analogous to the house to the extent that it sheltered a group or community that chose to be together while remaining separate from society to pursue some common goal. But his vision of the role of the landscape in this community changed as his architectural ideas developed. In his own homes from the very beginning the center was occupied by a tree or a fragment of natural landscape. He chose sites with as wild a character as he could find and kept them that way, slipping the architecture in between the trees to preserve and accentuate the site's natural features. In his institutional designs there was far more interaction between the cultivated and natural landscapes. The geometric

organization of buildings and formal lawns was offset by the more ad hoc, asymmetrical balance and naturalistic vegetation Wright had learned from his observation of nature.

Many of Wright's institutional designs included both cultivated and natural landscapes, but the relative importance of each changed throughout his life. One of Wright's earliest community designs was the Como Orchards project of 1909, a summer colony in Montana for a group of University of Chicago faculty (figs. 41, 42). This project consisted of 53 small cottages grouped around a lodge where the families would eat. The lodge was located at one end of a lawn which was to be used for recreational activities. The placement of the cottages on the site was almost entirely symmetrical with the exception of a few of the outermost cottages which shifted to follow the contours of the land. Norris Kelley Smith stated that despite the freedom Wright had developed in his house plans by then his understanding of the community was still quite rigid. "As late as 1909 he had at his disposal only one means of expressing in architectural imagery the idea of collective agreement--i.e., the kind of geometrical formality one sees in the Winslow façade, the Robie dining room, and Unity Temple. In order for Como Orchards to appear to be a community, it had to be composed, Wright felt, according to a simple and immediately comprehensible diagram."[38] The lawn in the Como Orchards plan is like that at the University of Virginia but with its more complete closure and the refectory rather than the library at its head it has a family focus rather than an intellectual one, not inappropriate

for a residential colony in which the family groups were to assemble at mealtimes.

The open lawn as the central element of an institutional plan was a strategy that Wright continued to use occasionally throughout his life in projects such as the School of the Free Spirit in Japan and Taliesin West in Arizona. It gradually became less important and the lawn was replaced by more wooded, naturalistic landscapes such as Wright had preserved at Taliesin. This central grove motif appears as early as 1902, in the Quadruple Block project (fig. 43). This housing proposal consisted of identical homes in groups of four, creating units that could be repeated to create larger neighborhoods. The substantial Prairie-style houses are separated from the street by generous lawns, while behind the continuous wall linking the four houses into a square the landscape asserts itself, becoming a dense collection of trees and undergrowth. The entrance walk to each house is lined by an equally lush small garden, which extends the natural vegetation almost to the curb. The house clearly mediates between the domesticated and wild landscapes. The cultivated lawn demonstrates the resident's adaptability to the conventions of suburban life; the grouping of the homes suggests the importance to Wright of a community larger than one family but smaller than the neighborhood; while the grove suggests that the true meaning of home is found in the natural landscape at the center of the block. Altogether it seems to be a foreshadowing of Taliesin where the house mediates between the natural landscape of the protected hilltop and the town of Spring Green in the river valley, emphasizing the almost tribal character of its occupants.

Taliesin began its existence as a private home for Wright and his family but when he created the Taliesin Fellowship in the late 1920s it took on some of the character of an institution. The Taliesin Fellowship consisted of young, unpaid apprentices who lived at Taliesin and devoted themselves to farm work and architectural activities. During the early period of the Fellowship's existence Wright built two Taliesin-like homes in the Arizona desert for himself, his family, and the Fellowship. These two projects are especially interesting because both gave Wright the opportunity to design the ideal living and working conditions for this mixed group, a situation analogous to a small institution.

The first project, Ocotillo, was a small, temporary camp the Fellowship built to live in while working on the design for San Marcos in the Desert, a large resort commissioned by Alexander Chandler in 1927. The camp consisted of a number of wooden cabins located around a low mound and connected by a wooden wall. As in many of Wright's other designs the cabins are all located at about the same contour level defining a sort of platform on which they all sit just below the crest of the landform (figs. 44, 45). At the center of the enclosure was the campfire, the main gathering place of the Fellowship. The form and site planning of this camp enabled it to blend into the desert visually while creating a protected space in an alien and difficult environment. This intention was embodied in more permanent form in Wright's second Arizona camp, Taliesin West. At the base of the McDowell Mountains, Taliesin West faced towards Phoenix just as the original Taliesin faced Spring Green. The siting of the parts of Taliesin West created sheltered outdoor spaces

within the project as a whole. The siting of the building also defined a large triangular area of the desert between the main body of the building and the base of the mountains (fig. 46). This protected area was where the new apprentices built their own living quarters.

The design of Taliesin West utilized what Wright called the great "reflex diagonal"[39] at a 45-degree angle to the main axis of the building (fig. 47). This diagonal movement orients the building to the scale of the larger landscape and establishes a series of non-rectilinear outdoor spaces. These somewhat fragmented spaces help the building merge into the fragmented character of the surrounding desert landscape. Taliesin West, like Ocatillo, merges visually into the desert without losing the ability to shelter its human occupants. In the later development of Taliesin West this protective tendency is exaggerated by service wings which extend toward the mountains to partially enclose an orange grove (fig. 48). The total effect is to create an even greater resemblance to the original Taliesin in Wisconsin.

The site planning characteristics of Taliesin West were carried over to Wright's next few institutional projects and mark the shift to a new geometric order in his institutional designs. His proposals for expansion of the Hillside Home School and Florida Southern College were both developed in the late 1930s and have a great resemblance to each other and to Taliesin West. Both consist of a fragmented, asymmetrical collection of building parts dispersed within a protected landscape space and organized by a major "reflex diagonal."

The Hillside Home School was actually part of the Taliesin Fellowship, and was located adjacent to Taliesin in the buildings of a former school run by Wright's aunts. When the number of apprentices grew too large to be accommodated in the main house at Taliesin, Wright turned to these nearby buildings to use as the Fellowship's headquarters. His 1938 renovation plan proposed many new structures and an entirely new organizational scheme (fig. 49). The various buildings of the school were arranged in a series of rows on a south-facing slope. The lowest level included the communal areas of the school--apprentices' living rooms, dining room, and kitchen. Just above this was a new central drafting room with its own gallery. Above that was a symmetrical bar of cell-like bedrooms, connected by a long covered walkway to a guest house. This row of rooms was sited on a diagonal to the rest of the school, re-orienting the complex to follow the slope of the hill and echoing the orientation of Taliesin itself, only a short distance away. Neither the diagonal bar nor the guest house was ever built, but the rendering indicates their role in creating the boundaries of the project, at the center of which was the most important architectural element of the Fellowship's life, the drafting room (fig. 50).

Wright's plan for the campus of Florida Southern College was also developed in 1938 and its conceptual organization was very similar to that of the Hillside Home School. The president of the college, Ludd Spivey, commissioned Wright to design an addition to their Lakeland, Florida, campus that would double its size. This project was one of Wright's few opportunities to design an entire institution and the only

one in which a large part of his plan was actually constructed. The site was a south-facing slope on the northern shore of Lake Hollingsworth, one of the region's many lakes (fig. 51). Wright's proposal was a bold asymmetrical plan in which the major campus buildings were dispersed over the site and connected by a series of covered walkways (fig. 52). The placement of the buildings within the site plan reflected their importance to the college as a whole. The dual nuclei of the library and the chapel were located near the physical center of the plan while the administrative and residential elements formed a defensive perimeter on three sides. The most important symbolic element of the Methodist college, the chapel, was located at the geometric center of the plan and was to be linked to the lake by a long covered walkway.

Because of the proximity to Lake Hollingsworth water was more important in the plan for Florida Southern College than in some of Wright's other designs. At the northern end of the site Wright designed a large fountain he called the water dome, larger than any of the buildings. The size and prominent location of the water dome within the campus emphasized the importance of water in the Florida Southern College plan. Wright was also very concerned with preserving the existing vegetation of the site, a large orange grove. Not all of the orange trees are present in the later photographs, but Wright's drawings always showed the grove as a continuous grid into which the buildings were placed, and it was essential in establishing within the school "an outdoor garden character fit for Florida." As in Wright's proposal for the Hillside Home School, the overall institution has multiple centers but the separation of the whole

into parts enables each part to have a strong relation to the whole while claiming some private space. In Wright's own words "the buildings do not crowd each other . . . but each has its own stretch of esplanade and intervening trees."[40]

Despite the complex spatial character of the Florida Southern College campus, Wright continued to make a very strong distinction between the inside and the outside of the school. The major buildings and the water dome were located in the grove, while the supporting buildings were placed on the perimeter, forming a wall between the ideal agricultural landscape on the interior and the surrounding suburban context (fig. 53). Where the edge is not made by buildings a high wall screens the parked cars and automobile circulation from the pedestrian enclave within.

Vincent Scully has suggested that Wright's knowledge of "non-Greek mediterranean" architecture influenced Florida Southern College. "His plan . . . would seem to have derived its pivotal circular pool, its long opening and closing diagonal axes with their colonnades, perhaps even its outdoor theatre and top-lighted buildings of many shapes--such as the chapel and the library--from the published plans of Hadrian's Villa at Tivoli"[41] (fig. 54). Neil Levine suggests that the diagonal axis of these late 1930s projects was not just an internal compositional device but rather one that was intended to connect the heart of each project to the largest scale of the surrounding context. "The diagonal axis was never just a compositional device for Wright. It implied a rootedness to earth along with a sense of liberation in space."[42] But Wright also

intended a connection with the landscape in all of its tactile and visual senses as well. Any institution worthy of being called a School "would be set in some natural park carefully chosen in the choicest part of the whole countryside; situated preferably, say, by some stream or body of water."[43] Florida Southern College was never completed as Wright had planned, but came the closest of any of his works to achieving that goal.

For both Jefferson and Wright the institution was independent from the city but resembled a small city. Separated from its surroundings by a wall of some kind, the institution would include a range of public and private buildings and landscape spaces. The most important landscape space was oriented to some natural space or view outside the institution, reminding its occupants of the natural condition of the American context. At the University of Virginia Jefferson invoked the classical ideal to create a disciplined academic community. The orderly rows of buildings surrounding the large, simple lawn established a public, even political, space across which the library and nature faced each other. At Florida Southern College Wright looked to organic notions of architecture to create a less rigidly organized but still hierarchal community. Within an overall concept still focused on nature, in this case the lake, Wright's use of the diagonal transformed the courtyard plan type into a series of varied spaces and building forms. The interior landscape at Florida Southern College was also less disciplined and hierarchical than that of the University of Virginia. Though hardly the wild and overgrown landscape of some of Wright's other projects, the orange grove was to Wright the native vegetation on the site. Along with the

fragmented and asymmetrical site plan, Wright created a more "natural" and "organic" institution than Jefferson could ever have envisioned.

THE TOWN

Jefferson and Wright both expanded their planning of the ideal environment beyond the scale of the institution to the town. Both based their schemes on the idea of the grid. The grid appealed to both Jefferson and Wright because of its ideal geometric character and the possibility of using it to ensure even and fair distribution of land. But just as in their houses and institutions, beyond this initial formal gesture their ideal town forms had important differences.

THOMAS JEFFERSON

Thomas Jefferson's first town planning effort appears to have been a plan for the extension of Richmond, Virginia, in 1780 (fig. 55). This plan consisted of "some 400 new lots, located four to a block, on a gridiron plan."[44] Jefferson later changed his mind about the virtues of the simple gridiron plan, believing that yellow fever and other diseases could be prevented and the general health of a town's inhabitants improved by "building our cities on a more open plan. Take, for instance, the chequerboard for a plan. Let the black squares only be building squares and the white ones be left open, in turf and trees. Every square of houses will be surrounded by four open squares, and every house will front an open square . . . the plan of the town . . . will be found handsome and pleasant."[45]

Jefferson himself did not leave a drawing of a checkerboard plan, but it is easy to construct one (fig. 56). The nature of such a drawing indicates a difference not only in the character of each kind of space, but in the effort required to create it. In drawing a checkerboard on paper, it is the black squares that require effort to fill in while the white squares remain the color of the background. This suggests that while the black squares of Jefferson's town were the ones that required human effort to build upon, or "fill in," the white squares remaining as "background" would continue as something approximating the natural condition of the landscape. The checkerboard plan goes one step beyond the plain grid in differentiating between kinds of space. The ordinary grid contains only one distinction--between streets, or circulation, and blocks, or areas for building (fig. 57). The dual character of the blocks in Jefferson's plan adds an additional distinction between spaces, though only in type of use rather than in the hierarchy of importance of uses.

This lack of hierarchical distinction is probably what led to the failure of the few towns built on the checkerboard model to survive in that form for very long. Without a strong belief in the value of the open spaces, their condition of being equivalent in size, shape, and number to the blocks for buildings led investors and speculators to sell them for development. A documented example of this was the town of Jeffersonville, Indiana. The original 1802 plan of the town was a distorted variant of Jefferson's plan but did have alternating squares of buildings with streets running along the diagonals between them (fig. 58). By 1817 the streets had been reoriented into a typical orthogonal grid, the open

spaces had been sold off and built upon, and the remaining open spaces consisted of one public square, one grave yard, and a strip of common land along the edge of the river--a far more conventional pattern of open spaces typical of other towns created in that period (fig. 59).

Jefferson's ideas about town planning can be further investigated by looking at his ideas for the design of Washington, D.C. His first mention of the plan of Washington was in a note to George Washington in 1790, in which he made suggestions about the width of streets and the size of blocks. In November 1790 he made a sketch for the division of the city blocks into fifty-foot-wide lots on all four sides of the blocks, the side lot lines extending back to diagonal boundaries running between the corners of each square[46] (fig. 60). John Reps suggests that "this odd subdivision may have been intended to equalize the value of the lots by reducing the size of corner locations while allowing interior lots to have progressively greater depth from corners to the mid-point of the boundary street lines."[47] In light of Jefferson's proposed checkerboard plan scheme it seems possible that it was to maintain the focus of the building façades on the town's open squares. With Jefferson's plan not only would every house face onto an open square, the sides and backs of building lots would all be internal to the blocks. Thus Washington would consist of houses ranged around a series of open squares acting as local centers and no streets or squares would be exposed to the sides or backs of any lots. This diagonal lot and block scheme would have enabled the plan not only to achieve an additional level of internal hierarchy but also to re-create in its open squares of grass and trees the effect of

the central lawns of Monticello and the University of Virginia in a dispersed and democratic yet elegant fashion (figs. 60, 61).

Jefferson also sketched a proposal for the layout of a capitol city on the site of Carrollsburg, in the District of Columbia, but difficulties arose in obtaining the site and attention shifted to a site along the Tyber stream, where the city was eventually laid out. Jefferson's first idea for the Carrollsburg site was a simple, undifferentiated grid (fig. 67). By the next year when the site on the Tyber was under consideration, his idea had become more complex. As the nation's capitol, Washington needed space for special buildings such as the president's house and the capitol building. To accommodate these, Jefferson inserted three special areas into the simple grid; a large open-ended square for the president's house, a similar one for the capitol building, and a stretch of land along the river to be laid out as public walks (fig. 63). Reps notes that this map contains perhaps "the genesis of the present mall as well as the eventual relationship of the White House and Capitol building," and it does bear some resemblance to the city as it was eventually laid out[48] (fig. 64). A reading of this plan as two major structures, each commanding its own controlled open space surrounded by narrow strips of development, recalls the initial layout of both the University of Virginia and Monticello. The consistency and continuity in Jefferson's use of this motif is impressive, and suggests that this architecture/landscape unit was an essential component of Jefferson's vision of the place of architecture in America.

FRANK LLOYD WRIGHT

Frank Lloyd Wright's utopian town planning proposals were based on Wright's vision of the ideal society, in which a dispersed community of self-sufficient individuals lives an agrarian life close to the land. This vision of society was based on Wright's idea of the "natural aristocrat"; the individual who had certain basic rights but beyond these was dependent on his or her own actions and abilities. Wright was inspired by Jefferson's political philosophy and believed that Jefferson's greatest legacy was the "true democracy" fostered by the "sovereignty of the individual."[49] Thus one of the most important aspects of Wright's utopian town schemes was the provision of adequate space and privacy for each individual.

Wright's first exposition of this ideal was a non-competitive entry in a 1913 competition to design a suburb of Chicago (fig. 65). There was no actual site; instead, the design was for a prototypical flat quarter-section. Wright's proposal was based on a simple grid laid over the entire area with apartment houses and public buildings around the outside, single family housing based on the Quadruple Block model on the inside, and a series of square and rectangular parks meandering through the middle of the block. The organization of the plan as a whole repeats the basic strategy of the Quadruple Block house. The perimeter of the development consists of a public yet slightly defensive layer of structures enclosing a series of private and semi-private landscaped open spaces. The geometric meandering of these open spaces across the site is not untypical of Wright's work before 1913, but in this case it has

a somewhat forced asymmetry which suggests some frustration with the need to design a prototypical layout on a site with no natural features. Wright's response to such a featureless site was to dispose the elements in plan to give the appearance of a response to natural conditions which did not exist on the provided site.

Wright's most developed town planning proposal was Broadacre City or "Broadacres," a project which did not appear in complete form until the 1930s but which incorporated many ideas he had been working on for most of his life (fig. 66). Broadacre City was a prototypical section of the American landscape in the form of a square, which Wright considered the most stable and harmonious geometric shape. This form also combined Wright's personal logo or mark, a red square, with the square grid of the national land survey, which had been initiated by Jefferson. Broadacre City was a complex, completely designed community containing residences, farms, schools, factories, hospitals, parks, government buildings, religious and recreational facilities. Wright intended Broadacre City to be the truly American occupation of the land in a pattern of development that merged the city and the countryside.

One of the most important aspects of Broadacre City, especially in comparison with Jefferson's town planning proposals, is the extent to which Wright designed the landscape which Broadacre City occupied. The landscape features were part of the design from the earliest stages (fig. 67). This was consistent with Wright's normal way of working on a real site, where he insisted on having an accurate topographic survey

of the entire area with all the trees above a certain size located even if he was not able to visit the site himself. It is indicative of Wright's concern for the landscape that even in his most idealistic, utopian proposal he still felt the need to create a specific site with real physical characteristics. It is clear that Wright designed the landscape and the Broadacre City plan at the same time, but the sensitive relationship between them emphasizes the role that Wright gave to the landscape in suggesting and justifying the siting and design of his architecture.

The section Wright designed covers four square miles and contains a variety of natural conditions and basic topographic elements such as a lake, a river, a hill, and a sloping plain (fig. 68). The organization of these basic landscape elements bears a great resemblance to the area surrounding Taliesin and Spring Green, Wisconsin, a landscape with which Wright was intimately familiar. The major portion of the section is a gently sloping plain on which the schools, factories, farms, and small homes are located. The meandering river and lake shore are lined with forested parks while to the north of the lake an area of higher ground is the site of larger "Taliesin-like" homes, separated by a parkway from the valley below (fig. 69). Within the overall layout of the city the siting of specific uses indicates their importance and their preferred relationship to the landscape (fig. 70). Wright placed the schools at the center of the section, emphasizing their importance to the entire community. The naturalistic parks form a linear band along the river's edge, and within this band are clustered most of the public

facilities--the county seat and civic center, the sports area, clinics, university, zoo, and aquarium. Also in this zone is the cathedral, which Wright envisioned not as a single structure but as a collection of buildings housing different religious groups around a central outdoor space. He hoped that the "focus of religious activity would shift from the tabernacles to the courtyard. There the universal religion of Broadacre City would be celebrated with magnificent pageantry drawn from the four elements: earth, air, fire, and water."[50] This concern for the outdoor space adjacent to the religious buildings recalls Wright's memory of the importance of the picnics in the fir grove next to the Lloyd-Jones family chapel near Taliesin. At the edge of Broadacre City farthest away from the "Taliesin-like homes" and public buildings were located the high-speed roads, protected from the small farms and houses by a buffer zone of orchards and vineyards.

The most important landscape aspect of Wright's utopian town planning proposals is the consistent way in which the geometric, human order of the architecture and planning responds to the non-geometric order of nature without losing its coherence as a grid. None of Wright's town planning schemes went beyond the proposal stage, but all of them have some relationship to a realistic, if not actual, site. The diagrammatic landscape of the Quadruple Block house is less diagrammatic in the Chicago suburb scheme, while by the time of the Broadacre City plan the supposed natural or pre-existing landscape is much more convincing. Natural features appeared in Jefferson's town plans but only after they were laid out conceptually and often in reality, as elements to be

accommodated after the system was determined. In Wright's town plans the philosophical basis of the architecture and planning demanded that the natural elements at least give the appearance of having existed first to suggest the deployment and design of the scheme from the very beginning.

CHAPTER IV

THE LAWN AND THE FOREST: DIVERGENCE WITHIN THE PASTORAL TRADITION

It is clear that the built work of Thomas Jefferson and Frank Lloyd Wright is part of a continuous tradition of pastoral architecture in America. Jefferson and Wright agreed on the importance of nature and the natural landscape in an ideal life and incorporated that landscape in their architectural work. They both "leaped for freedom" into American space with a vigor and enthusiasm that simultaneously captured a basic American trait in architectural form and inspired other architects to follow suit. But it is also clear that Jefferson's and Wright's specific aspirations and intentions regarding the landscape were very different, in ways not explained by the pastoral model.

The important characteristics of any great work of art or architecture are intimately related to the interests and personality of the artist. But art is not created in a vacuum; the designer is constantly influenced by the social and cultural context in which the work is being made. In the work of Jefferson and Wright, each architect's perception of the landscape must be considered in light of common attitudes towards the environment held by Americans at that time. Jefferson's assimilation of Enlightenment philosophy inspired him to create geometric order and visible harmony in the untamed and overgrown American landscape, while Wright's place in the period of transition from the environmentally rapacious nineteenth century to the resource-conscious twentieth century inspired a shift in his own work from highly ordered, geometric

landscapes to more "natural" or at least "naturalistic" ones. Each architect's work was affected by his personal preference in landscape character, but that personal preference was conditioned by cultural ideals that changed, and continue to change, over time. In order to fully understand the profound shift from Jefferson's period to Wright's it is necessary to look back in history to basic ideas about the landscape.

A fundamental concept of special usefulness in looking at the landscape is that of type. The concept of type is used in many ways, but implies some consistent relationship of form and meaning. In architecture the term "type" may refer to objects or organizational ideas with structural similarities, or more simply, the possibility of thinking in groups or categories.[1] By their existence as landscape notions, landscape types acknowledge and define a range of relationships and interactions between humans and nature. At one extreme are types that are primarily natural and initially unaffected by humans, such as savannah, prairie, and forest. At another extreme are those types that are consciously created or defined by humans, such as lawn, garden, or park. Intermediate types demonstrate a variety of influences and interactions, such as can be seen in vernacular settlement patterns and agricultural landscapes.

The lawn and the forest are two landscape types with strong physical characters and a persistent appearance in the history of the landscape. As such they are roughly analogous to architectural types such as "house" or "monument" and have powerful historical and psychological associations. As basic types they also have an epistemological

significance that deserves recognition and discussion. The lawn and the forest together provide a dialectical framework for looking at human intervention in the landscape. Because a forest is the culmination of unrestrained natural processes and a lawn the most significant symbol of human control over those processes, this framework allows identification of intermediate types and conditions, as well as critical analysis of changing attitudes toward nature and the environment. It also implies a theory of origins and a sequence of historical events that places human activity in the landscape firmly in the context of both natural and cultural history.

The word "forest" has only recently become the term used to describe a large tract of land covered with a dense growth of trees and underbrush, developing or having achieved a climax, or stable and self-sustaining, condition.[2] The medieval term for what we now call forest was silva, which referred to wilderness or the primeval forest, that space entirely outside human occupation, intervention, or effect. Tacitus referred to it as horrida silva, which meant that it was bristly or prickly, and thus dangerous and impenetrable. According to J. B. Jackson, the word forest "came into existence in courtly circles in the ninth century to identify a part of the wilderness set aside for the king's hunting."[3] Though originally a legal term, the "invention of this word marks one of the first steps in what can be called the discovery or the creation of the forest as a distinct ecological entity. For then it began to be seen as part of the life--social, economic, ecological, and spiritual--of every . . . landscape."[4] Jackson also identifies different types of forests.

"There was clearly a distinction made, even in the remotest times, between the heart of the primeval forest, what could be termed the 'heroic' forest associated with myth and mythic divinities, and the everyday or folk forest," which supplied each community with temporary grazing areas and raw materials, and became part of its everyday life.[5] The heroic forest, though outside human effect, was the backdrop against which human labor exerted its influence. It also had emotional and even religious significance as the unknown, unchanging context for human existence.

> In legendary times in northern Europe the great mass of the wilderness (or forest), the seemingly endless reaches of trees and vegetation and inaccessible mountainsides and valleys remained untouched. It was seen, two thousand and more years ago, simply as wilderness; a vast, featureless, inhospitable region not unlike the open sea in its terrors. "The absence of large-scale clearing cannot simply be explained by the technical incompetence of the Germans," an historian remarks. "They valued the primeval forest: it was impassable and untouchable. There were great frontier stretches of forest between the tribes. The heart of the forest was the seat of the Godhead; there it displayed its awe; there it claimed sacrifice and humble submission . . . We cannot say that this numinous atmosphere absolutely forbade the pushing of settlement into the woods. But it was a hindrance, and is at least evidence that the Germans looked on the woodland in whose midst they dwelt as an unchangeable thing."[6]

Our modern minds no longer perceive the primeval forest as an unchangeable entity or the literal source of religious power, but it has not entirely lost its heroic, mythic associations. In her study of contemporary attitudes towards wilderness, Linda Graber cuts through the variety of reasons for preserving wilderness areas in their natural state to identify the unity of the underlying motivations.

> We live in a secular age, so the religious essence of the wilderness ethic tends to be overshadowed by attempts to justify wilderness preservation on secular grounds, be they scientific, aesthetic, nationalistic, or hygienic. Wilderness preservation

> is often presented as a means to some widely desired end, rather than as an end in itself. Secular arguments in favor of a religious goal tend to be somewhat misleading, for public programs such as outdoor recreation, watershed management, or wildlife habitat preservation do not necessarily require wilderness locations to be successful . . . The intense emotion and rigid codes of conduct associated with wilderness areas suggest a motivation beyond the practical. Whether we realize it or not, an influential portion of the American public treats wilderness as sacred space.[7]

We still consider the untouched wilderness the locus of both primitive urges and natural virtues, and our desire to preserve this environment testifies to our continuing assignment of significant moral, psychological, and ecological value to "natural" nature.

The words "lawn" and "land" have the same Celtic root and once meant the same thing--an open space between woods, or an opening in what we now call the forest.[8] The existence of a lawn is dependent upon clearing the forest away to create usable land, and thus the idea of lawn implies destruction of the forest and the imposition of order and visible human control, or civilization, on the natural condition of the land.
J. B. Jackson identifies the modern American lawn with its trees as the expression of an enduring memory of the northern European proto-landscape of forests and meadows which has been loyally re-created in generations of front yards. The lawn itself is the persistent reincarnation at a symbolic level of clearings originally created for agricultural purposes. "For almost a thousand years after the collapse of the Roman Empire the history of Europe was the history of a slow and persistent de-forestation," Jackson says. "After the forest came the pasture, and the pasture in time became the lawn . . . our lawns are merely the civilized

descendants of the medieval pastures cleared among the trees."[9] According to Paul Shepard, the lawn was the physical and symbolic precursor of the English landscape garden, the one great innovation in the history of garden design to have come from Northern Europe. "For the most part, [the North's] gardens have been imitations and adaptations from the South. But its social lawn, or glade, ringed by the forest wall, is distinct from the Mediterranean grove. It is an inverse oasis, an island of open space in the continuum of forest. In Old Saxon 'paradise' was translated as meadow."[10] As the most refined version of both pasture and meadow, the lawn is a reminder of the struggle to carve an occupiable space out of the continuous forest. As a highly controlled landscape the lawn symbolizes our ability to control the landscape for both pleasure and power, and is the living embodiment in landscape form of the possibility of a cooperative and productive relationship with nature.

The lawn and the forest are antithetical landscapes and landscape types. The forest is dark and disorderly and mysterious, out of control and beyond understanding, the locus of primitive and numinous powers. It is the most "natural" of natural landscapes, and constantly threatens to reclaim what humans have wrested from it. The lawn is neat, open, and orderly; disciplined and domesticated; subservient to the human motivations that are necessary for its creation and maintenance. It is still a landscape but the most "unnatural" kind, and remains vulnerable. Together, however, the concepts of lawn and forest provide a basic framework for looking at human intervention in the landscape, whether vernacular or consciously designed. As landscape types they encompass

the growth and change that is an essential feature of the natural landscape and human interaction with it; as opposites they establish a tension that suggests a spectrum of types and combinations of types.

The persistent appearance and significance of the lawn and the forest as basic elements in the landscape is acknowledged by Jay Appleton's prospect-refuge theory, based on his study of the relationships between human behavior, the environment, and aesthetic tastes. "Prospect" in Appleton's analysis refers to "an environmental condition, situation, object or arrangement conducive to the attainment of a view," while "refuge" refers to "an environmental condition, situation, object or arrangement conducive to hiding or sheltering." Prospect-refuge theory itself proposes that "the ability to see without being seen is conducive to the exploitation of environmental conditions favorable to biological survival and is therefore a source of pleasure."[11]

Appleton applies this general theory to a wide variety of artistic objects and categories, and finds that the lawn and the forest have consistent symbolic roles. "What the American romantics really discovered in their landscape was that fundamental refuge symbol, the primeval forest," he observes. "If the Ancient Greeks had still been afraid of it, having barely emerged from its tyranny, the nineteenth-century Americans had come from a tradition which had already come to terms with it and found a place for it within its aesthetic philosophy."[12] Appleton considers the lawn as one of the types of "carpeted open surface," which are "prospect-conducive almost by definition in that they facilitate

rather than impede the view. One thinks first of mown or closely cropped grass, a highly important source of aesthetic satisfaction alike to the fell-walker and the connoisseur of landscape painting from the Middle Ages to Seurat and on to the present day. It is frequently used as the basic prospect symbol in landscape design."[13]

The lawn and the forest are extreme, idealized landscapes that suggest an expanded field of intermediate types and conditions. Two additional types that are of consequence in understanding the American landscape are the grove and the prairie. If lawn and forest are examples of the extremes of human control or lack of control of natural forces at work in the landscape, grove and prairie define a related but shifted range of possibilities. The grove is a wood or clump of trees with a lawn or other low, controlled surface underneath--the "civilized" version of the forest. The prairie is a large area of natural, uncultivated grassland--the "uncivilized" version of the lawn. Together with the lawn and the forest, the grove and the prairie are terms "on the periphery of a field in which there are other, differently structured possibilities," a field which suggests new ways of thinking about landscape forms and meanings.[14]

The lawn and the forest are persistent and recurring motives in landscape history and design and are valuable models for analyzing any inhabited arboreal landscape. They are particularly useful and appropriate for North America, where the forest and the response to the forest have been a major influence on the development and transformation of the landscape. The first occupation of this continent by European explorers and

settlers is recent enough that their original impressions of America as a primitive, forested landscape are still potent and pervasive cultural memories. Though European observers did not agree on whether the continent was a lovely garden or a howling wilderness, they uniformly perceived it as a virgin land; inhabited, but only by natives who were almost a part of the landscape themselves. Leo Marx concluded that

> Most Elizabethan ideas of America were invested in visual images of a virgin land. What most fascinated Englishmen was the absence of anything like European society; here was a landscape untouched by history--nature unmixed with art. The new continent looked, or so they thought, the way the world might have been supposed to look before the beginning of civilization. Of course the Indians also were a source of fascination. But their simple ways merely confirmed the identification of the New World with primal nature. They fit perfectly into the picture of America as a mere landscape, remote and unspoiled, and a possible setting for a pastoral retreat.[15]

This perception persisted well into the nineteenth century, typified by one English writer who remarked that "the grandeur of the scenery of America arises from its boundless forests, stretching away for hundreds of miles over districts hitherto untrodden by the foot of civilized man."[16]

The American self-image has always been linked to this notion of the continent as a "boundless forest," even though that image and the response to it have changed over time. The lawn and the forest are models for characterizing attitudes toward ideal forms of the American landscape, but they also describe a historical progression, a shift in the general character of the United States from a predominantly unpopulated wilderness to a denser urban and suburban pattern of development. The history of the American landscape is the story of gradual

occupation, control, and civilization of the land. When the forest was great and its inhabitants few, nature was something to be subdued and conquered. The primary method was based on cutting and clearing, an attitude Hans Huth described as "the cult of the axe." In his study of changing American attitudes toward nature Huth noted that although Americans now value nature and conservation this was not always the case.

> In Colonial days and in the years following them in which the pioneers pushed the frontier farther west, the situation had been very different. Then the breaking of ground was all important and the broadaxe was considered the most essential tool. Later, the axe was even accepted as the appropriate symbol of the early American attitude toward nature . . . In descriptions of the country, emphasis was unfailingly concentrated upon westward expansion, and the standard story centered on the frontiersman's untiring efforts to fell primeval forests in his rapid strides to clear the ground. Receding timber stands were accepted as a matter of course, and whatever loss might result from the removal of a few trees appeared overbalanced by the increase of farmland and the growth of cities. The supply of timber was apparently inexhaustible, and most of the vast expanse of the West was still unexplored.[17]

J. B. Jackson described this attitude not as the cult of the axe but rather "the cult of the tree," by which he meant that the wholesale destruction of nature in some areas was accompanied by a "piecemeal domestication of nature," a concern with nature to the extent that it served the economic needs of the community and was part of its everyday life. The economic value of the domestic woodlot and the decorative value of the trees in the front yard were respected long before there was any concern for nature as a whole or the forest as an ecological entity.[18]

By the mid-nineteenth century a definite shift had begun. In 1844 Henry Thoreau retreated to Walden Pond and extolled the virtues of

primitive nature in Walden; in 1858 Frederick Law Olmsted and Calvert Vaux won the competition for the design of Central Park in New York City with an entry that was intended to bring the beneficial effects of rural conditions into the city as the "antithesis . . . of the streets and houses";[19] and in 1864 George Perkins Marsh published Man and Nature, a book that "constituted the most eloquent as well as the most scholarly expression of the new philosophy of the relation between man and nature," a view that "man was destroying the balance of nature, but that with foresight, knowledge, and technical skill he could still reverse the destructive process."[20] Marsh's view was pragmatic and scientific rather than romantic or sentimental, but his work marked the decisive point at which the forest was no longer viewed as a convenient source of raw materials but as an independent entity worthy of preservation. "The forest, and by extension the woodlot, ceased to be defined as a convenient warehouse to be raided with impunity and occasionally restocked by the random planting of trees. It became, in theory at least, a special environment with its own 'natural' boundaries."[21]

Many nineteenth-century naturalists did take a romantic and sentimental view of the forest and its symbolic extension, the wilderness. The aspirations and efforts of individuals such as John Muir and Frederick Law Olmsted during the final decades of the nineteenth century led to the preservation of the Yosemite Valley in California and other wilderness areas as well as the creation of large landscaped parks in every major American city. The public's desire for such natural and naturalistic spaces created a legitimate place in society for professional

environmentalists. It is no surprise to discover that the title of "landscape architect" was first used during this period to identify those whose values and skills were aimed at the dual goals of preservation of the natural environment and the design of new landscapes intended to have the character of natural landscapes.[22] The overall change in the physical environment during the twentieth century has generally been perceived as deterioration. Concern about the environment has gradually increased, reaching a dramatic peak in the celebration of Earth Day in 1970, followed by the incorporation of environmental concerns into a broad range of individual, institutional, and governmental activities. These powerful perceptions have influenced twentieth-century architecture and landscape design. Attitudes toward the designed landscape are inevitably linked to attitudes toward the natural landscape, and twentieth-century values supporting "nature" and wilderness have informed the architecture and landscape work of our time as much as earlier attitudes influenced earlier work.

Thomas Jefferson's desire to clear the forest and transform the uncontrolled wilderness into an ordered and productive landscape was, in terms of intellectual history, an expression of Enlightenment ideals. These ideals were aimed at understanding natural phenomena and finding the principles of order, and ultimately beauty, within that knowledge. Jefferson's primary response to the unknown American landscape was to open up space within the forest and establish a lawn, a place for human occupation. The primary act in accomplishing this end was cutting or

clearing--a manifestation in physical form of the desire to clarify the underlying order and beauty of nature and the natural environment.

These basically European ideals of order and beauty were fundamentally changed by the shift to a new context, quite literally a "New World." Jefferson learned from European artifacts and theories and adapted them to the needs of the American situation. Jefferson chose the Palladian villa as a model for his architectural work because of its suitability for an elegant agricultural establishment, but transformed the type to suit his conception of American life. In his landscape work Jefferson also adapted an existing type to this new context. The use of the picturesque landscape style in England had transformed an already well-established agricultural landscape into one that could be appreciated for its beauty as well as its utility. Among the many factors that led to the change from open field to enclosed farming systems in Britain were the propensity of the land and climate to produce fine turf and the economic value of that turf for grazing, supported by the opportunity for development of large tracts of land under the control of one owner.[23] The English landscape garden was a means of appropriating the increased utilitarian and economic values of the changed landscape for pleasurable and aesthetic effects.

But Jefferson was faced with the task of beautifying and humanizing a new landscape, one that had never been cultivated or controlled on a large scale. His perception of the American landscape was far more sophisticated than that of the average eighteenth-century pioneer or

farmer, but he still resorted to the axe to insert his beloved lawn and garden into the forest. Jefferson's practical interpretation of the English landscape garden was that it was the most appropriate type in the forested American context. In America, Jefferson wrote, "the noblest gardens may be made without expense . . . we have only to cut out the superabundant plants."[24] The vast extent of the natural landscape prevented this from being perceived as a potentially destructive impulse. Even on his own estates Jefferson's success was limited to a small area surrounding his house, from which "the impression of surrounding countryside . . . was that of a limitless natural forest" containing dispersed evidence of human settlement.[25]

This difference between America and Europe was noted by many of Jefferson's European visitors, who often had difficulty describing or analyzing American scenes in comparison with the picturesque landscapes with which they were familiar. They were often disdainful of what they considered to be the relatively infantile state of the American landscape.[26] The Duc de la Rochefoucauld-Liancourt wrote, after a visit to Monticello in 1796, that the ratio "between the cultivated lands and those which are still covered with forests as ancient as the globe, is at present much too great. The eye longs 'to discover' a broad river, a great mass of water--destitute of which the grandest and most extensive prospect is ever destitute of an embellishment requisite to render it completely beautiful."[27] But Jefferson was not intimidated by such vast spaces and so daunting a task. In his innocent, pre-industrial view of the world the landscape could provide economic independence, aesthetic

satisfaction, and moral strength to its occupants. The lawn was simply the epitome of the manipulated landscape and the end result of the virtuous effort that would bring the benefits of civilization to the countryside without ruining its essential character.

Frank Lloyd Wright's treatment of the landscape is more difficult to characterize than Jefferson's because Wright encountered a greater variety of landscapes, projects, and project types and had a greater variety of responses to them. In several of his early projects such as the Como Orchards summer colony and the Jiyu Gakuen School he clearly invoked the Jeffersonian lawn as the model for the major public or semi-public space. Even in these projects his schemes showed substantial differences from Jefferson's. Rather than opening to embrace the landscape as did Jefferson's designs, the lawn or court in Wright's early plans was surrounded and enclosed by buildings. Like Jefferson's buildings they hold the landscape but unlike Jefferson's buildings they hold it in a defensive manner, to shelter and protect it rather than to expose it.

This desire to shelter and protect the natural landscape became stronger in Wright's work and eventually replaced his interest in the Jeffersonian lawn. The cultivated and visibly controlled landscape was replaced by the natural, organic landscape. The lawn was superseded by forms based on natural landscape types, especially the forest and the prairie. In the houses he designed for himself, Wright looked to the natural landscape for ideas from the very beginning. His first home in Oak Park

retreated from the street and surrounded a single oak tree, which also furnished the ornamental motif for the interior. Taliesin sheltered and grew around a hilltop grove of trees, while Taliesin West created and protected an oasis in the desert.

By the 1920s and 1930s Wright was more consistent in his use of natural landscape forms in public projects and buildings. The shift from regular, carpeted landscape spaces to irregular, naturalistic, sometimes forest-like ones indicates that Wright's own perception of the role of these spaces changed. By maintaining natural landscapes or creating ones that looked natural, Wright emphasized the connection of his buildings to the natural American environment. His efforts to retain and even re-create the indigenous environment suggests a preference for the primitive or primeval values associated with the wild, natural landscape. Furthermore, Wright's defensive placement of buildings in relation to natural elements such as topography and vegetation appears to be a reaction against an implied threat of some kind, whether invasion or destruction. Unlike the eighteenth- and nineteenth-century viewer who saw the forest as threatening and overwhelming, Wright saw it as a safe refuge from the threatening aspects of twentieth-century urban and suburban development. This defensive use of the landscape is also clear in Wright's use of agriculture to claim space. In his polemical writings he claimed to value agriculture as a source of economic self-sufficiency and as the proper expression of the natural characteristics of the earth. In his work, however, he used agriculture primarily to create buffer zones

around his buildings and picturesque views that extended the domain of the building out into the landscape.

Wright's diverse interests in the landscape and their expression in architectural forms firmly place him in the organic tradition in architecture, a tradition in which the elements of architecture and ornament are considered the natural outgrowth or consequence of structure and function. In true organic fashion Wright used the tree as the metaphor for architectural structure and ornament, often consciously and explicitly. The biological notion underlying the concept of organic architecture implies a respect for natural processes that in Wright's case extended to the appearance and symbolic associations of the natural landscapes in which he worked. By the latter part of his life he also began to conceive of interior architectural space in landscape terms, most clearly when he referred to the drafting room at the Hillside Home School as an "abstracted forest."[28] In Wright's work not only is the tree the model for growth and architectural structure, the forest is the model for shelter and architectural space.

An analysis of Thomas Jefferson and Frank Lloyd Wright's design methods reveals differences that correspond to their different ideal landscapes. The surviving documents and drawings indicate that Jefferson typically started his design process with a notion of the ideal configuration of elements not linked to any specific site. He would then adjust and develop the resulting architectural diagram in response to opportunities suggested by actual site conditions and specific functional problems

that arose when the diagram was imposed on the site. The design of Monticello was closely related to its site from the beginning, perhaps because Jefferson knew the site well before he started to design the building. His early drawings for both the University of Virginia and Washington, D.C., however, reveal his ability to create orderly, hierarchical plans unrelated to existing conditions. In both of these cases Jefferson made his first sketches before the sites were chosen. The subtlety of the adaptations at the University of Virginia demonstrate his ability to accommodate real site conditions and the exigencies of building construction without losing the clarity and elegance of the original scheme. His success in that situation suggests that his gridded town planning ideas might have been more complex and interesting if he had ever had the opportunity to develop them himself.

Despite a design process that began with a strict, geometrically derived order, Jefferson was sensitive to the natural landscape. He recognized special areas and unusual conditions in the landscape as worthy in their own right and deserving of preservation for public use and enjoyment. At a meeting in 1791 about the design of Washington, D.C., Jefferson was supportive of a recommendation that "Lots with springs on them to be appropriated to the public if practicable, without too much discontent, and the springs not to be sold again."[29] He also eloquently defended the Natural Bridge in Virginia, which he acquired in 1774. He was pressured to sell it on several occasions and absolutely refused. "I have no idea of selling the land. I view it in some degree as a public trust, and would on no consideration permit the bridge to be injured,

defaced or masked from the public view."[30] But in all of Jefferson's designs and recommendations the ordered, geometric ideal came first and was modified when conditions on the ground interfered or suggested change.

Frank Lloyd Wright's design method focused on site issues as much as on building concepts and organization. He was intensely concerned with site characteristics and preferred to know them before beginning any design work. This is especially noticeable in his utopian design projects, in which he established "natural" features and realistic sites in order to have something to which his design could respond, and by which it could be reinforced. This tendency is clear as early as the Chicago subdivision plan of 1913. Most competitors treated the flat quarter section as a featureless tabletop on which program elements could be arranged according to internal program needs and abstract geometries. Wright's proposal was abstract and geometric in its overall design, but was organized around a series of small parks linked in an asymmetrical meander that appears to be seeking some natural condition to justify its form.[31] The "natural" justification for the plan of Broadacre City is much more explicit, for Wright's early sketches clearly show the development of the landscape features at the same time as the architectural ones. For Wright the character of the environment came first, and was adapted and modified to accommodate the needs of the client and the program.

The shift or progression in landscape emphasis from that found in the work of Thomas Jefferson to that found in the work of Frank Lloyd Wright parallels the shift in American attitudes toward the natural environment

from the eighteenth century to the twentieth century. Our ability to perceive and understand this shift is contingent upon the existence of a defined range of familiar landscapes. If Jefferson favored the lawn cut into the wilderness and Wright preferred the forest woven into the urban context, the value of each landscape type individually depends upon the existence or memory of both kinds of environments, even though the quantity and relative importance of these types has radically changed in the several centuries since the North American continent was first inhabited by Europeans. The significance of this historical progression is implicit in Vincent Scully's analysis of the hundred-year time span between Jefferson and Wright. The "leap for freedom" that Scully identifies as the common thread linking their works was a movement

> whose great years were those of the Republic from its inception until something went wrong with it about the time of World War I. Middle-class and fundamentally reasonable, with that kind of gentle romanticism which is one of the most sympathetic products of a protected life, the movement lasted until reason and gentleness began to go out of the world. When the freedom which the Republic had promised began to seem less attractive than security and conformism--or rather, when the middle class which had invented that freedom was willing to forget that it had done so--then the domestic program was in a sense divested of its magical aspirations, and the true skimpiness of the environment as a whole showed threadbare through . . . or perhaps the whole movement only marked the necessarily temporary ferment which arose in the transition from a small-scale agrarian world to a choked urban one; it died just about the moment when the transition was largely complete.[32]

Scully is describing an idea about architectural history but he draws his conclusions from conditions in the non-built environment as well.

Scully's most insightful remark regarding the environment is his identification of the "transition from a small-scale agrarian world to a

choked urban one," a transition that corresponds to the general trend in attitudes toward the environment. Considered in this context, the civilized lawn of Jefferson and the elemental forest of Wright may have grown not just from their different visions of the ideal American landscape and the exigencies of their own historical periods, but from a common impulse to create something rare or lacking in the landscape of their own time. Thomas Jefferson lived when America was not just vast but still relatively unknown and sparsely settled. His design efforts established order and reason in the landscape in the form of a kind of open space of elegance and generosity unprecedented in America. Even his prototypical town plan, implemented in a simplified manner, was responsible for hundreds of gracious and beautiful American towns. Frank Lloyd Wright tried to create a whole, natural environment in the face of forces fragmenting society and destroying the individual's relationship to nature. He tried to reveal and reestablish a kind of order that could soothe and heal the brutal wounds caused by the ugliness and disorder of the twentieth-century urban environment. If Jefferson saw his task as that of humanizing an inhuman landscape, then Wright saw his as that of humanizing a dehumanized landscape. Their techniques may have been different, but their goal of finding a refuge and a balance was the same.

The philosophical congruence of Jefferson's and Wright's disparate ideals demonstrates once again the enduring power of the pastoral framework and the underlying hope of achieving a balance between nature and civilization. Within this framework, however, it is important to analyze time-bound pastoral works carefully to elucidate the significance of the

pastoral in specific historical and environmental terms. The "middle landscape" at a particular time is not just any landscape found somewhere between two extreme positions or types. Individual landscapes have their own characteristics, justifications, and meanings. The ideal in architecture has no existence apart from its expression and resolution in architectural ideas and materials, and likewise the pastoral in architecture is meaningless unless it is embodied in architectural form.

The range in expression of the pastoral ideal even in the work of Jefferson and Wright demonstrates that it is not a fixed or static position. The pastoral framework recognizes the importance of the preservation of opposing positions and the value of a dynamic, constantly changing relationship between them. The maintenance of opposing conditions in the real landscape recognizes the human need for variety and the importance of diversity in physical settings.[33] Testing and redefinition of these conditions must be an integral part of the search for the pastoral ideal. Just as the continual grazing of sheep will eventually destroy a rural landscape, a static notion of pastoral will eventually destroy the pastoral condition itself.

The landscape will continue to be of importance in the development of American culture and self-image. Despite the dilemma of choice presented by the lawn and the forest, the question is not as simple as whether we prefer wild nature or tamed nature. We probably need and desire both, and the proper question is not which, but what combination, and under what circumstances? In a historical view of American architecture and

landscape the contemporary interest in landscape design is not incongruous, but perhaps quintessentially American. The landscape work of Michael Graves may, more than anything else, be the harbinger of a new phase in the relationship of architecture and the landscape in America. It may be a sign that the ideal relationship of nature and civilization is changing yet again. Without losing the hope that is its justification, the pastoral ideal must continue to be adjusted and redefined to accommodate changes in the real world.

NOTES

PREFACE

1. Specific studies addressing the landscape at the scale of the city include Morton and Lucia White, The Intellectual Versus the City (Cambridge, Mass.: Harvard University Press and MIT Press, 1962); Thomas Bender, Toward an Urban Vision (Lexington, Kentucky: University Press of Kentucky, 1975); and Robert Fishman, Urban Utopias in the Twentieth Century (Cambridge, Mass.: MIT Press, 1977).

CHAPTER I

1. Kurt Forster and Diane Ghirardo, trans., "The Modern Cult of Monuments: Its Character and Its Origin," by Alois Riegl, Oppositions 25 (Fall 1982), p. 50.

2. For a discussion of theories of the origins of architecture, see Joseph Rykwert, On Adam's House in Paradise, 2nd ed. (Cambridge, Mass.: MIT Press, 1981).

3. George Perkins Marsh, Man and Nature, ed. David Lowenthal (Cambridge, Mass.: Belknap Press of Harvard University Press, 1965), pp. 114-115.

4. Nan Fairbrother, The Nature of Landscape Design (New York: Knopf, 1974), pp. 20-21.

5. Walter Burley Griffin, quoted in Donald Leslie Johnson, The Architecture of Walter Burley Griffin (Melbourne, Australia: Macmillan, 1977), p. 26.

6. Vincent Scully, The Earth, The Temple, and the Gods, rev. ed. (New York: Praeger, 1969); idem., Pueblo (New York: Viking, 1975); idem., American Architecture and Urbanism (New York: Praeger, 1969).

7. Scully, The Earth, The Temple, and the Gods, p. ix.

8. Ibid., p. xiii.

9. Ibid., p. 2.

10. Paul Shepard, Man in the Landscape (New York: Knopf, 1967), p. 67.

11. C. L. Franck, The Villas of Frascati (New York: Transatlantic Arts, 1966).

12. Ibid., pp. 13-14.

13. Ibid., p. 22.

14. Ibid., p. 24.

15. Ibid., p. 20.

16. For a discussion of garden as a metaphor for the American landscape, see Henry Nash Smith, Virgin Land (New York: Vintage, 1950), and Leo Marx, The Machine in the Garden (New York: Oxford University Press, 1964).

17. Helen Tanzer, The Villas of Pliny the Younger (New York: Columbia University Press, 1929).

18. Marx, Machine, p. 3.

CHAPTER II

1. Vincent Scully, "American Houses: Thomas Jefferson to Frank Lloyd Wright," The Rise of an American Architecture, ed. Edgar Kaufmann, Jr. (New York: Praeger, 1970), p. 164.

2. Vincent Scully, American Architecture and Urbanism, p. 54.

3. Vincent Scully, Frank Lloyd Wright (New York: Braziller, 1960), p. 22.

4. Marx, Machine, p. 3.

5. Ibid., pp. 101-102.

6. Bender, Toward an Urban Vision, p. 4.

7. Washington is quoted in Bender, Toward an Urban Vision, p. 3.

8. Jefferson is quoted in Bender, Toward an Urban Vision, p. 21.

9. Bender, Toward an Urban Vision, p. 7.

10. As far as I know, Leo Marx is the first scholar to have used the phrase "middle landscape" to describe this ideal pastoral condition.

11. Marx, Machine, p. 87.

12. Ibid., p. 128.

13. Thomas Jefferson, Notes on the State of Virginia, ed. William Peden (Chapel Hill, North Carolina: University of North Carolina Press, 1955).

14. Marx, Machine, p. 118.

15. Jefferson, Notes, p. 24.

16. Marx, Machine, p. 119.

17. Ibid., pp. 117-118.

18. Jefferson is quoted in Thomas Jefferson's Garden Book, ed. Edwin Morris Betts (Philadelphia: American Philosophical Society, 1944), p. 323.

19. Merrill Peterson, The Jeffersonian Image in the American Mind (New York: Oxford University Press, 1960), p. 446.

20. Frank Lloyd Wright, An Autobiography (New York: Longmans, Green and Co., 1933), pp. 1-2.

21. Ibid., pp. 119-120.

22. Ibid., pp. 297-298.

23. Ibid., p. 371.

24. Henry-Russell Hitchcock, In the Nature of Materials (New York: Duell, Sloan and Pearce, 1942), p. 64.

25. See Preface, note 1.

26. Morton and Lucia White, The Intellectual Versus the City, p. 190.

27. Jefferson, Notes, p. 125.

28. Marx, Machine, pp. 122-123.

29. A complete discussion of Thomas Jefferson's agricultural interests and innovations can be found in Thomas Jefferson's Farm Book, ed. Edwin Morris Betts (Princeton, New Jersey: Princeton University Press, 1953) and Thomas Jefferson's Garden Book (see Chapter II, note 18).

30. Wright, Autobiography, p. 323.

31. Frank Lloyd Wright, When Democracy Builds (Chicago: University of Chicago Press, 1945), pp. 87-89.

32. Lewis Mumford, The South in Architecture (New York: Harcourt, Brace and Company, 1941), p. 56.

33. Wright, Autobiography, p. 229.

34. Marx, Machine, pp. 9-10.

35. Ibid., p. 339.

36. Ibid., p. 69.

CHAPTER III

1. Thomas Jefferson's architectural books and drawing materials are discussed in Frederick Doveton Nichols, Thomas Jefferson's Architectural Drawings, 2nd ed., rev. (Boston: Massachusetts Historical Society and Charlottesville, Virginia: Thomas Jefferson Memorial Foundation and University of Virginia Press, 1961).

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3. Andrea Palladio, The Four Books of Architecture, rpt., ed. Adolf K. Placzek (New York: Dover, 1965), Book II, p. 46.

4. Ackerman, Palladio's Villas, p. 10.

5. Palladio, Four Books, Book II, p. 47.

6. William Howard Adams, Jefferson's Monticello (New York: Abbeville, 1983), p. 51.

7. Thomas Jefferson's gardening books are discussed in Frederick Doveton Nichols and Ralph E. Griswold, Thomas Jefferson Landscape Architect (Charlottesville, Virginia: University Press of Virginia, 1978), Chapter IV.

8. Samuel Arndt Roberson, "Thomas Jefferson and the Eighteenth Century Landscape Garden Movement in England" (Ph.D. diss., Yale University, 1974), p. 19.

9. Jefferson's notes from his trip to visit English landscape gardens are included in John Dixon Hunt and Peter Willis, eds., The Genius of the Place (London: Paul Elek, 1975), pp. 333-336.

10. Jefferson, quoted in Hunt, Genius, p. 333.

11. Ibid., p. 334.

12. Ibid., p. 335.

13. Jefferson, quoted in Adams, Jefferson's Monticello, p. 146.

14. For a discussion of the development of the English landscape garden with respect to earlier phases of the English landscape, see Christopher Hussey, English Gardens and Landscapes (London: Country Life, 1967).

15. Jefferson, quoted in Garden Book, p. 111.

16. Smith is quoted in Adams, Jefferson's Monticello, p. 154.

17. William Lambeth and Warren Manning, Thomas Jefferson as an Architect and a Designer of Landscapes (Boston and New York: Houghton Mifflin, 1913), p. 104.

18. Margaret Smith, quoted in Adams, Jefferson's Monticello, p. 159.

19. The design of Mt. Vernon is attributed to Samuel Vaughn, according to William Howard Adams, The Eye of Thomas Jefferson (Washington, D.C.: National Gallery of Art, 1976), p. 317.

20. Peterson, The Jeffersonian Image, p. 417.

21. Wright, Autobiography, p. 3.

22. Ibid., p. 5.

23. Ibid., p. 4.

24. Ibid., p. 26.

25. Ibid., p. 25.

26. Ibid., p. 65.

27. Ibid., p. 81.

28. Ibid., p. 80.

29. Ibid., p. 109.

30. Ibid., pp. 170-171.

31. Edgar Tafel, Apprentice to Genius (New York: McGraw-Hill, 1979), p. 164.

32. Wright, Autobiography, p. 171.

33. Ibid., p. 173.

34. Ibid., p. 244.

35. Palladio, Four Books, Book II, p. 47.

36. Jefferson, quoted in Nichols, Thomas Jefferson's Architectural Drawings, p. 8.

37. Nichols and Griswold, Thomas Jefferson, Landscape Architect, p. 148.

38. Norris Kelley Smith, Frank Lloyd Wright: A Study in Architectural Content (New York: Prentice-Hall, 1966), p. 103.

39. Frank Lloyd Wright, Architectural Forum, Vol. 88, No. 1, January 1948, p. 87.

40. Ibid., p. 127.

41. Scully, Frank Lloyd Wright, p. 29.

42. Neil Levine, "Frank Lloyd Wright's Diagonal Planning," In Search of Modern Architecture, ed. Helen Searing (New York: Architectural History Foundation, 1982), p. 274.

43. Wright, When Democracy Builds, p. 106.

44. Jefferson, quoted in Nichols, Thomas Jefferson's Architectural Drawings, p. 4.

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46. Saul K. Padover, ed., Thomas Jefferson and the National Capitol (Washington, D.C.: U.S. Govt. Printing Office, 1946), p. 75.

47. John Reps, The Making of Urban America (Princeton, New Jersey: Princeton University Press, 1965, p. 245.

48. Ibid., p. 246.

49. Wright, When Democracy Builds, p. 20.

50. Fishman, Urban Utopias, p. 141.

CHAPTER IV

1. Raphael Moneo, "On Typology," Oppositions 13 (Summer 1978).

2. Fairbrother, The Nature of Landscape Design, p. 22.

3. J. B. Jackson, Discovering the Vernacular Landscape New Haven, Conn.: Yale University Press, 1984), p. 47.

4. Ibid.

5. Ibid., p. 46.

6. Ibid.

7. Linda Graber, Wilderness as Sacred Space (Washington, D.C.: The Association of American Geographers, 1976), pp. ix-x.

8. J. B. Jackson, "Ghosts at the Door," Changing Rural Landscapes, ed. Zube and Zube (Amherst, Mass.: University of Massachusetts Press, 1977), p. 46.

9. Ibid.

10. Shepard, Man in the Landscape, p. 77.

11. Jay Appleton, The Experience of Landscape (London and New York: John Wiley & Sons, 1975), p. 27.

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13. Ibid., p. 108.

14. Rosalind Krauss, "Sculpture in the Expanded Field," The Originality of the Avant-Garde and Other Modernist Myths (Cambridge, Mass.: MIT Press, 1985), p. 284.

15. Marx, Machine, p. 36.

16. Anonymous, English Forests and Forest Trees (London: Ingram, Cooke, and Co., 1853), p. 18.

17. Hans Huth, Nature and the American, rpt. (Lincoln: University of Nebraska Press, 1972), p. 2.

18. J. B. Jackson, American Space (New York: Norton, 1972), pp. 92-93.

19. Olmsted and Vaux, quoted in Frederick Law Olmsted, Jr. and Theodora Kimball, eds., Forty Years of Landscape Architecture: Central Park, rpt. (Cambridge, Mass.: MIT Press, 1973), p. 45.

20. Jackson, American Space, p. 97.

21. Ibid.

22. Julius Fabos, Gordon Milde, and Michael Weinmayr, Frederick Law Olmsted, Sr. (Amherst, Mass.: University of Massachusetts Press, 1968).

23. Hussey, English Gardens and Landscapes, p. 15.

24. Jefferson, quoted in Adams, Jefferson's Monticello, p. 158.

25. Adams, Jefferson's Monticello, p. 158.

26. For a discussion of the difficulty European explorers and travelers had in describing the North American landscape in familiar terms, see I. S. MacLaren, "The Limits of the Picturesque in British North America," Journal of Garden History, Vol. 5, No. 1, pp. 97-111.

27. Adams, Jefferson's Monticello, p. 158.

28. Frank Lloyd Wright, Architectural Forum, Vol. 68, No. 1, January 1938, p. 18.

29. Padover, Thomas Jefferson and the National Capitol, p. 72.

30. Jefferson, quoted in Thomas Jefferson's Farm Book, p. 335.

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32. Vincent Scully, "American Houses: Thomas Jefferson to Frank Lloyd Wright," The Rise of an American Architecture, p. 164.

33. Leo Marx, "Pastoral Ideals and City Troubles," Western Man and Environmental Ethics, ed. Ian Barbour (Reading, Mass.: Addison-Wesley, 1973), pp. 110-113.

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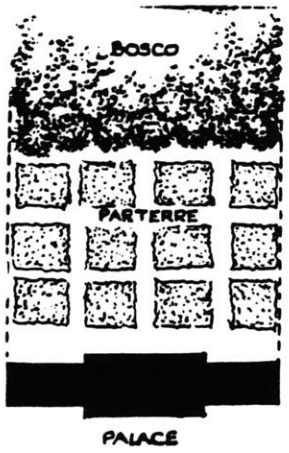
Figure 1



5. *The group of the Canon*

6. *The garden as a room of the palace*

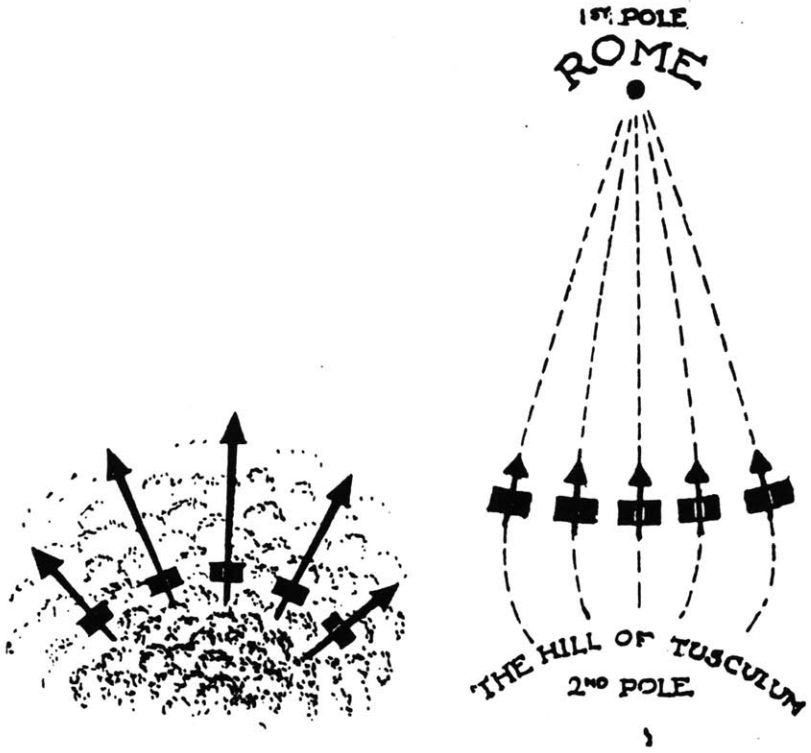
The Canon of the Renaissance. From Franck, The Villas of Frascati.

7. *The closed pattern*

8. *The nucleus and its enlargement*

Elaboration of the Canon. From Franck, The Villas of Frascati.

Figure 2

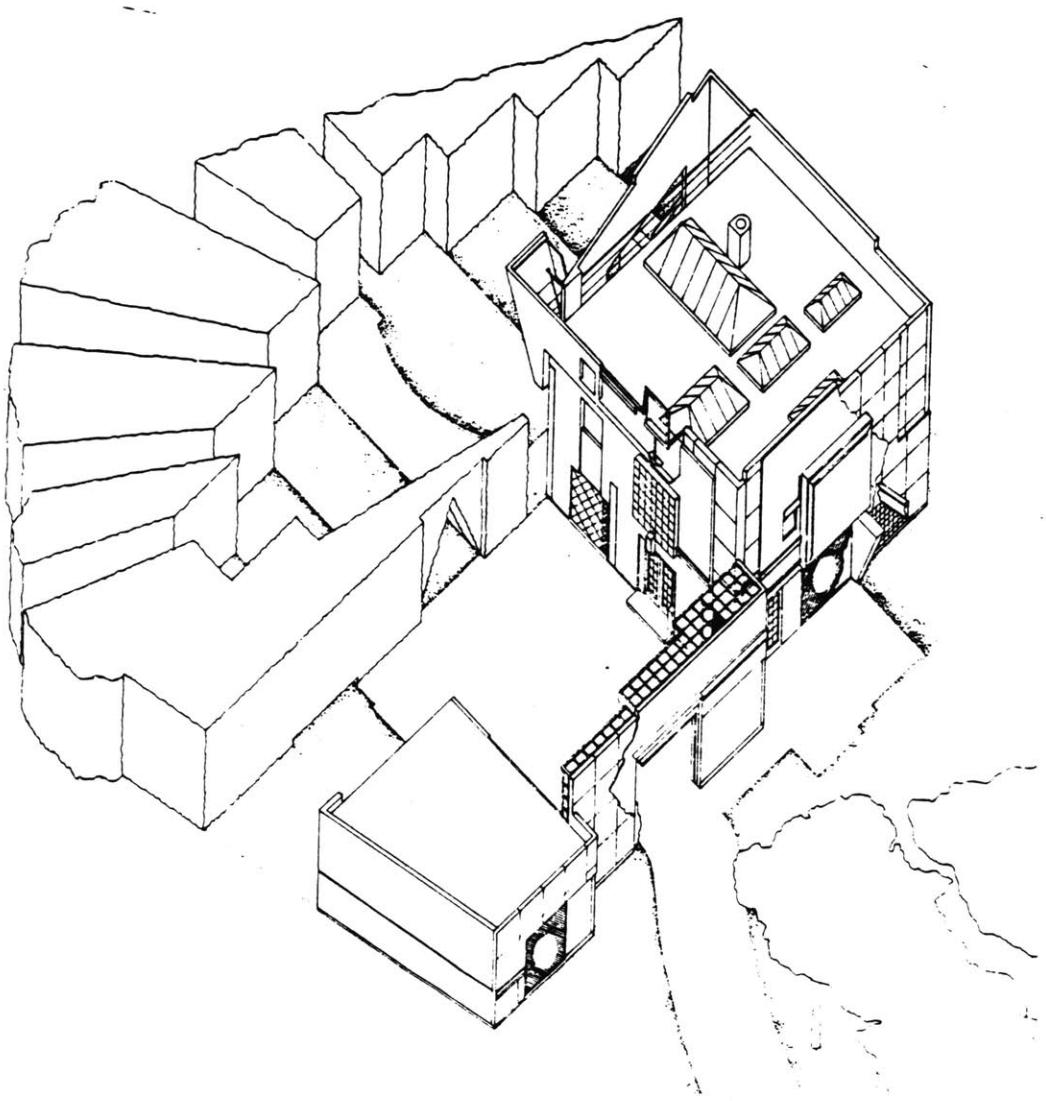


17. *Palaces radial to the slope*

18. *Attraction of Rome on the Villas*

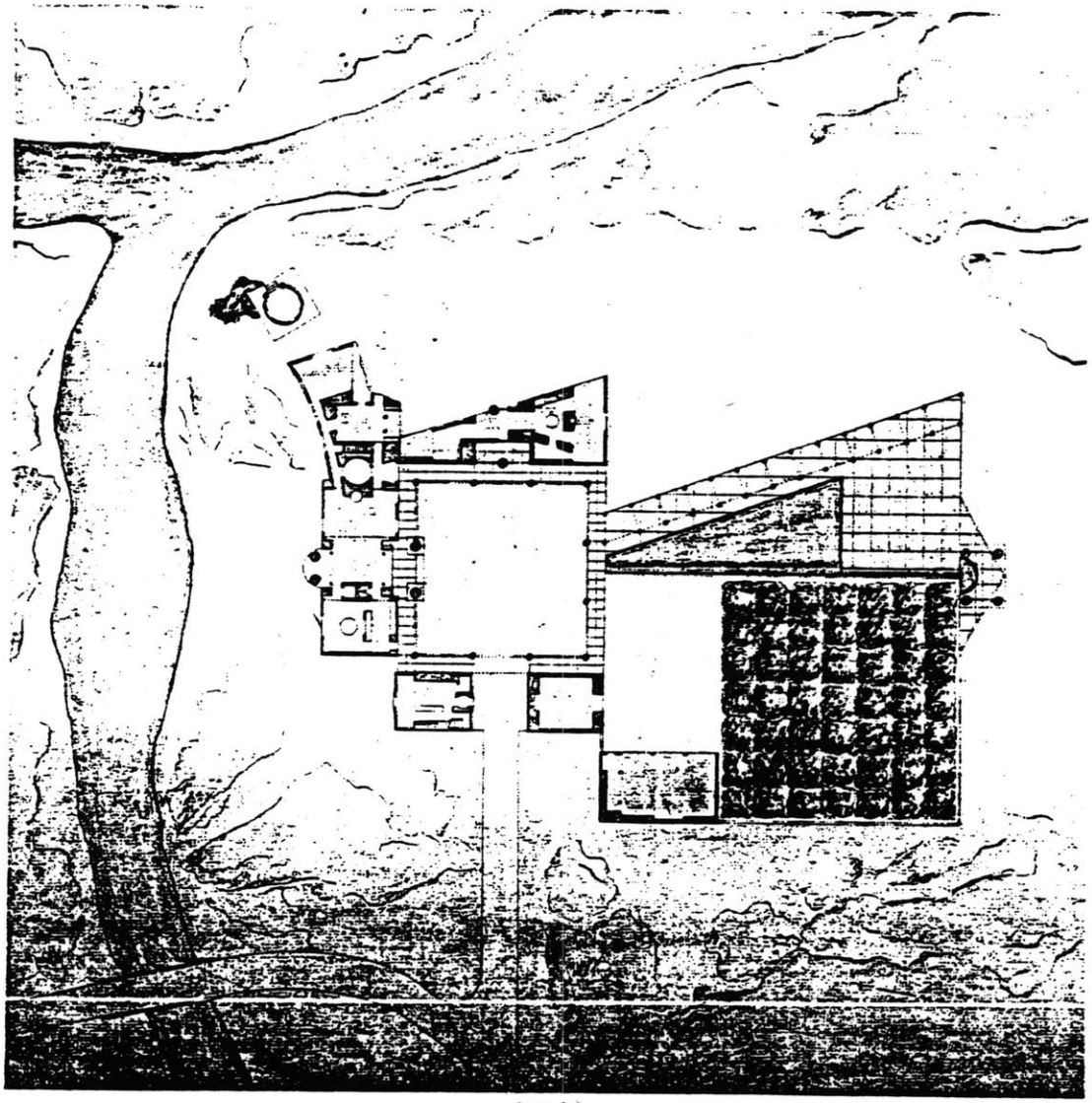
Relationship of the Canon to its surroundings. From Franck, The Villas of Frascati.

Figure 3



Crooks House, by Michael Graves. From Vogel, Michael Graves.

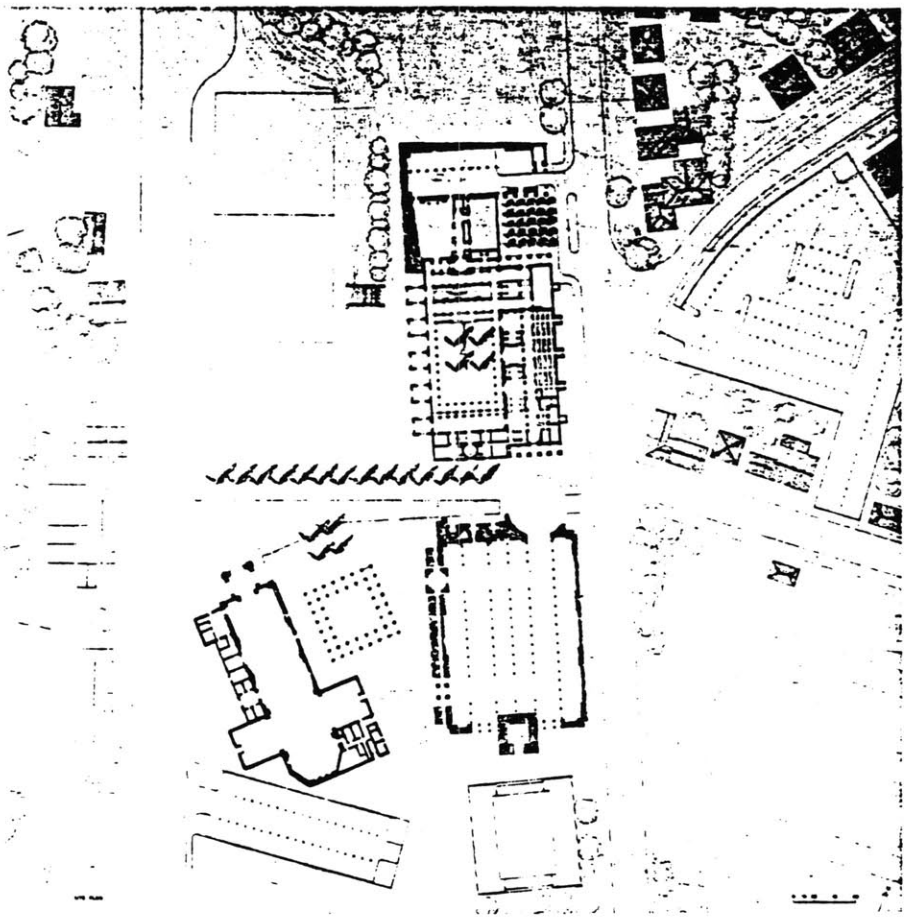
Figure 4



Site plan

Vacation House in Colorado, by Michael Graves. From Vogel, Michael Graves.

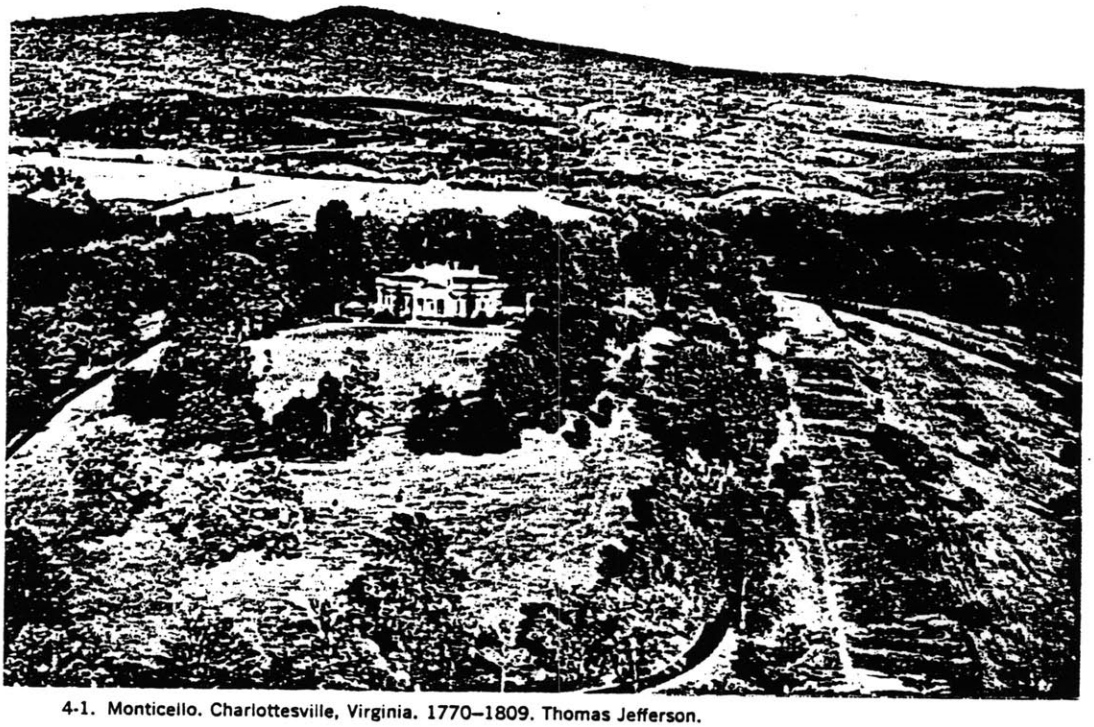
Figure 5



Site plan

Library in San Juan Capistrano, by Michael Graves. From Vogel, Michael Graves.

Figure 6



4-1. Monticello. Charlottesville, Virginia. 1770–1809. Thomas Jefferson.

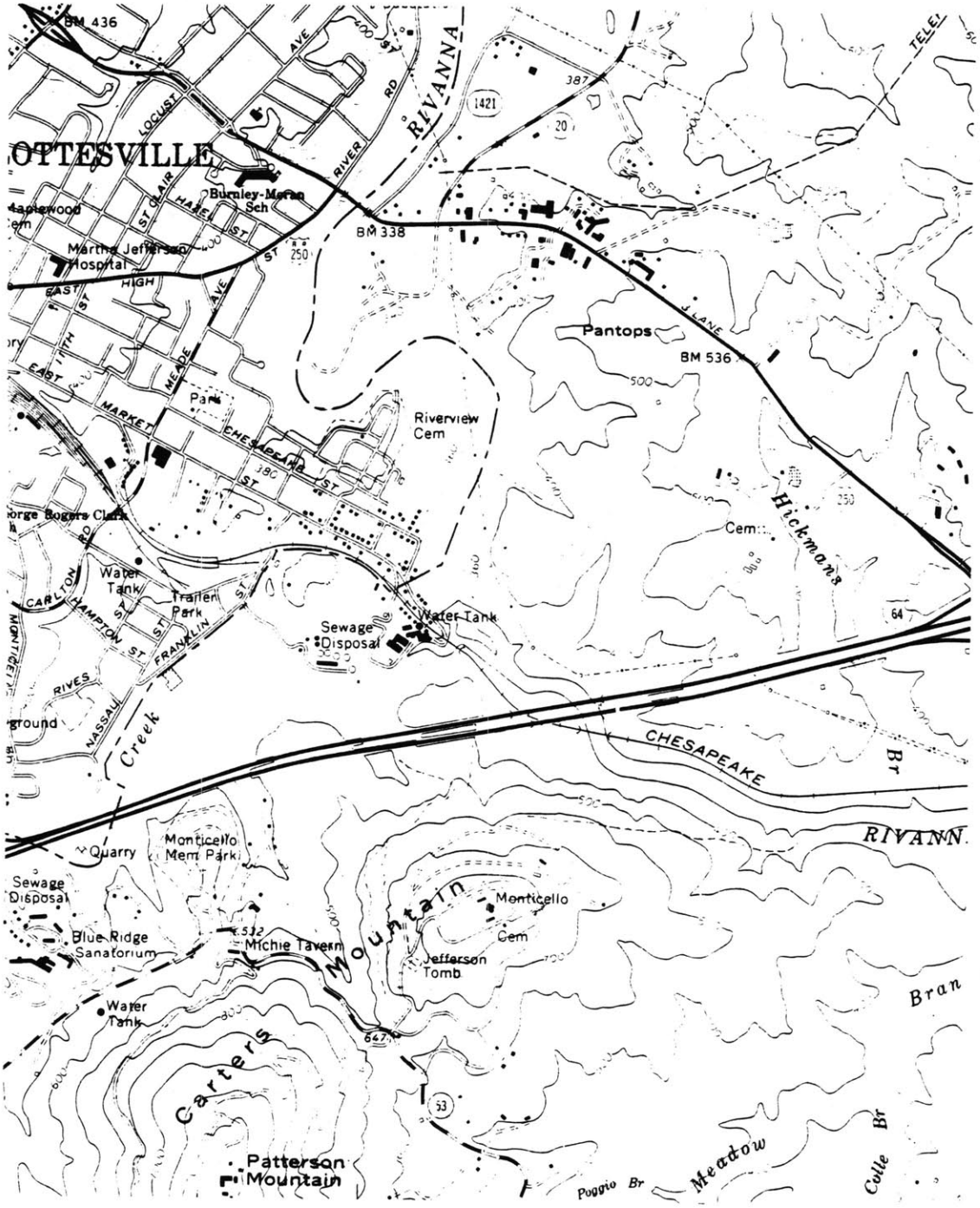
Monticello. From Scully, "American Houses," The Rise of An American Architecture.

Figure 7

Aerial view of Taliesin (1925ff), Spring Green, Wisconsin. Photograph courtesy of the State Historical Society of Wisconsin.

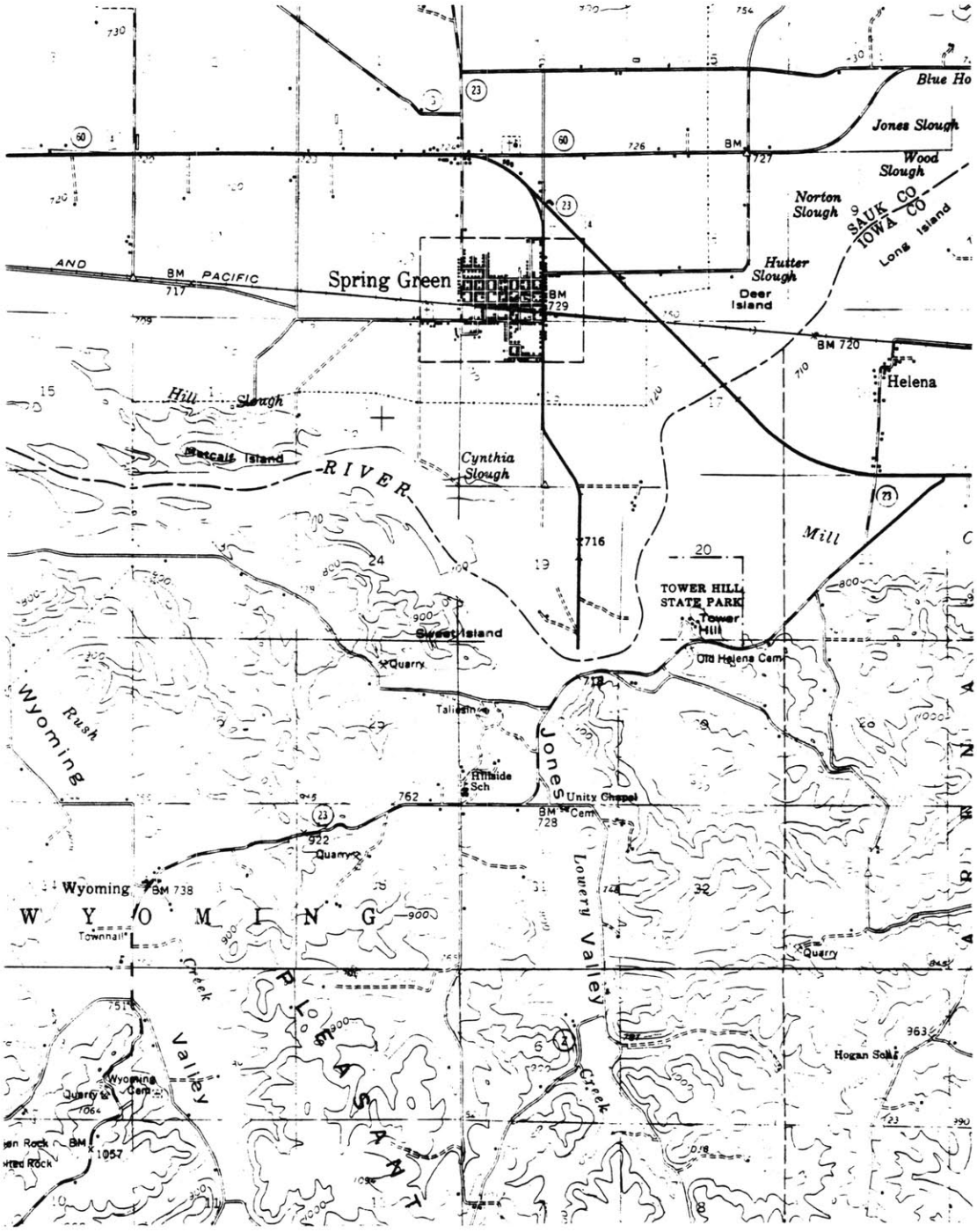
Taliesin. From Meehan, The Master Architect.

Figure 8



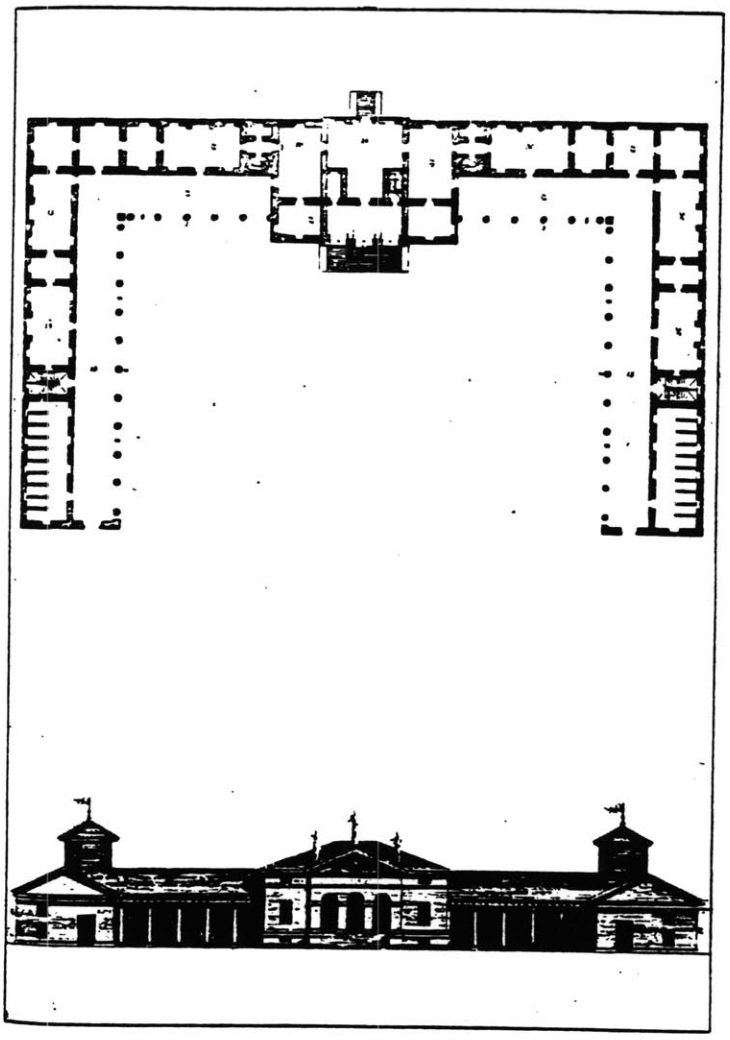
Map of Monticello and surrounding area. USGS Charlottesville East, Virginia, 7½', 1978.

Figure 9



Map of Taliesin and surrounding area. USGS Spring Green, Wisconsin, 15', 1960.

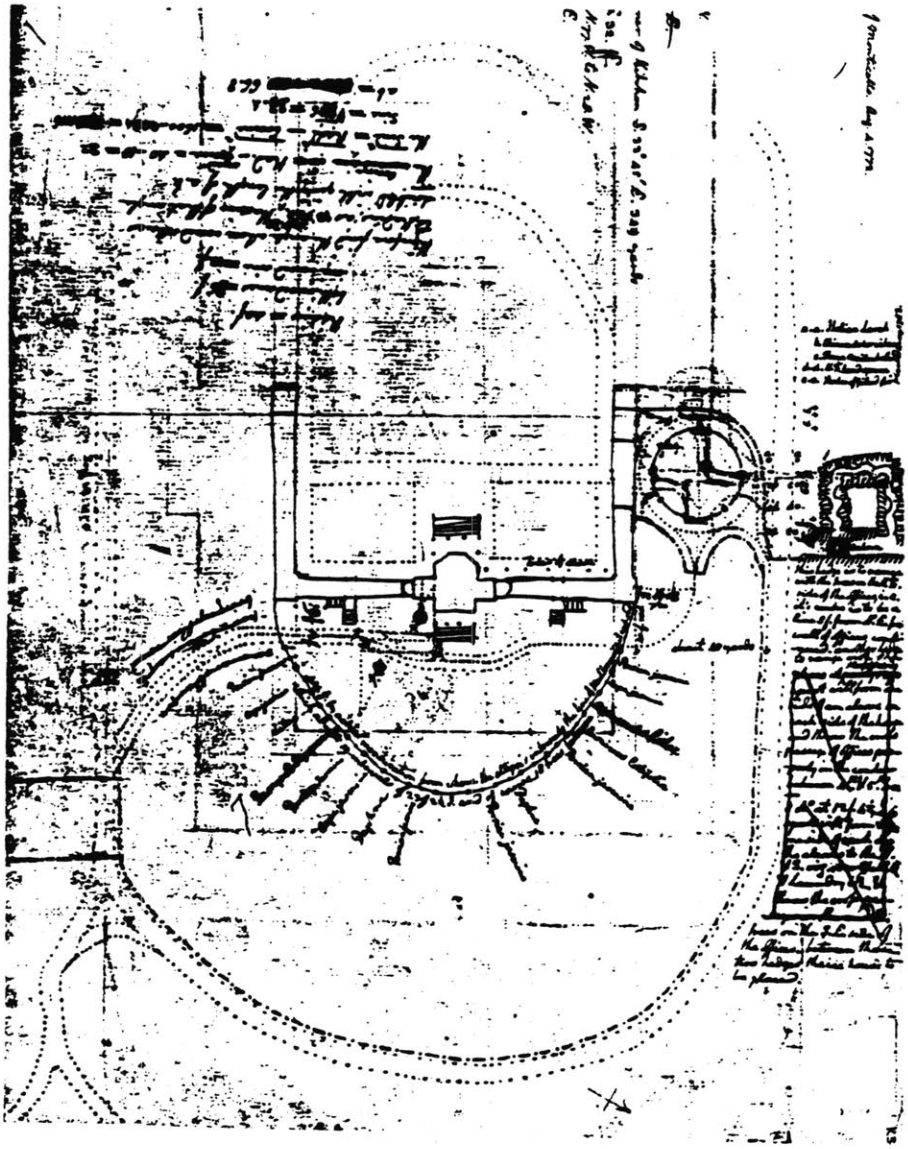
Figure 10



54 ***Plate 41, Book 2, Palladio.*** *Jefferson developed his ideas for the service wings at Monticello from Palladio's design for a villa shown here extending right and left and turning sharply to form a great U-shaped court.*

Typical villa plan of Palladio. From Adams, Jefferson's Monticello.

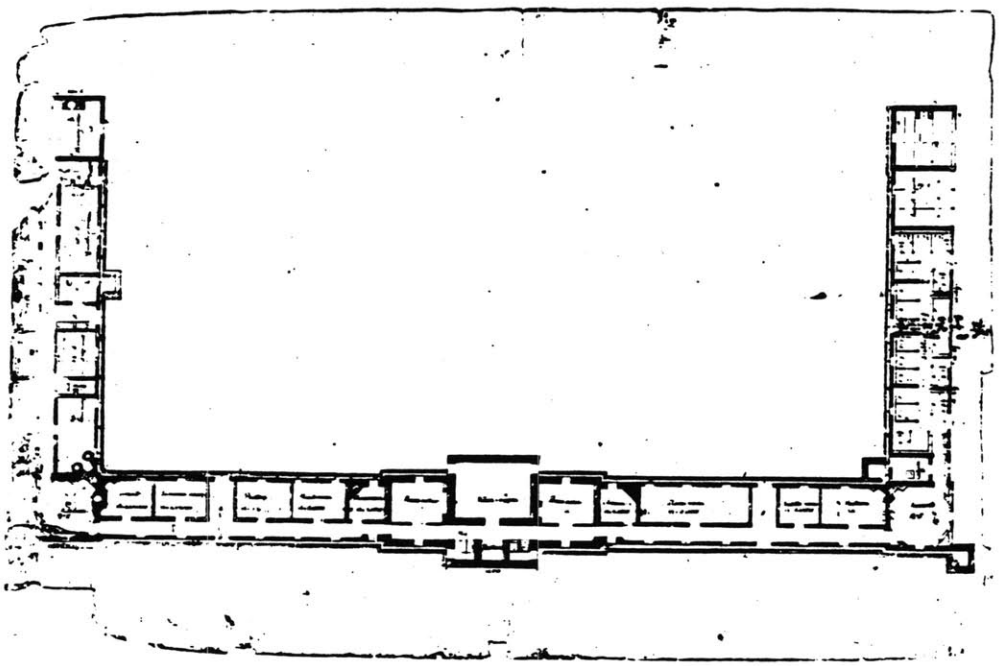
Figure 11



*148 **Jefferson's general plan of the Monticello grounds.** According to Frederick D. Nichols, Jefferson initially drew this plan before May, 1768. It was a working drawing and was changed and altered over the years, as is clear from all of the emendations.*

Plan of Monticello grounds. From Adams, Jefferson's Monticello.

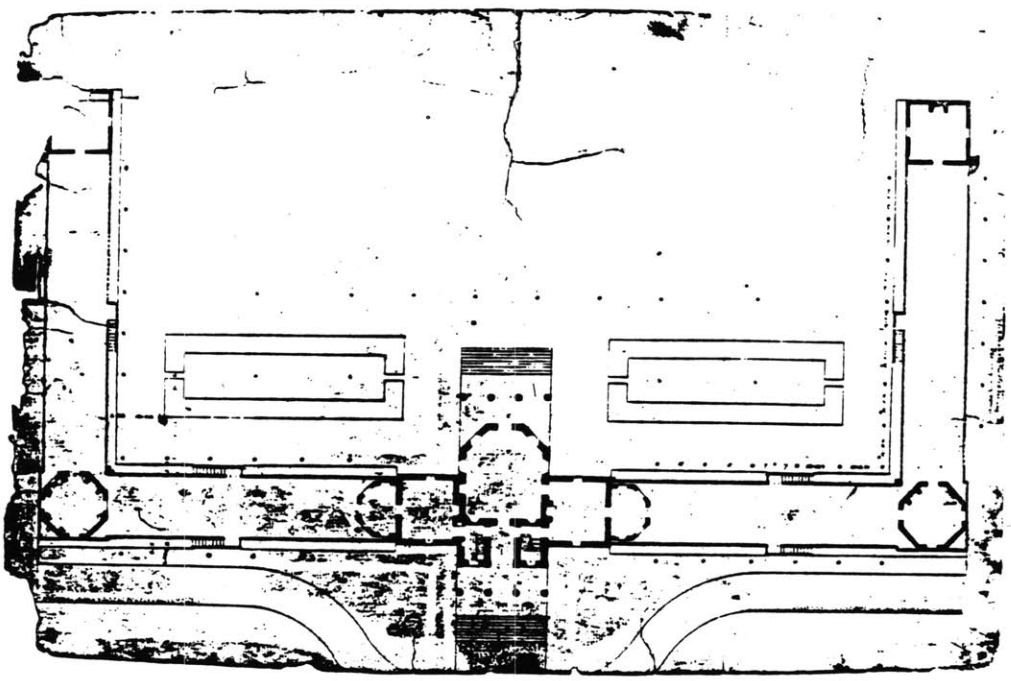
Figure 12



58 Final plan of the basement and dependencies, before August 4, 1772. Even though Jefferson completed this plan for the sunken service wings or dependencies before the fall of 1772, the north wing would not be finished until 1799 and the southeast "all weather passageway" was not begun until 1801. The rooms directly beneath the house were devoted to storage and to cellars for wine, rum, and beer, as well as an armoury. Under the terraces, there were kitchens, smoke room, offices, laundry, stables, and servants rooms, taking advantage of the drop of the hill on either side.

Plan of Monticello, basement and dependencies. From Adams, Jefferson's Monticello.

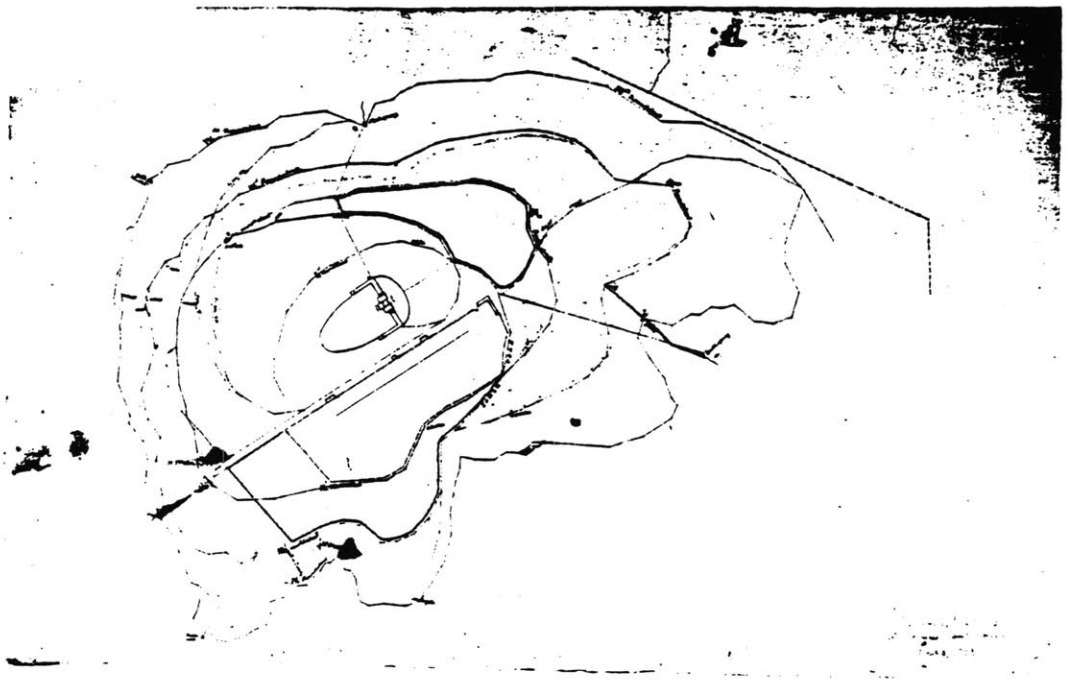
Figure 13



*55 **Final plan for the first Monticello and its proposed dependencies, before August, 1772.** The proposed octagonal pavilions shown at the right angles of the terraces were abandoned by Jefferson for an unobstructed view of the countryside, and the formal flower beds on the west probably were never laid out.*

Plan of Monticello, first floor. From Adams, Jefferson's Monticello.

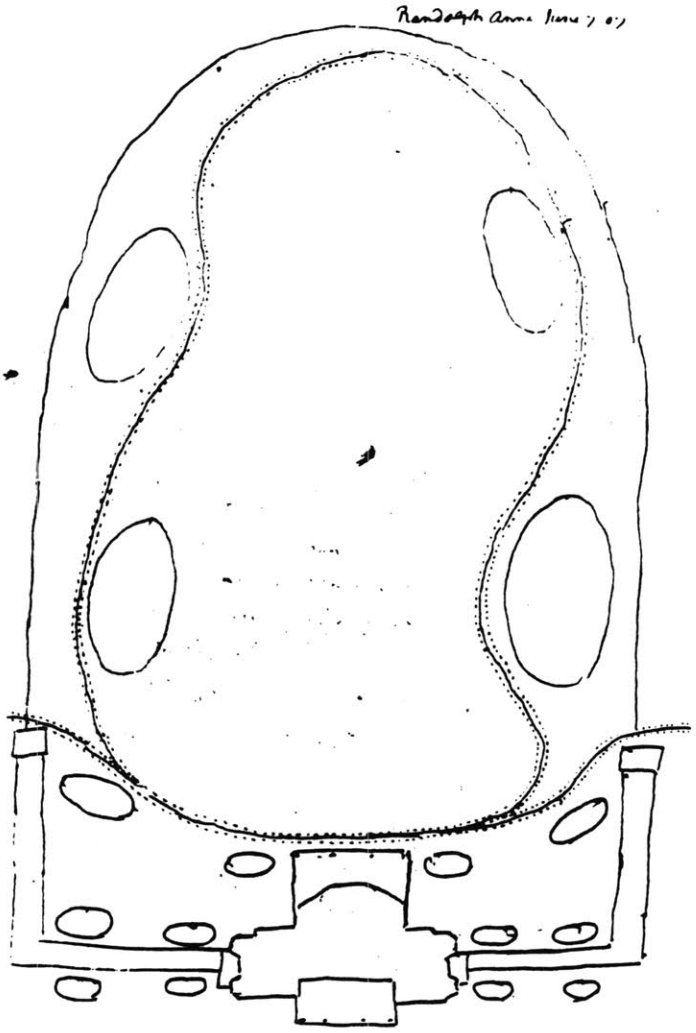
Figure 14



146 Jefferson's survey of Monticello, 1803. This map of Monticello, "with house and offices," shows the routes of the four roundabouts with which Jefferson encircled his mountain. Mulberry Row, the site of the plantation's industries, was the straight road to the south of the house where weaving, nail-making, blacksmithing, and joinery were carried out.

Jefferson's survey of Monticello. From Adams, Jefferson's Monticello.

Figure 15

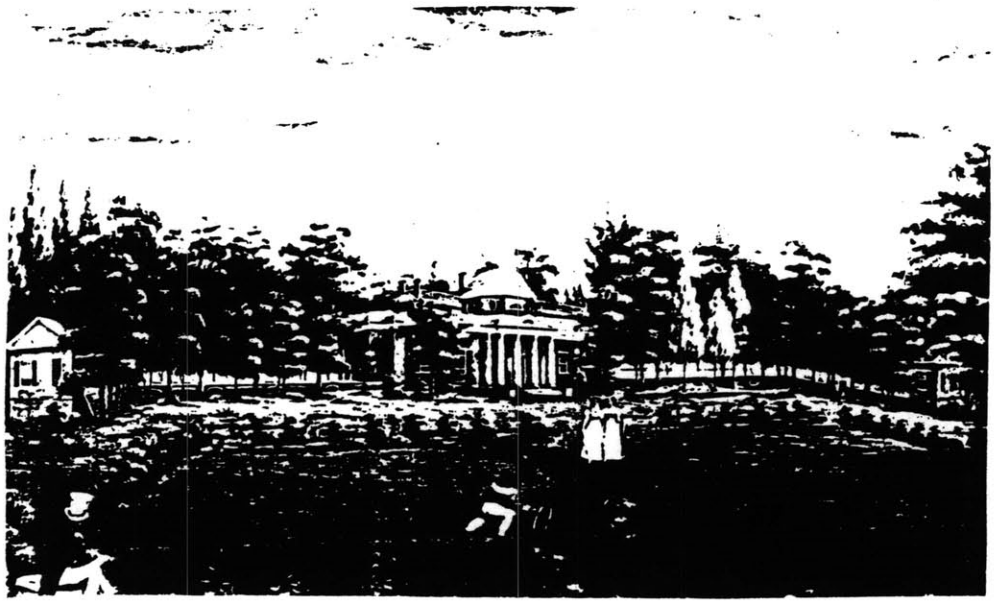


569 Sketch of the garden and flower beds at Monticello

THOMAS JEFFERSON 1743–1826
Ink, June 7, 1807
19.7 x 24.5 (7¾ x 9⅝)
Verso: Letter from Jefferson to Anne Cary Randolph
Lent by the Massachusetts Historical Society, Boston

Plan of garden at Monticello. From Adams, Eye of Thomas Jefferson.

Figure 16



180 **Monticello,** ***watercolor, c. 1820.*** *As Margaret Smith described it, "The level on which the house stands, is laid out in an extensive lawn, only broken by lofty weeping willows, poplars, acacias, catalpas and other trees of foreign growth, distributed at such a distance from the house, as neither to obstruct its prospect, nor that of the surrounding country of which it commands the view."*

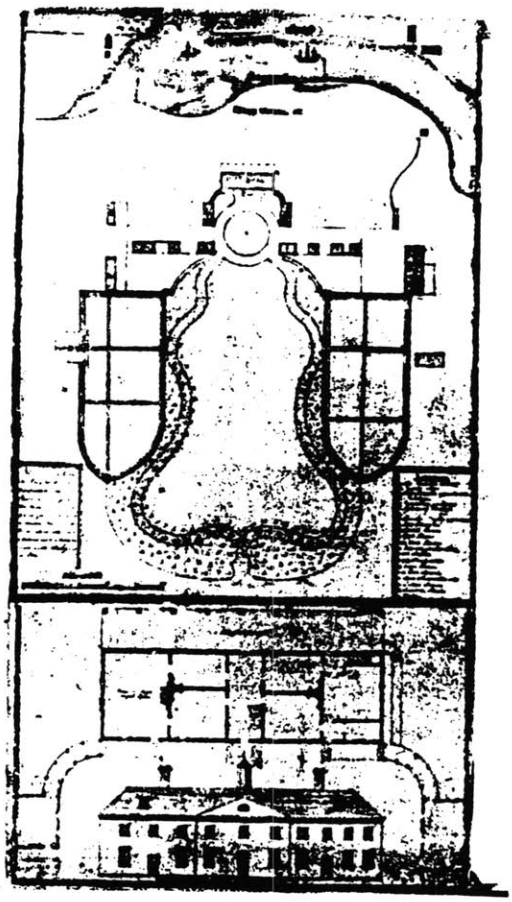
Garden at Monticello. From Adams, Jefferson's Monticello.

Figure 17

147 View from Monticello. watercolor. early 19th century. In this view from Monticello, the village of Charlottesville is visible in the distance. It was there that Jefferson would design and build his "academical village," the University of Virginia—after he had reached the age of seventy-four

View from Monticello. From Adams, Jefferson's Monticello.

Figure 18



545 Plan of Mount Vernon garden
VON GLUMER after SAMUEL VAUGHAN active late 18th century
Lithograph
Lent by Mount Vernon Ladies' Association of the Union, Virginia

Plan of Mount Vernon. From Adams, Eye of Thomas Jefferson.

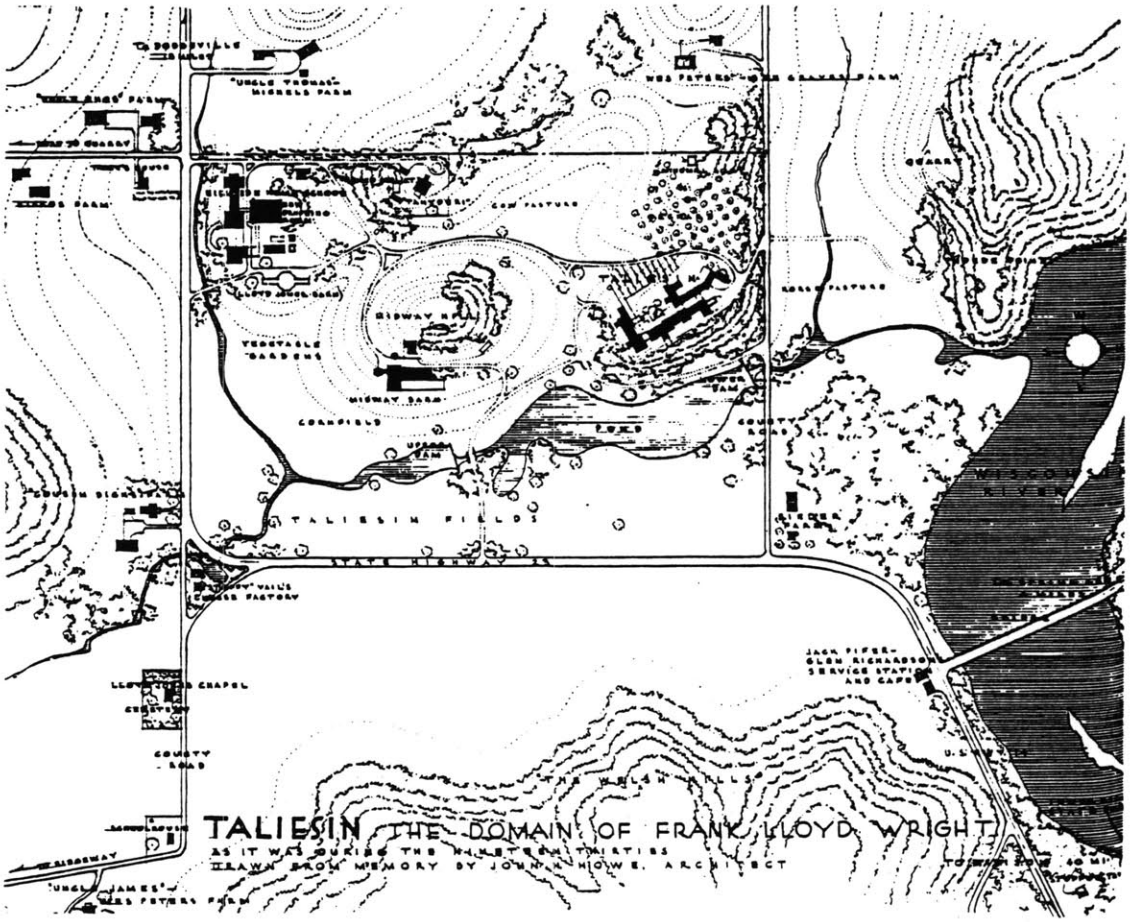
Figure 19

Bird's-eye view of Oak Park from the northwest in 1873, sixteen years before Wright built his own residence there. To the right are the lots on which would rise Unity Church and fifteen of the prairie houses built in the area between 1889 and 1913.

Oak Park. From Cuicci, The American City.

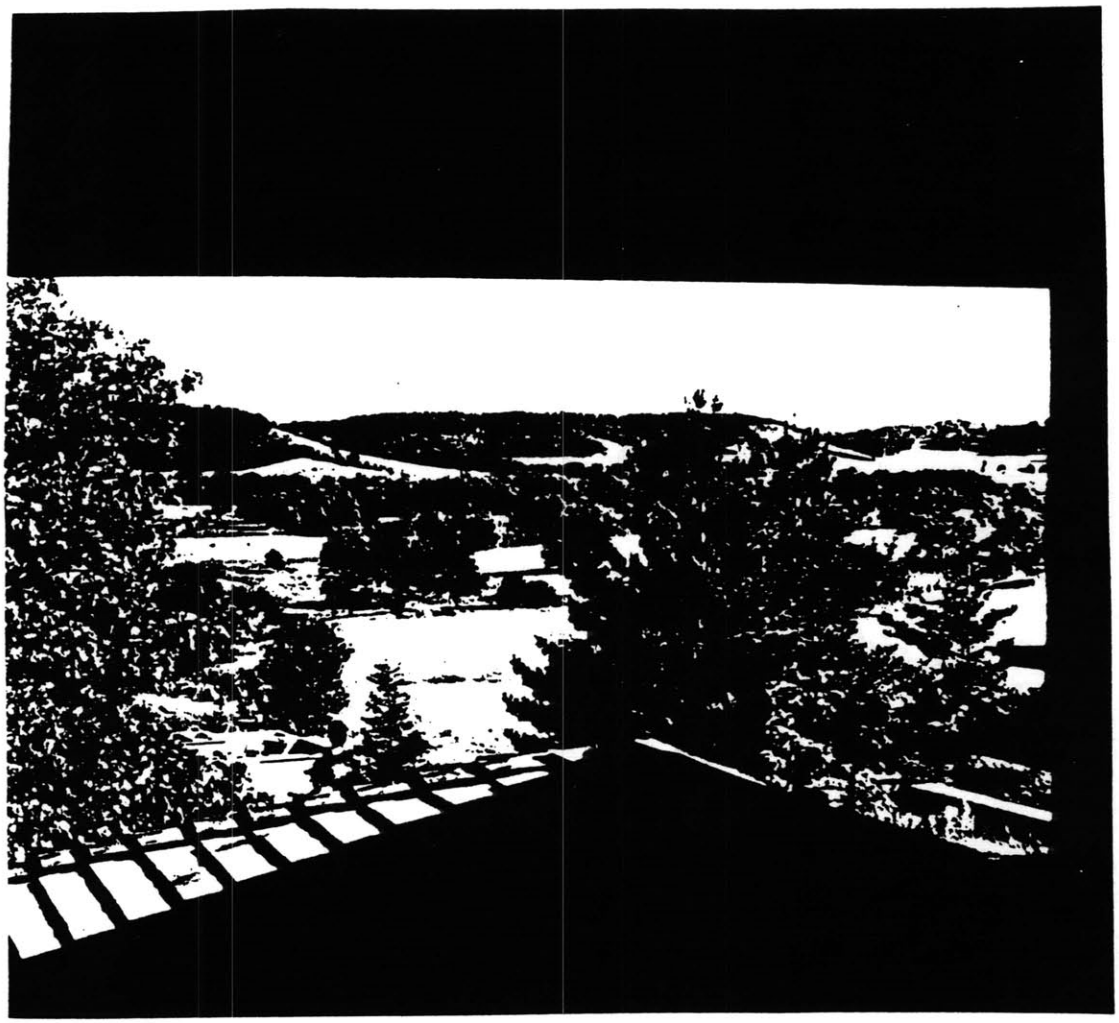
Oak Park. From Cuicci, The American City.

Figure 20



Map of Taliesin. From Tafel, Apprentice to Genius.

Figure 21



View from Taliesin. From Wright, An American Architecture.

Figure 22

Taliesin. From Meehan, The Master Architect.

Figure 23

269. TALIESIN III. SPRING GREEN, WIS. 1925– .

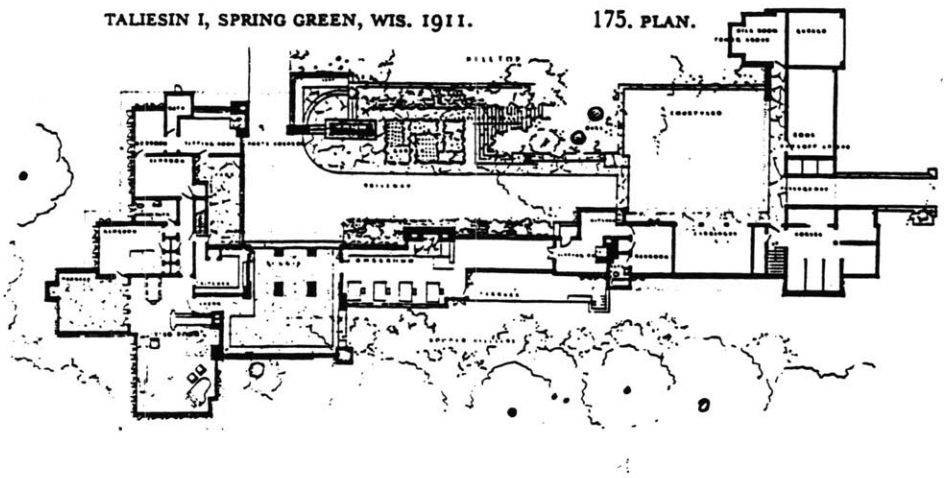
Taliesin. From Hitchcock, In the Nature of Materials.

Figure 24

The only photograph in Mr. Wright's studio of a building by another architect was one, about twenty-four inches wide, of the Potala (the Dalai Lama's residence) at Lhasa, in Tibet. He must have felt both pangs of jealousy and admiration for this structure, completed in the early 1600s, which rose from the plain to a great height.

The Potala, in Tibet. From Tafel, Apprentice to Genius.

Figure 25



Plan of Taliesin. From Hitchcock, In the Nature of Materials.

Figure 26

44. Taliesin I, Spring Green, Wisconsin, 1911. Roofs and Court.

Taliesin. From Scully, Frank Lloyd Wright.

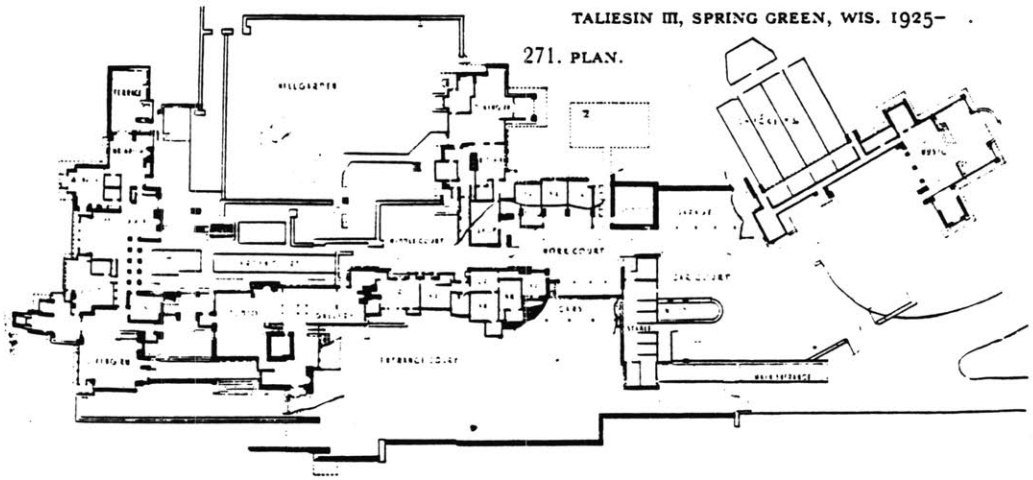
Figure 27

176. TALIESIN II, SPRING GREEN, WIS. 1914. THE GARDEN.

Originally Taliesin was quite small, but it was replaced on a larger scale after the 1914 fire. House and garden alike have grown continuously and are still growing.

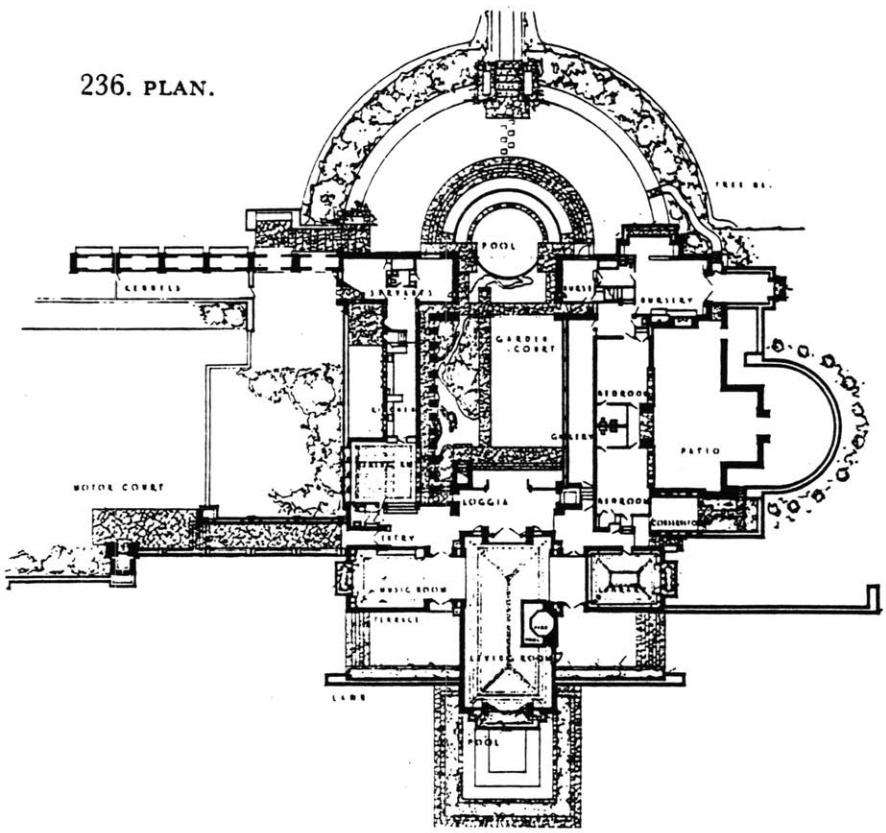
Garden at Taliesin. From Hitchcock, In the Nature of Materials.

Figure 28



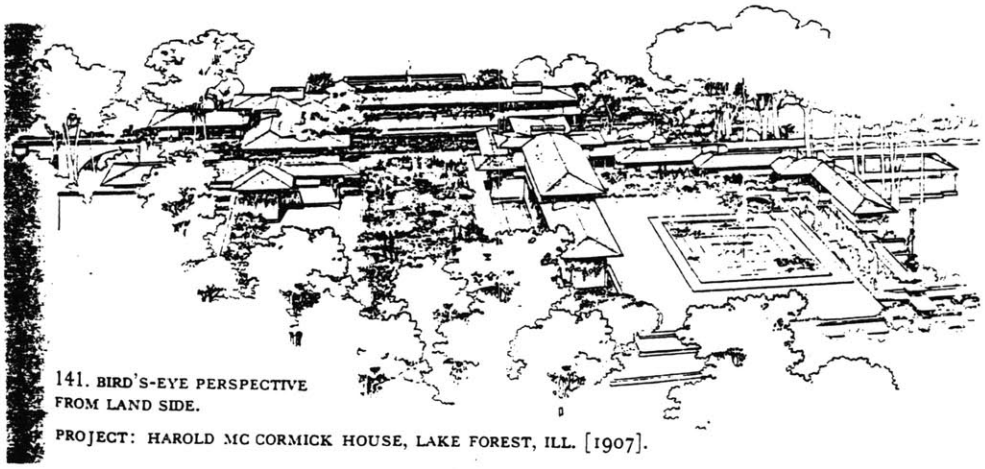
Plan of Taliesin. From Hitchcock, In the Nature of Materials.

Figure 29



Plan of Hollyhock House. From Hitchcock, In the Nature of Materials.

Figure 30

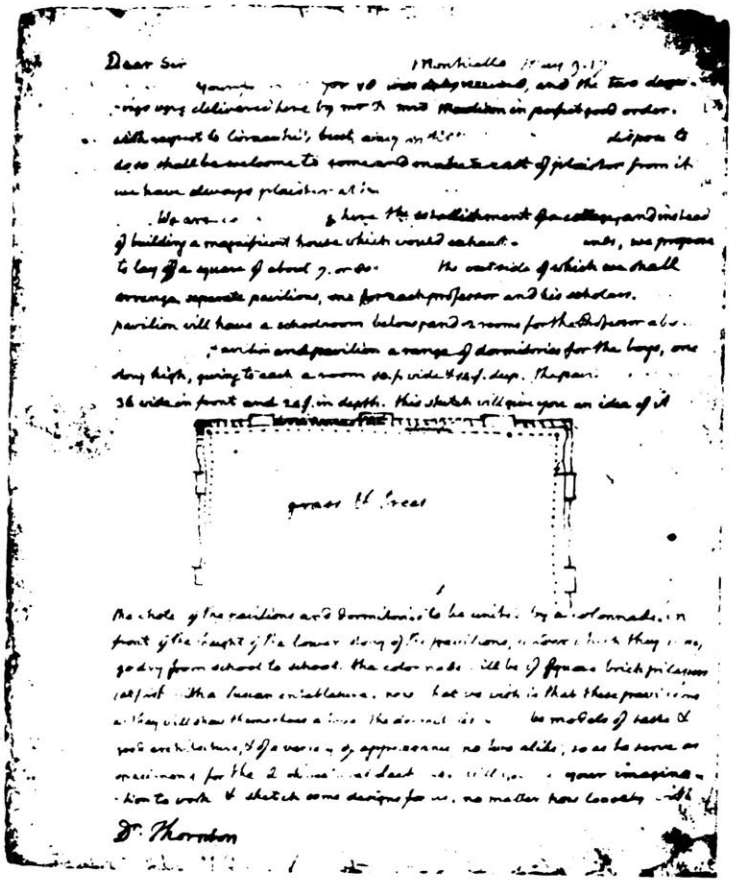


141. BIRD'S-EYE PERSPECTIVE FROM LAND SIDE.

PROJECT: HAROLD MC CORMICK HOUSE, LAKE FOREST, ILL. [1907].

McCormick House project. From Hitchcock, In the Nature of Materials.

Figure 31

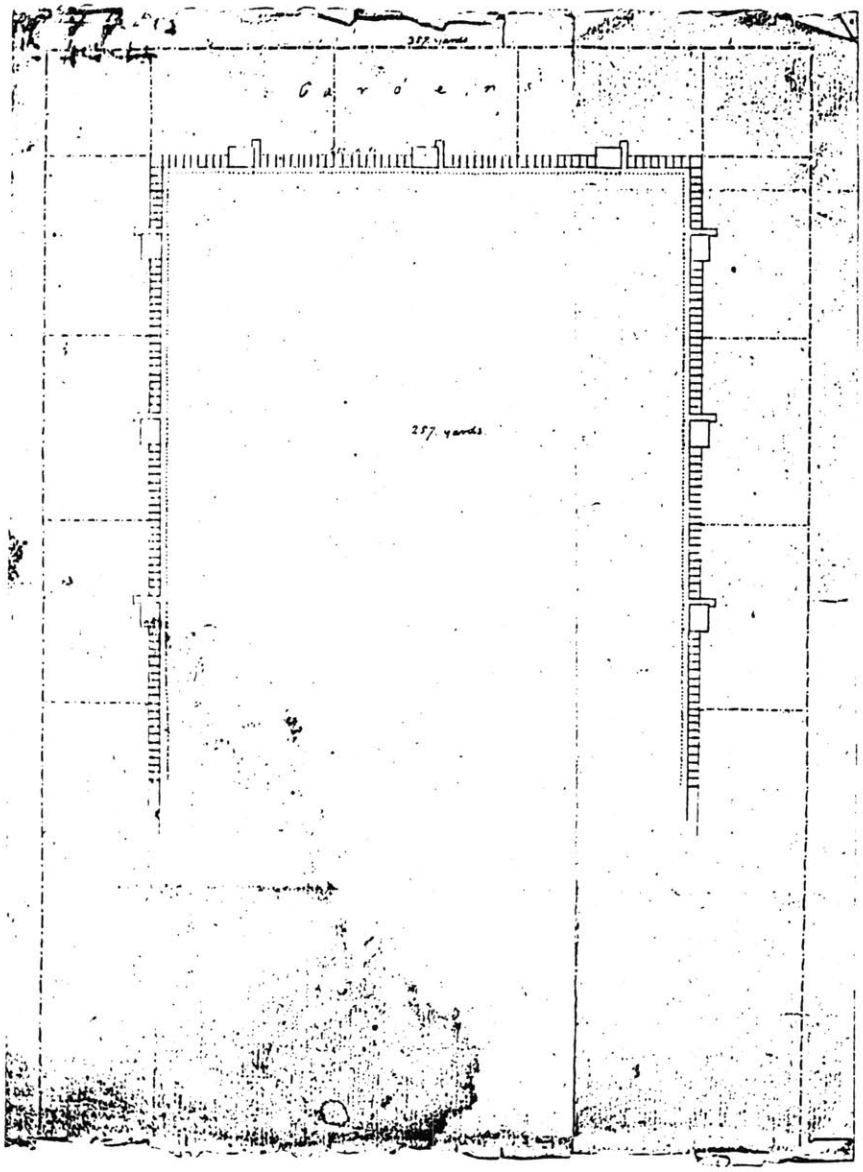


488 Early plan of the University of Virginia

THOMAS JEFFERSON 1743–1826
Ink on laid paper May 9, 1817
21.6 x 26 (8½ x 10¼)
Lent by the University of Virginia, Alderman Library, Charlottesville

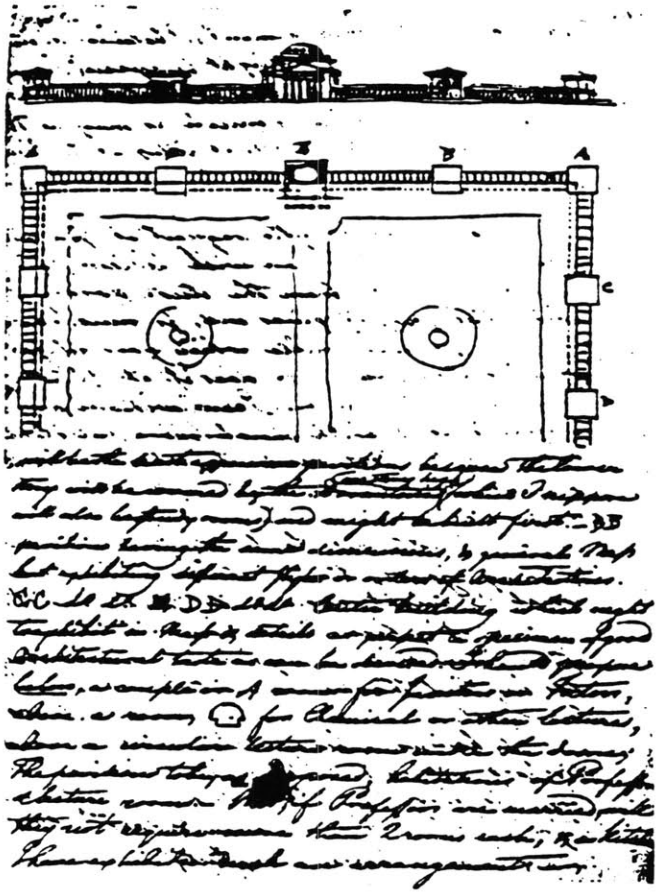
Early plan of the University of Virginia. From Adams, Eye of Thomas Jefferson.

Figure 32



Early plan of the University of Virginia. From Lambeth and Manning, Thomas Jefferson as an Architect.

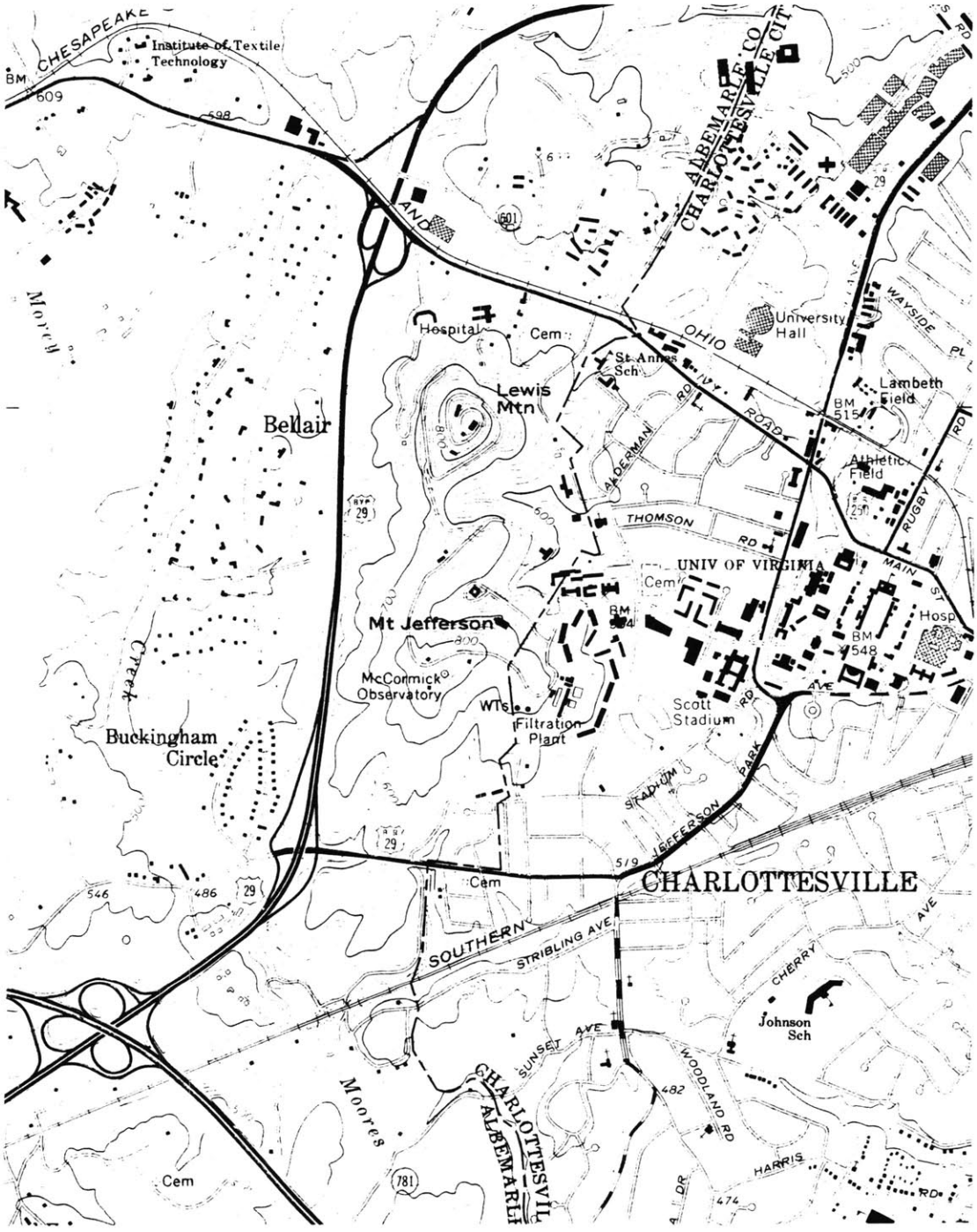
Figure 33



3 Latrobe's 1817 sketch proposal for the University of Virginia sent to Jefferson

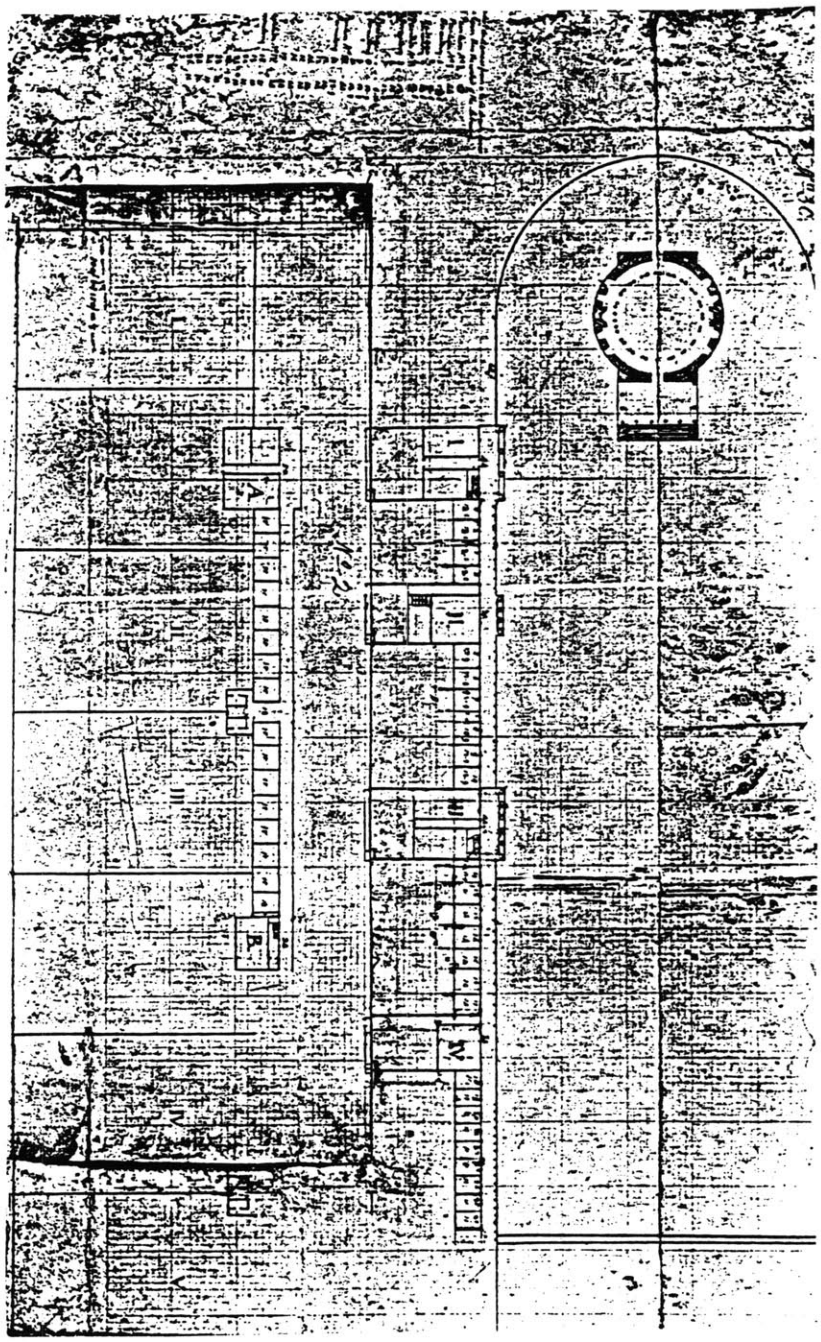
Latrobe's sketch of the University of Virginia. From Bell, "Knowledge and the Middle Landscape," JAE.

Figure 34



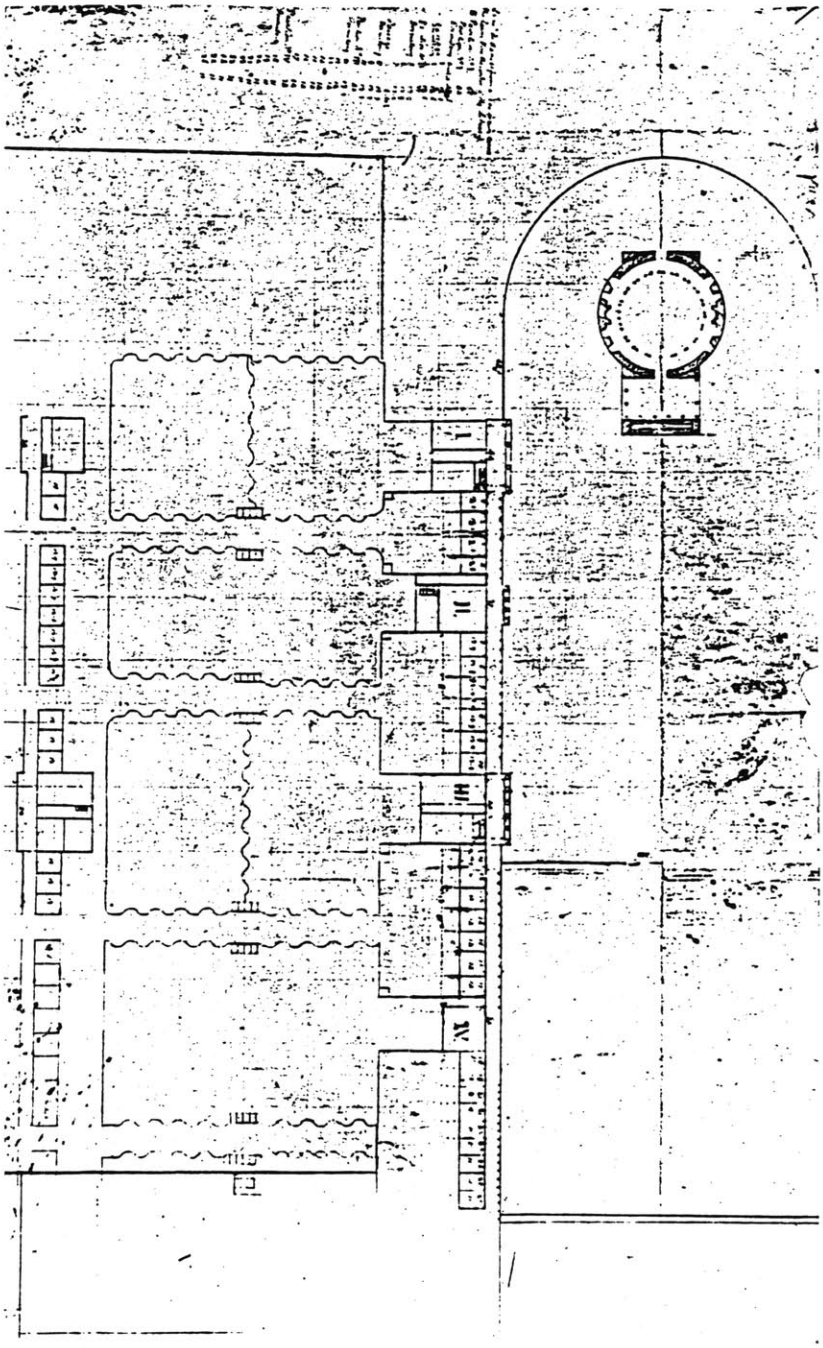
Map of University of Virginia and surrounding area. USGS Charlottesville West, 7½', 1973, photorevised 1978.

Figure 35



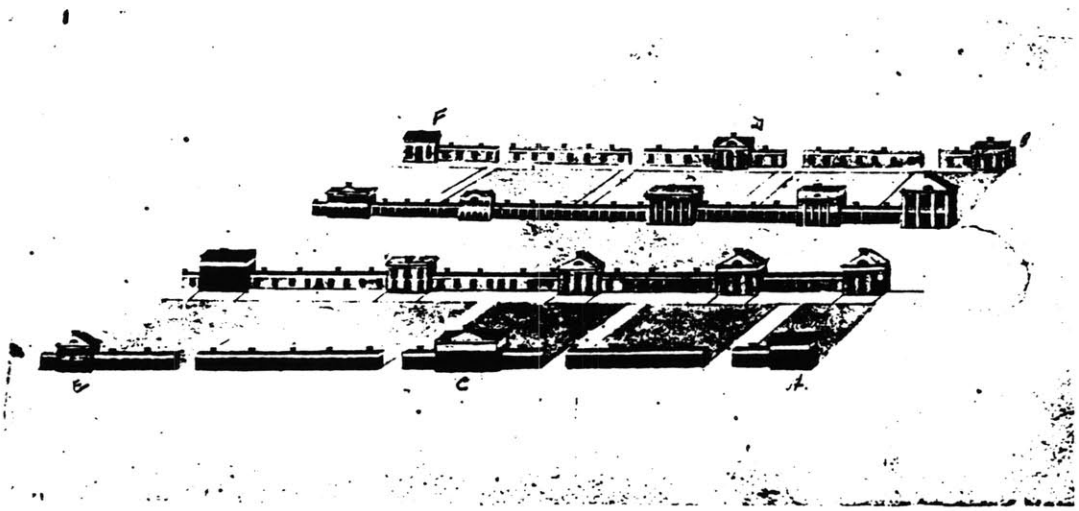
First plan of double ranges at the University of Virginia. From Lambeth and Manning, Thomas Jefferson as an Architect.

Figure 36



Second plan of double ranges at the University of Virginia. From Lambeth and Manning, Thomas Jefferson as an Architect.

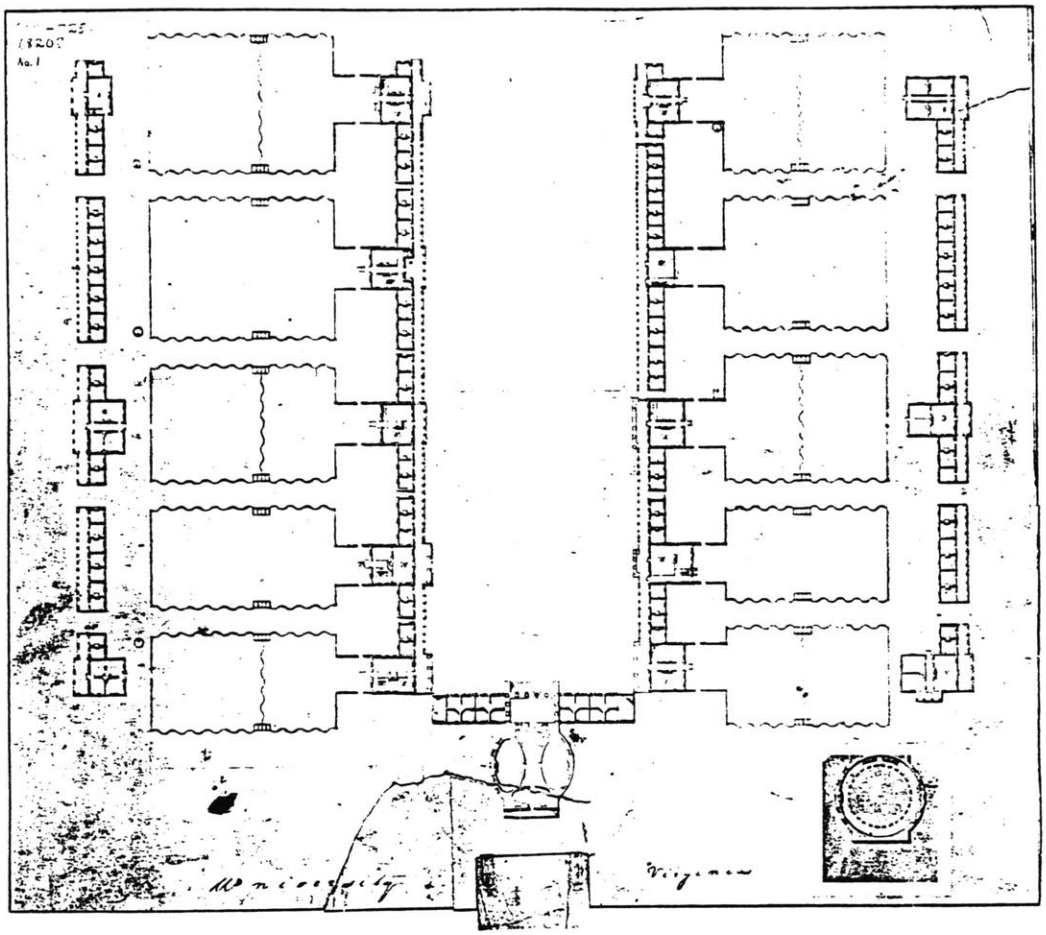
Figure 37



512 Bird's eye view of the University of Virginia
THOMAS JEFFERSON 1743–1826,
shaded by CORNELIA JEFFERSON
RANDOLPH (?) 1799–1871
Ink and wash on heavy, cold-pressed
paper c. 1820?
31.8 x 14.6 (12½ x 5¾)
Lent by the University of Virginia,
Alderman Library, Charlottesville

University of Virginia. From Adams, Eye of Thomas Jefferson.

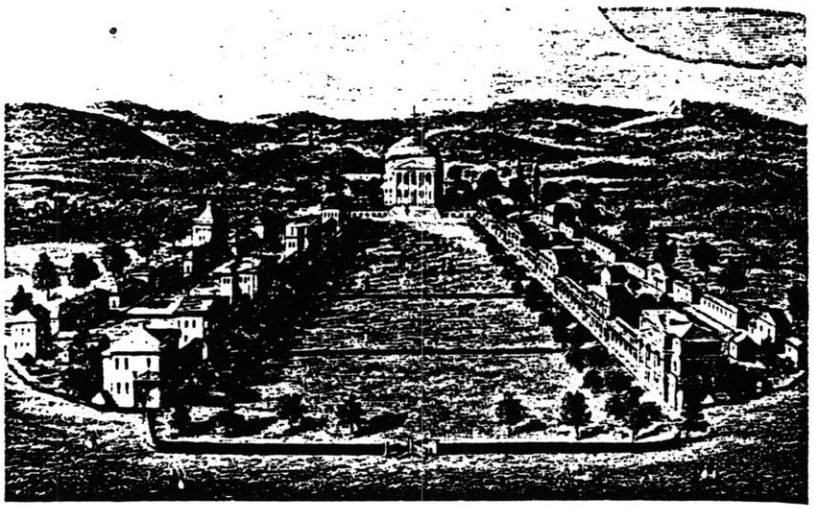
Figure 38



No. 26. University of Virginia: Study for 1822 Maverick Engraving, with Overlay of Library Room (see 382)

Plan of University of Virginia. From Nichols, Thomas Jefferson's Architectural Drawings.

Figure 39



Xb University of Virginia from the south, 1856
4 1/8″ × 7″. Steel engraving
Signed, lower right: Eng. by J. Serz
Labeled: University of Virginia
Publisher's inscription, lower left: Publ. by C. Bohn
Publisher's inscription, center: Entered according to Act of Congress, A.D. 1856 by C. Bohn in the Clerk's Office of the District Court of the United States, Dist. of Columbia.
Publisher's inscription, lower right: H. Weber, Printer
Coll.: University of Virginia

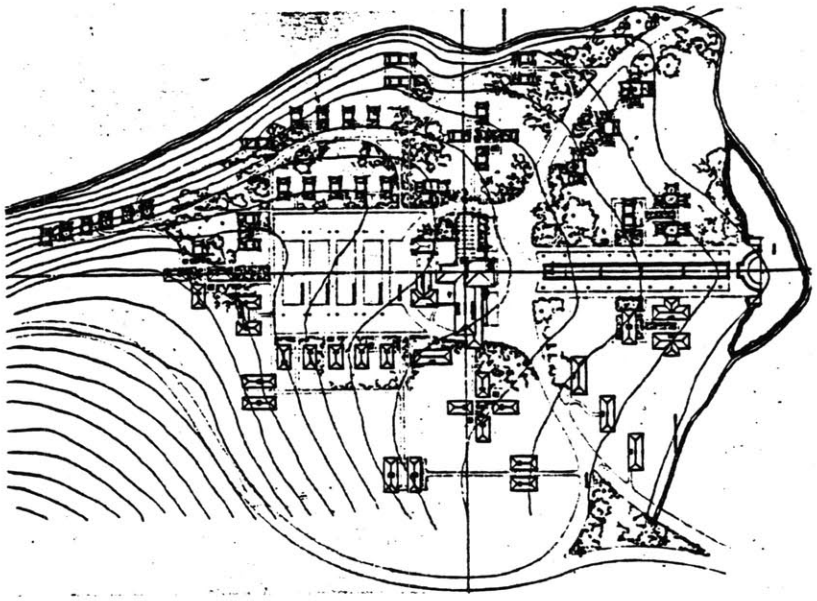
University of Virginia. From American Association of Architectural Bibliographers, An Intelligent Interest in Architecture.

Figure 40

Fig. 79. Bird's-eye view of Jefferson's "academical village," the University of Virginia (University of Virginia Graphic Communication Services, David M. Skinner, photographer)

University of Virginia. From Nichols and Griswold, Thomas Jefferson Landscape Architect.

Figure 41



Plan for the Como Orchards Summer Colony, Darby, Montana, prepared by Frank Lloyd Wright's studio in 1909 for a group at the University of Chicago.

Plan of Como Orchards Summer Colony. From Cuicci, The American City.

Figure 42

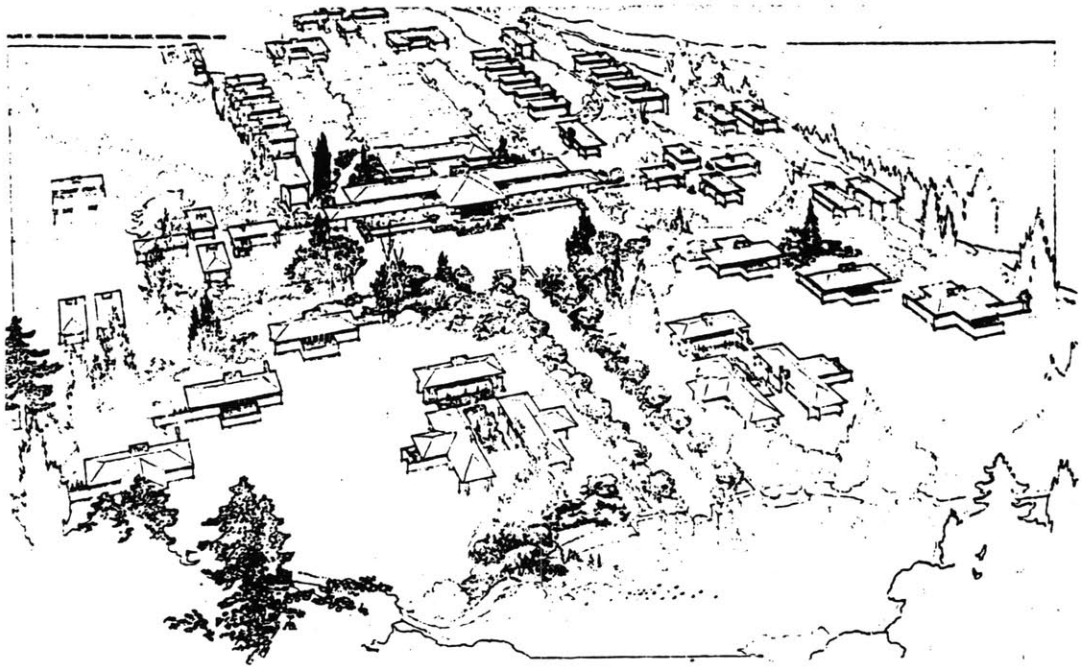
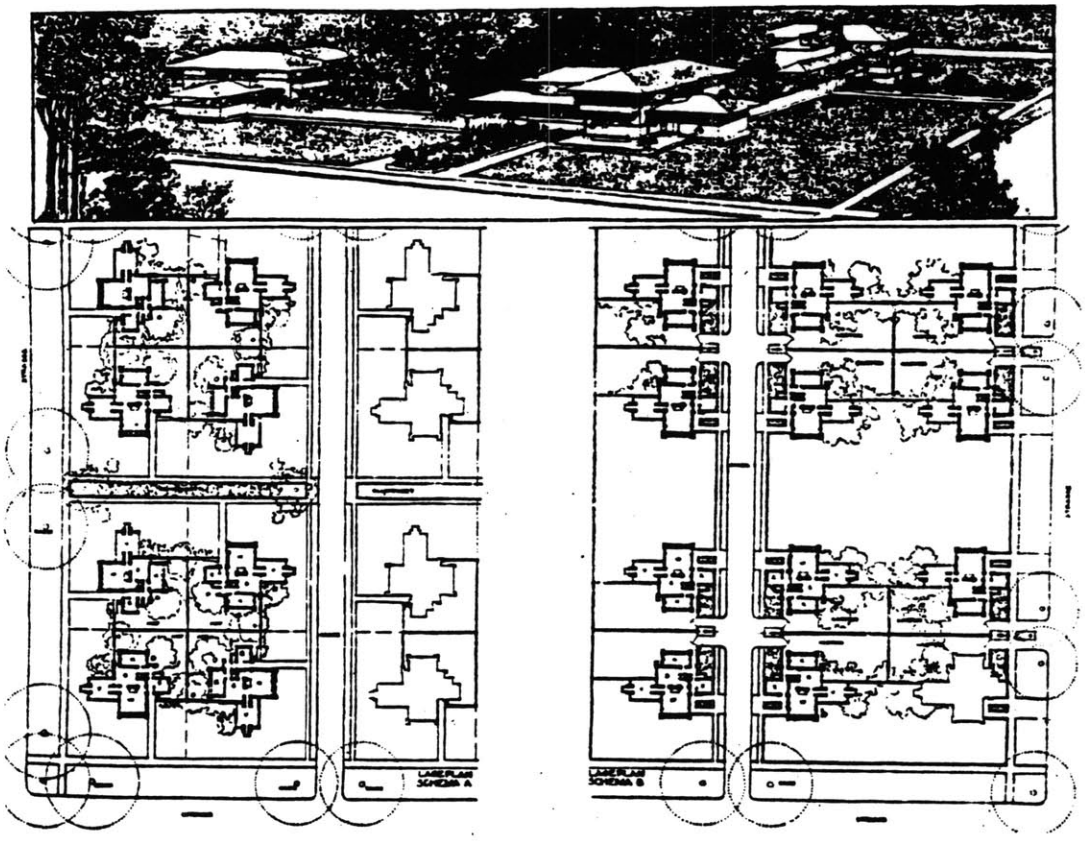


PLATE XVII. COMO ORCHARDS SUMMER COLONY PROJECT, 1909-1910.

Here Wright was asked to design a complete colony of summer residences for a specific site in the Bitter Root Mountains of Montana. The project was initiated by a group of professors from the University of Chicago who intended to develop the colony both as a vacation retreat for themselves and as an economic investment in rental property. As the architect pictured it in 1909, the community would have consisted of fifty-three separate cottages around a great lodge where all the families were to have their meals together. It was to have been a family of families—a purely residential colony in which all the family groups would have assembled at mealtime, just as do the members of a single family at home.

Como Orchards Summer Colony. From Smith, Frank Lloyd Wright.

Figure 43



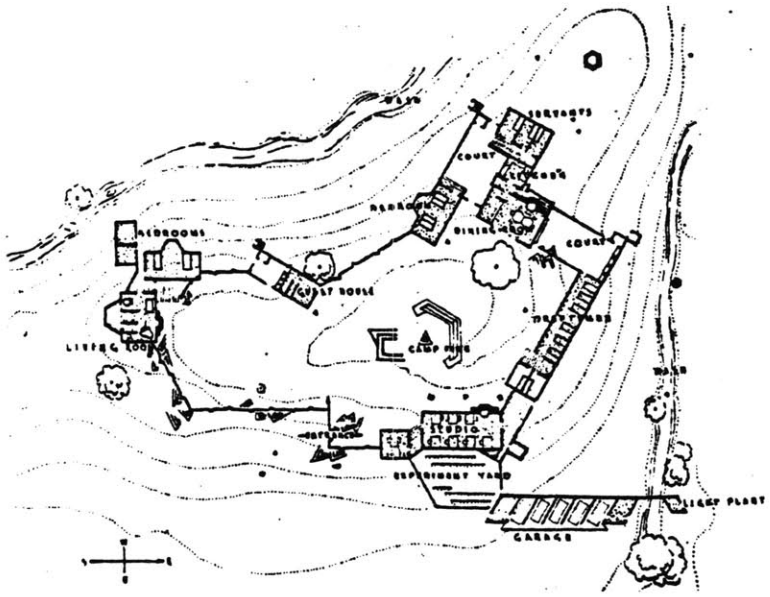
"A Home in a Prairie Town," proposal by Frank Lloyd Wright for the subdivision of a lot in four residential units, published in the *Ladies' Home Journal* in 1901, and re-proposed in his project for the 1913 competition.

Quadruple Block House. From Cuicci, The American City.

276. OCOTILLO DESERT CAMP, FRANK LLOYD WRIGHT WINTER HEADQUARTERS, SALT RANGE, NEAR CHANDLER, ARIZONA. 1927.

Ocotillo. From Hitchcock, In the Nature of Materials.

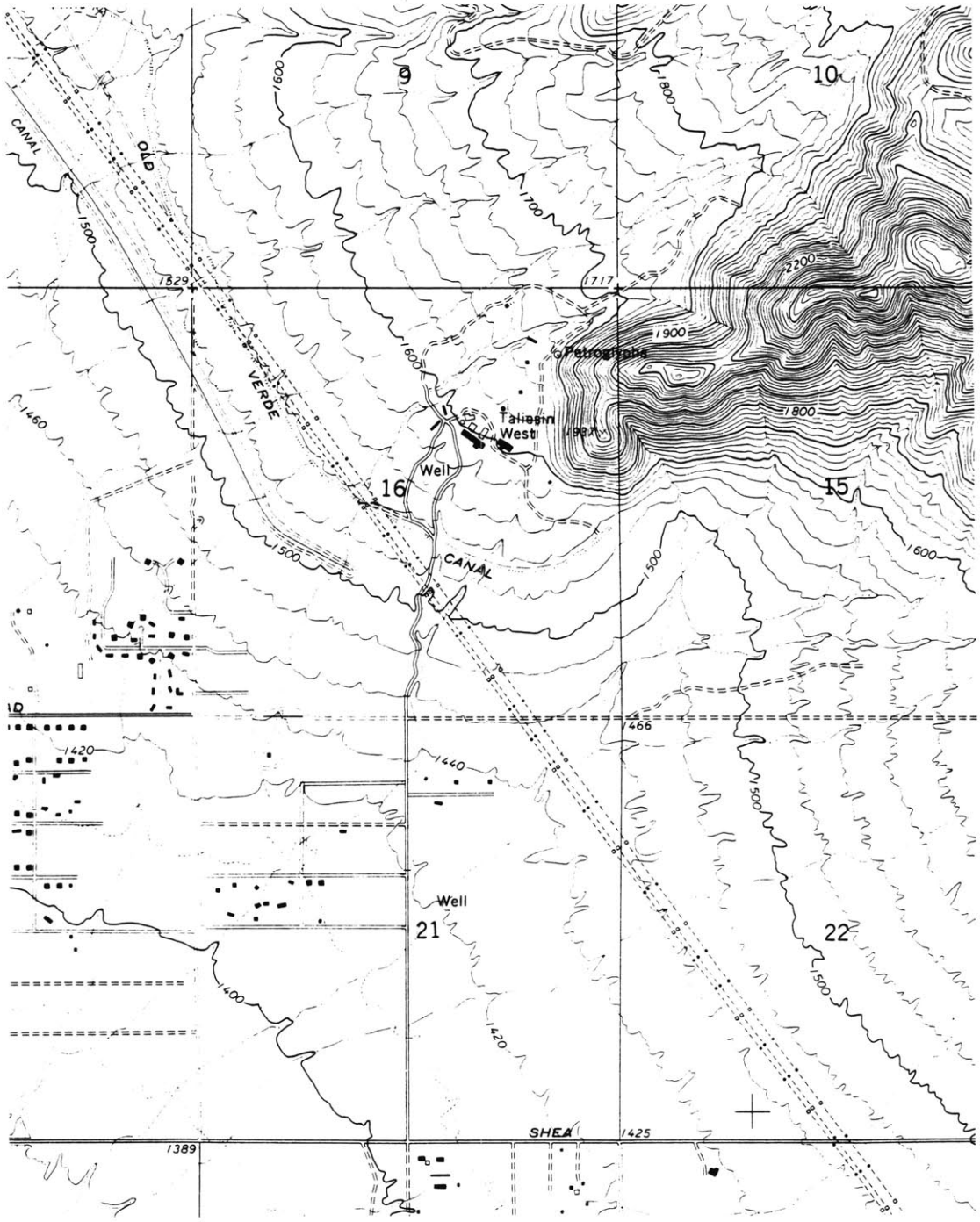
Figure 45



Plan of Ocotillo Camp at Salt Range, near Chandler, Arizona, built by Frank Lloyd Wright as a place to carry out the design of the residential complex of San Marcos in the Desert, commissioned by Alexander Chandler in 1927.

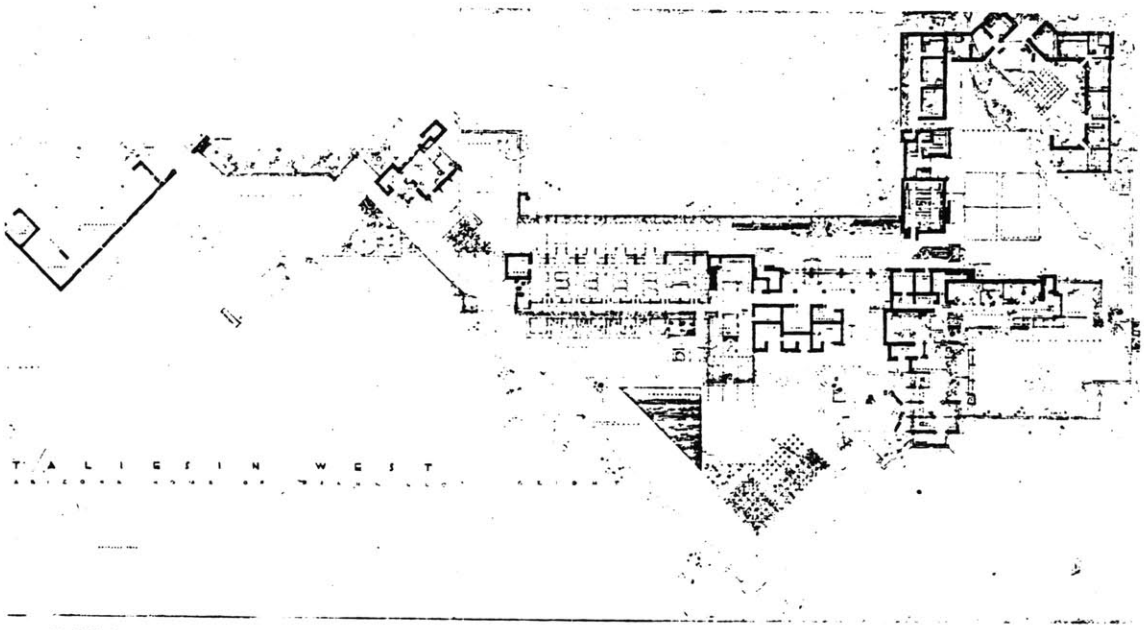
Plan of Ocotillo. Cuicci, The American City.

Figure 46



Map of Taliesin West and surrounding area. USGS Sawik Mountain, Arizona, 7½', 1964, photorevised 1982.

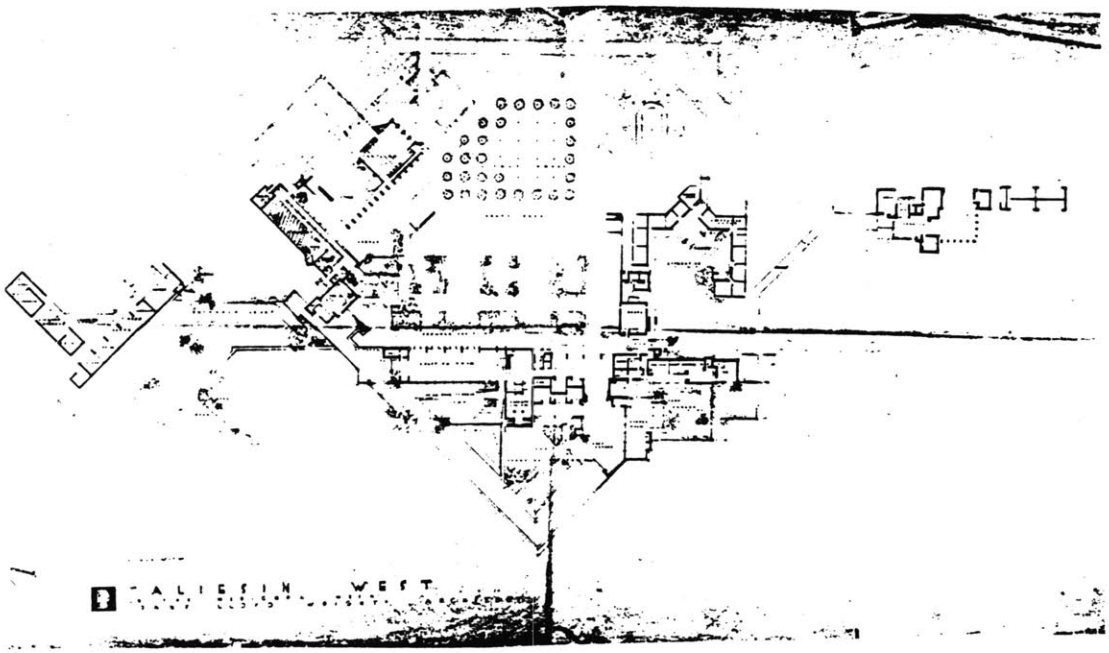
Figure 47



91. Taliesin West, Maricopa Mesa, near Phoenix, Arizona, 1938–1959. Plan.

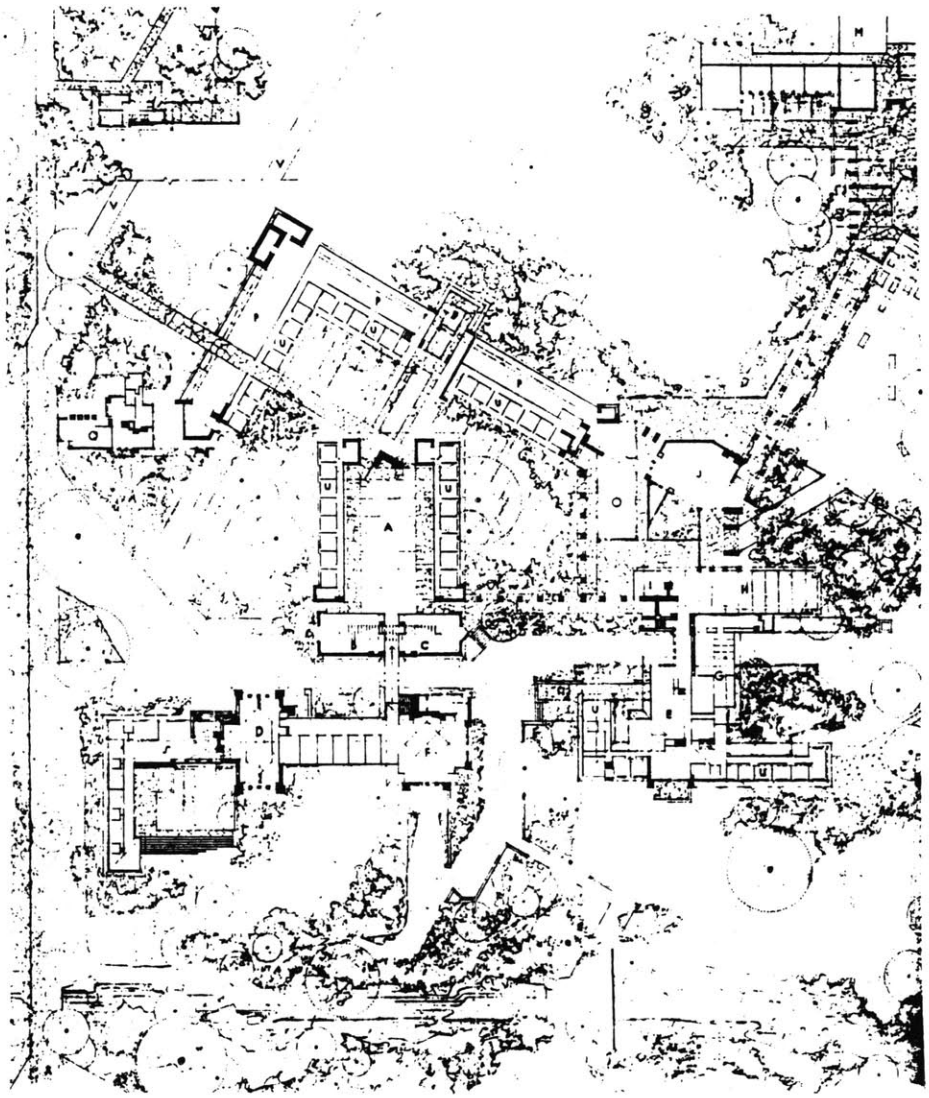
Plan of Taliesin West. From Scully, Frank Lloyd Wright.

Figure 48



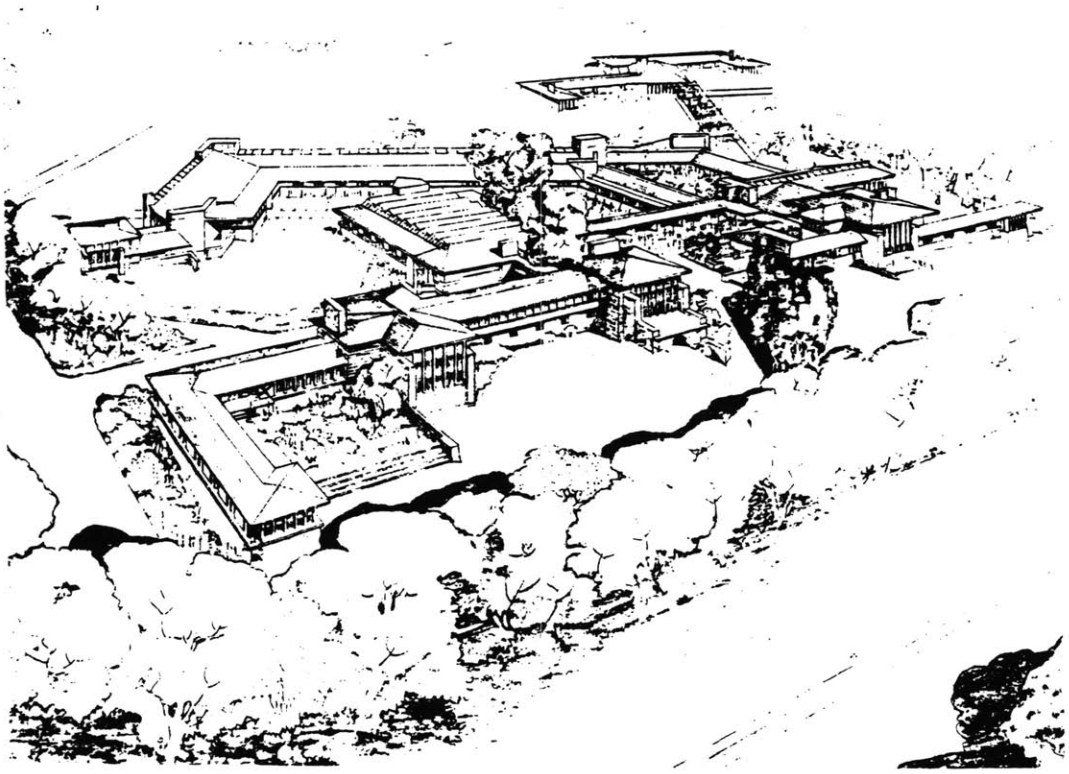
Plan of Taliesin West. From Meehan, The Master Architect.

Figure 49



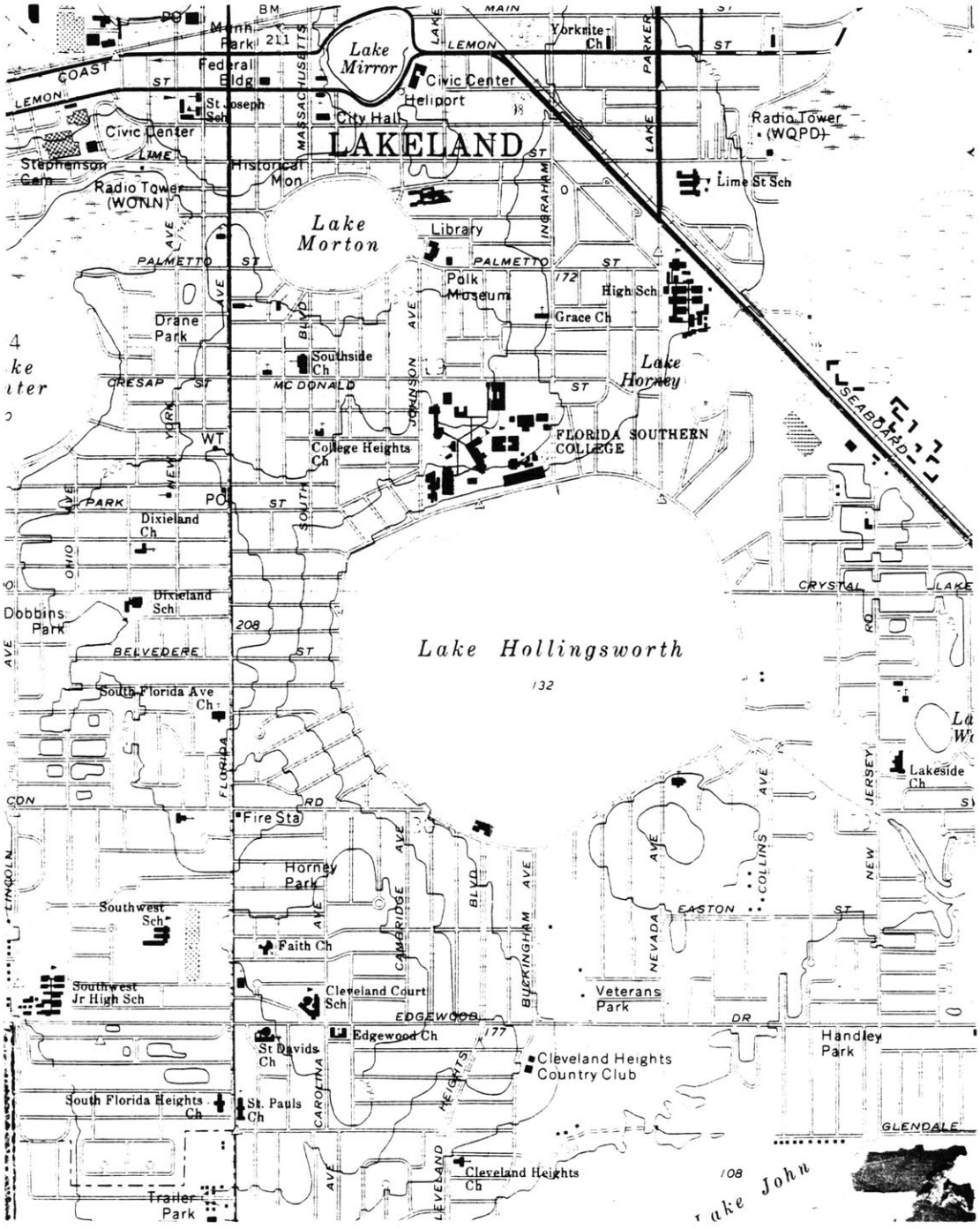
Plan of Hillside Home School. From Architectural Forum, January 1938.

Figure 50



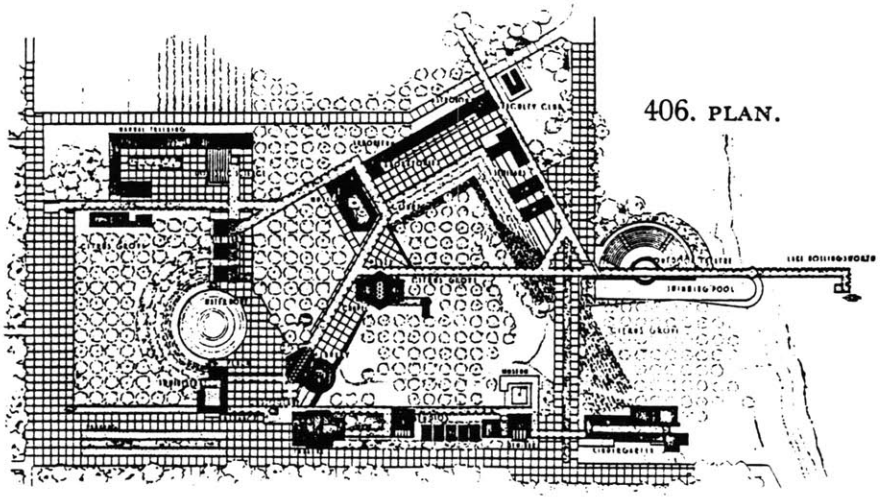
Hillside Home School. From Architectural Forum, January 1938.

Figure 51



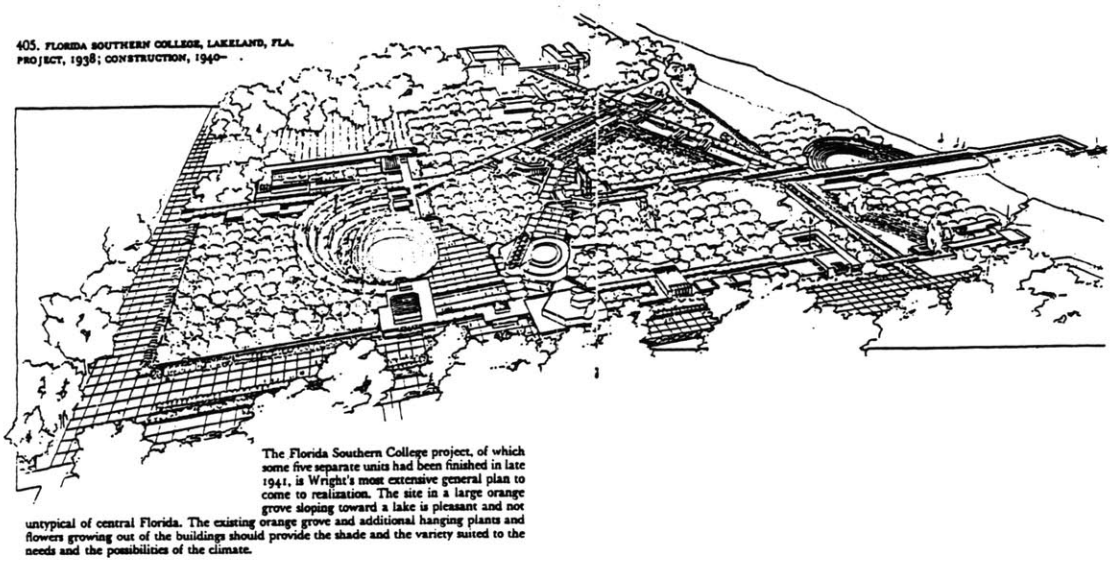
Map of Florida Southern College and surrounding area. USGS Lakeland, Florida, 7½', 1975.

Figure 52



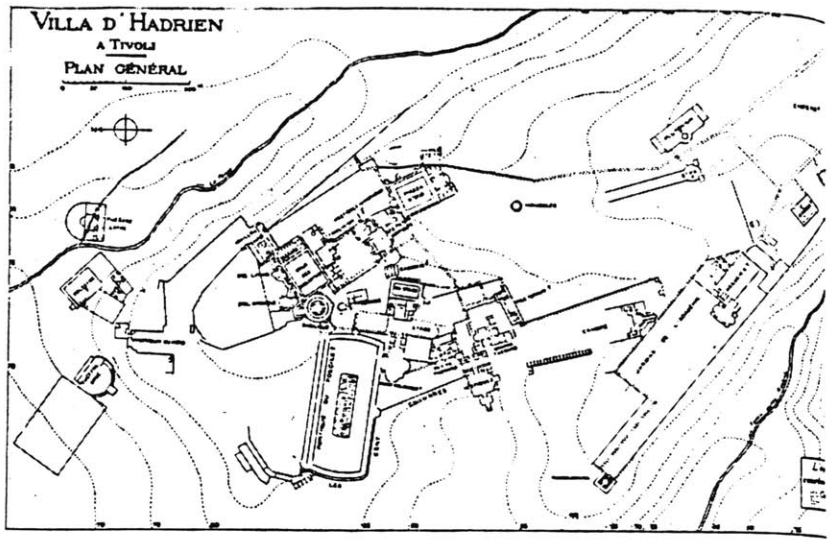
Plan of Florida Southern College. From Hitchcock, In the Nature of Materials.

Figure 53



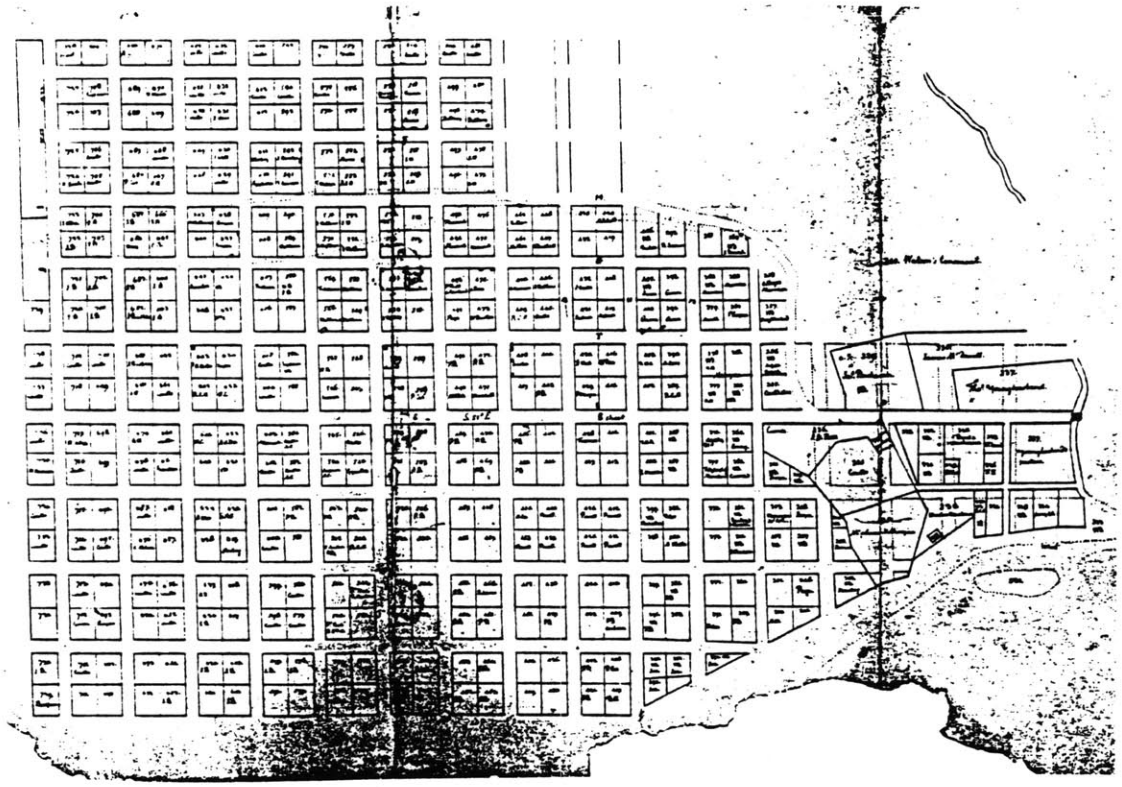
Florida Southern College. From Hitchcock, In the Nature of Materials.

Figure 54



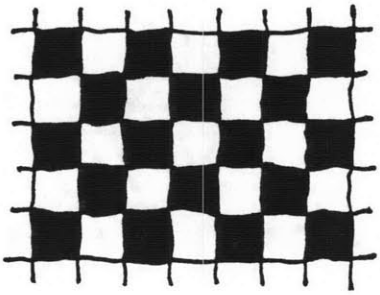
105. Villa of the Emperor Hadrian, Tivoli. Plan. (After Kähler)

Plan of Hadrian's Villa. From Scully, Frank Lloyd Wright.



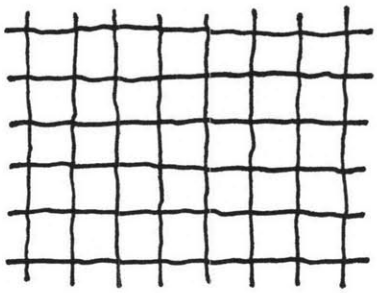
Plan of Richmond, Virginia. From Nichols, Thomas Jefferson's Architectural Drawings.

Figure 56



Thomas Jefferson's suggested grid plan.

Figure 57



Grid plan.

Figure 58

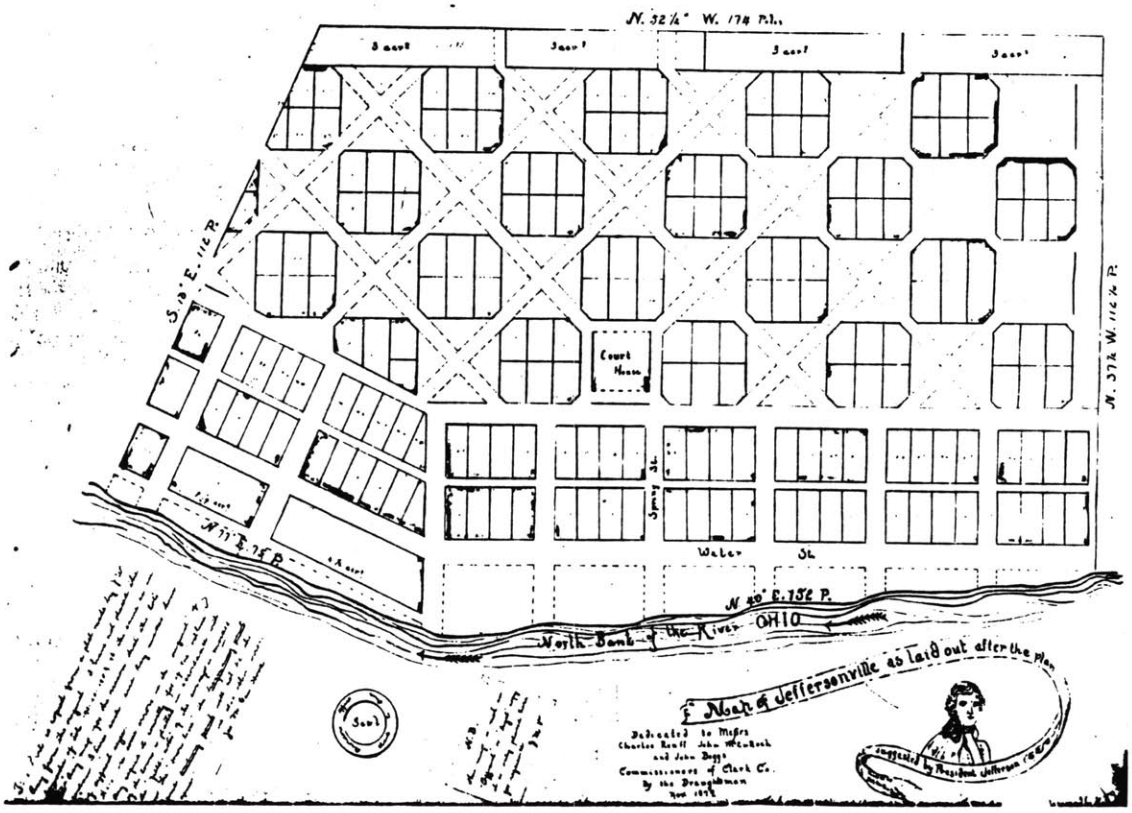


Figure 189. Plan of Jeffersonville, Indiana: 1802

Plan of Jeffersonville, Indiana. From Reps, Urban America.

Figure 59

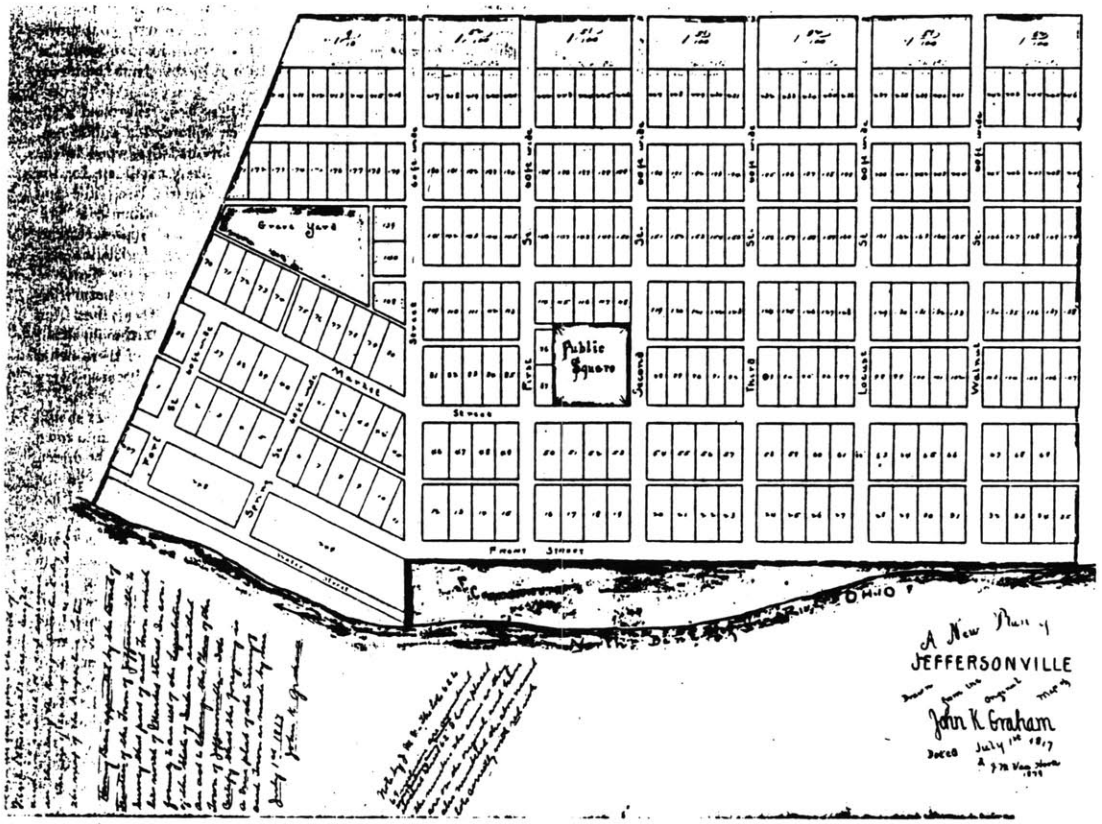


Figure 190. Plan of Jeffersonville, Indiana: 1817

Plan of Jeffersonville, Indiana. From Reps, Urban America.

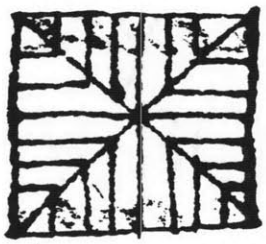
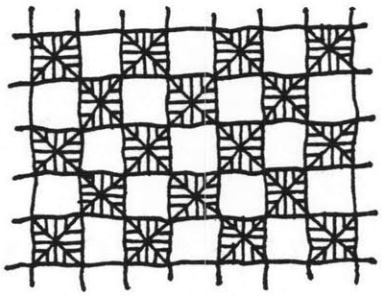


Figure 145. Thomas Jefferson's Suggested City Block Division: 1790

Thomas Jefferson's suggested city block division. From Reps, Urban America.

Figure 61



Thomas Jefferson's suggested checkerboard plan and block division.

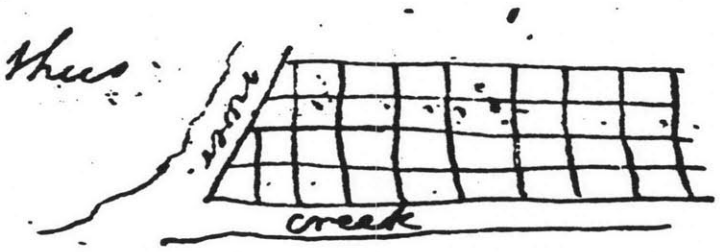


Figure 146. Thomas Jefferson's Plan for a Capital City on the Site of Carrollsburg, District of Columbia: 1790

Thomas Jefferson's plan for a capital city. From Reps, Urban America.

Figure 63

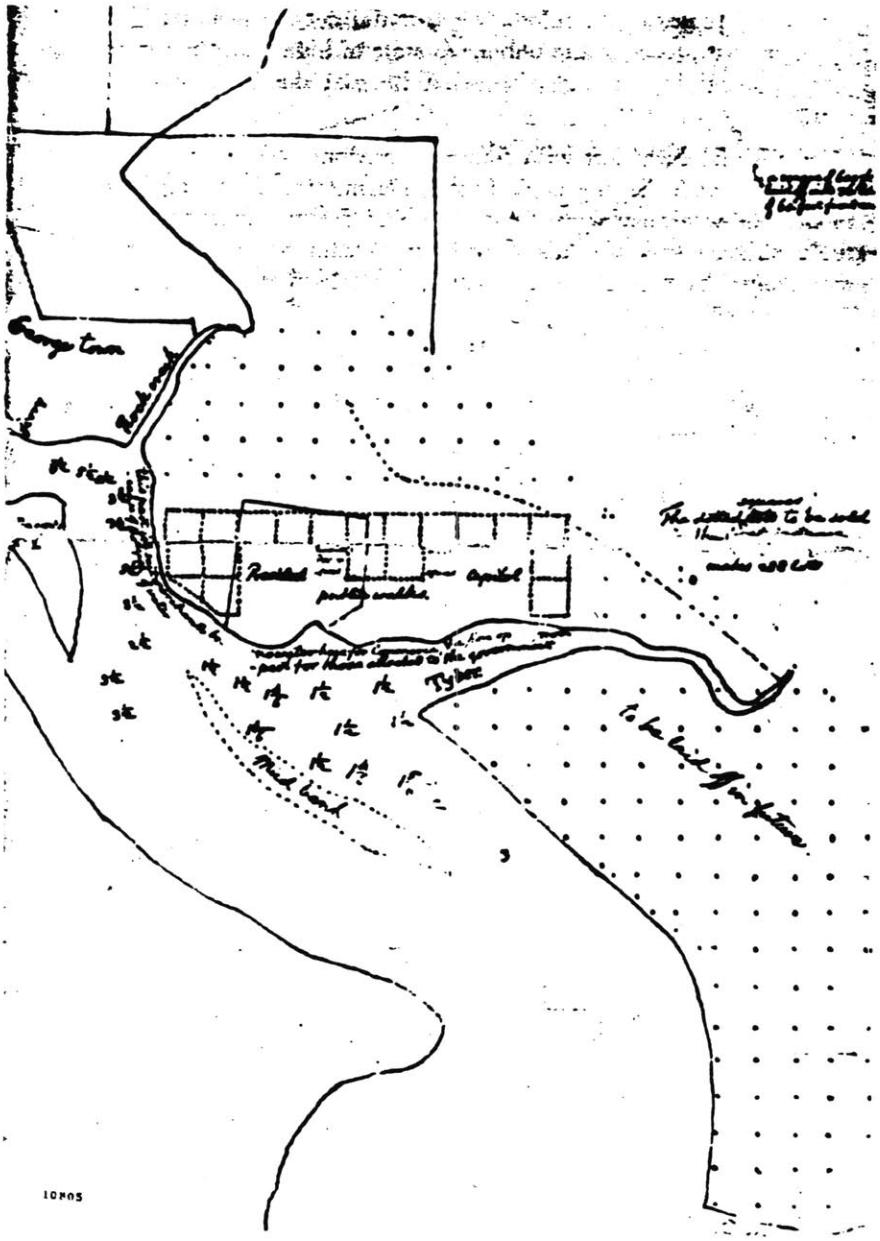


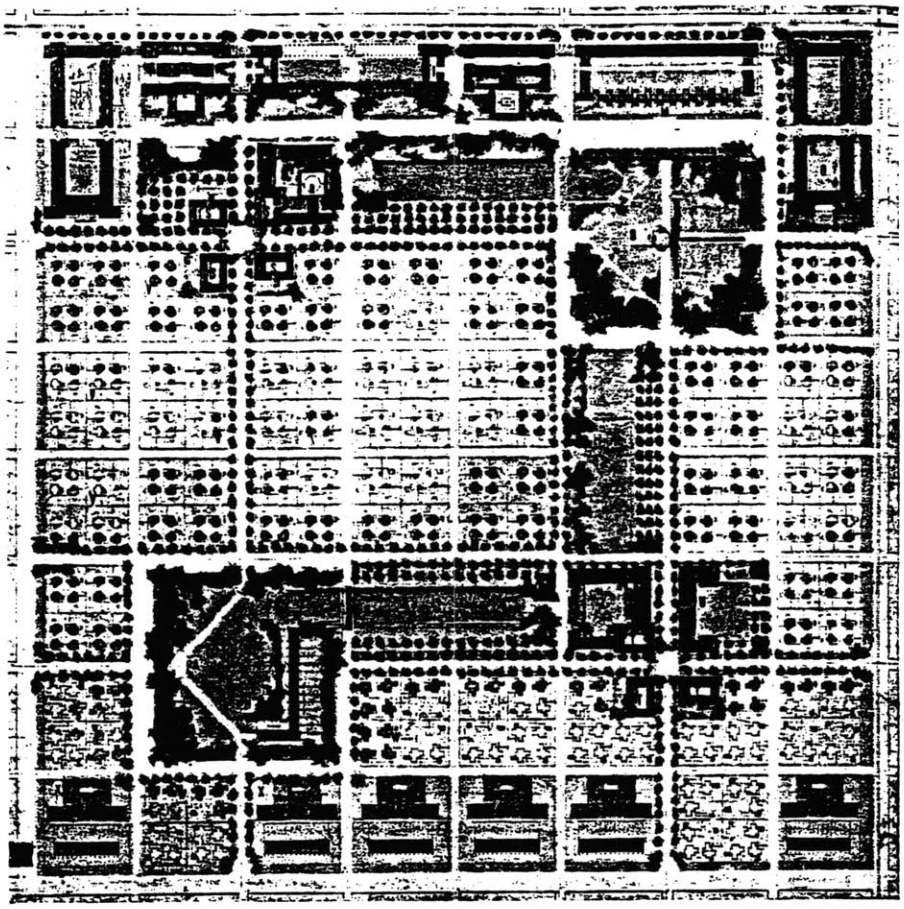
Figure 147. Thomas Jefferson's Plan for Washington, D.C.: 1791

Thomas Jefferson's plan for Washington, D. C. From Reps, Urban America.

Figure 64

Figure 149. The Ellicott Plan for Washington, D.C.: 1792

Ellicott plan for Washington, D. C. From Reps, Urban America.



PLAN BY FRANK LLOYD WRIGHT

KEY TO PLAN

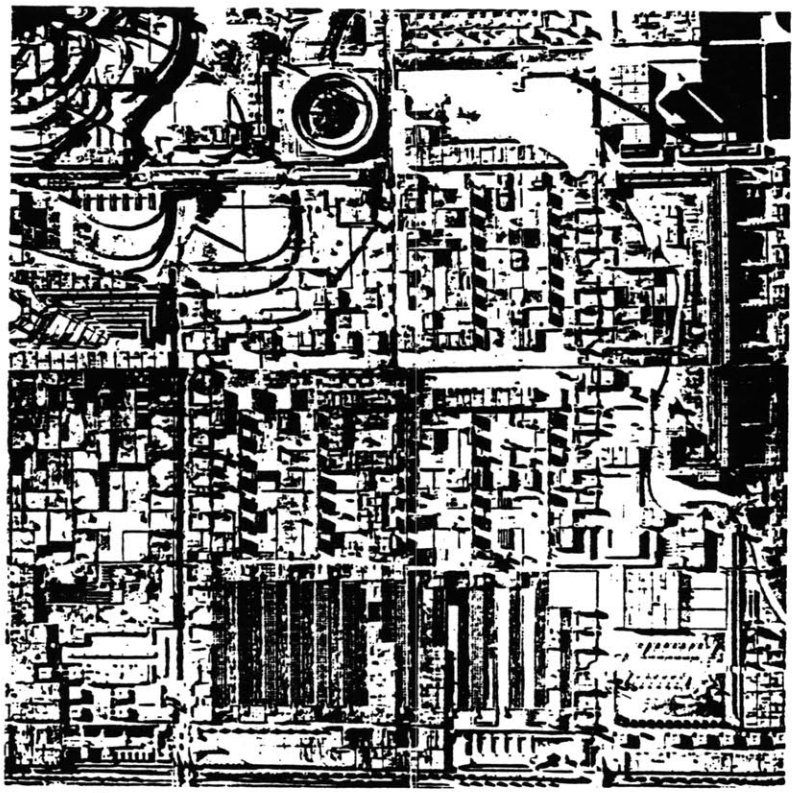
A. Park for children and adults. Zoölogical gardens.
B. Park for young people. Bandstand, refectory, etc. Athletic field.
C. Lagoon for aquatic sports.
D. Lagoon for skating and swimming.
E. Theater.
F. Heating, lighting, and garbage reduction plant. Fire department.
G. Stores, 3 and 4 room apartments over.
H. Gymnasium.
I. Natatorium.
J. Produce market.
K. Universal temple of worship, nonsectarian.
L. Apartment building.
M. Workmen's semi-detached dwellings.
N. Four and five room apartments.
O. Stores with arcade.
P. Post Office branch.
Q. Bank branch.
R. Branch library, art galleries, museum, and moving picture building.
S. Two and three room apartments for men.
T. Two and three room apartments for women.
U. Public school.
V. Seven and eight room houses, better class.
W. Two-flat buildings.
X. Two-family houses.
Y. Workmen's house groups.
Z. Domestic science group. Kindergarten.

STATISTICAL DATA

304 Seven and eight room houses.
120 Two-flat buildings, five and six rooms.
18 Four-flat buildings, four and five rooms.
6 Fourteen-family workmen's house groups.
12 Seven-room semi-detached workmen's houses.
6 Apartment buildings, accommodating 320 families in all.
4 Two and three room apartment buildings for women, accommodating 250 to 300.
Total, 1032 families and 1550 individuals (minimum).

Plan of Chicago subdivision. From Yeomans, City Residential Land Development.

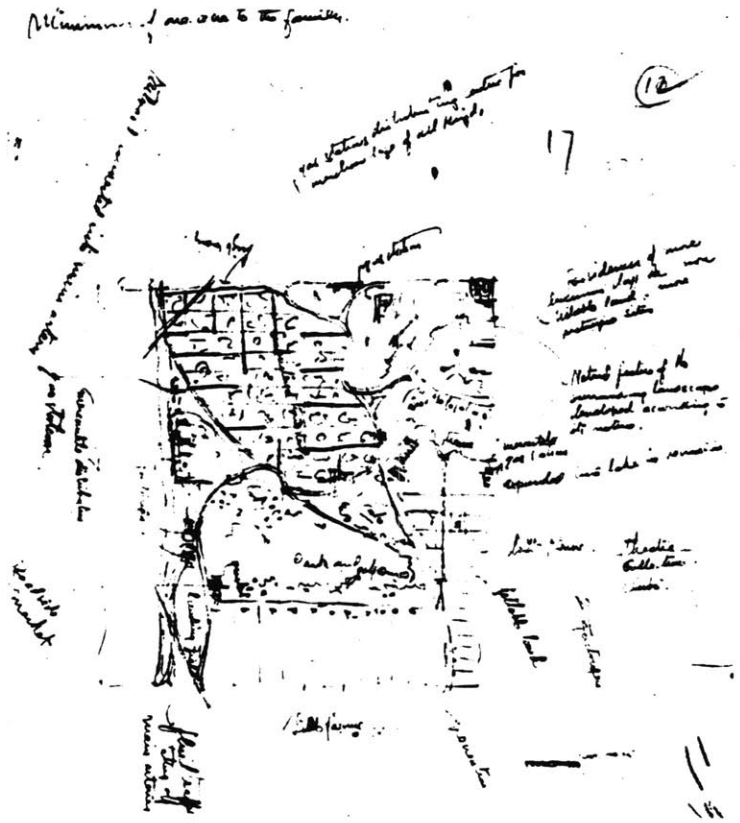
Figure 66



Model of Broadacres, exhibited in 1935 at Rockefeller Center, New York; the area represented is 4 square miles.

Broadacre City. From Cuicci, The American City.

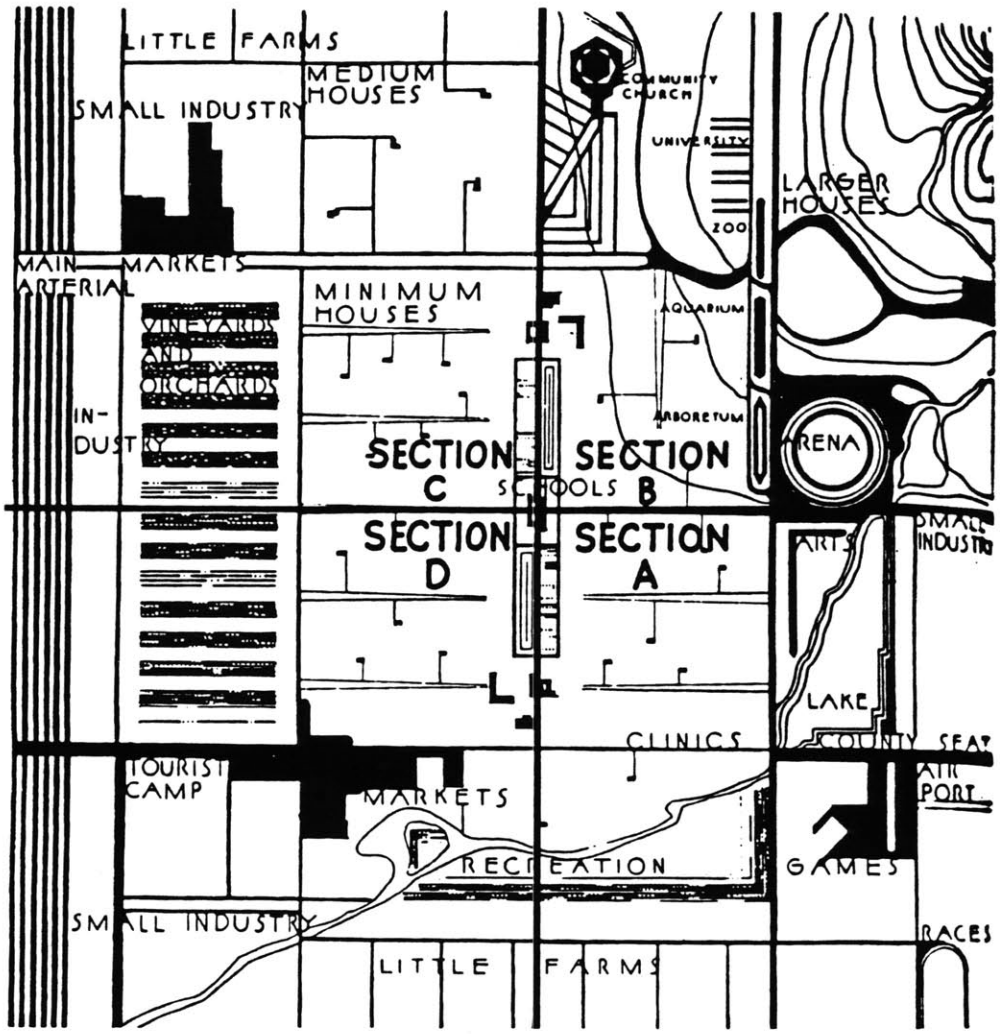
Figure 67



Frank Lloyd Wright's original design for Broadacres.

Early plan of Broadacre City. From Cuicci, The American City.

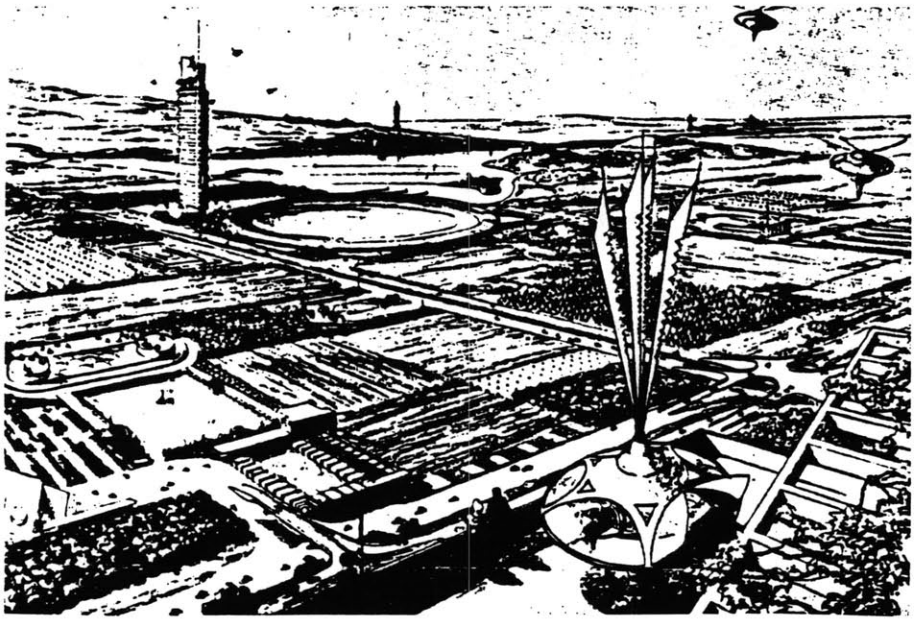
Figure 68



Plan of the center of Broadacre City. The grid pattern formed by the roads is typical of the American midwest. From *When Democracy Builds*, (1945).

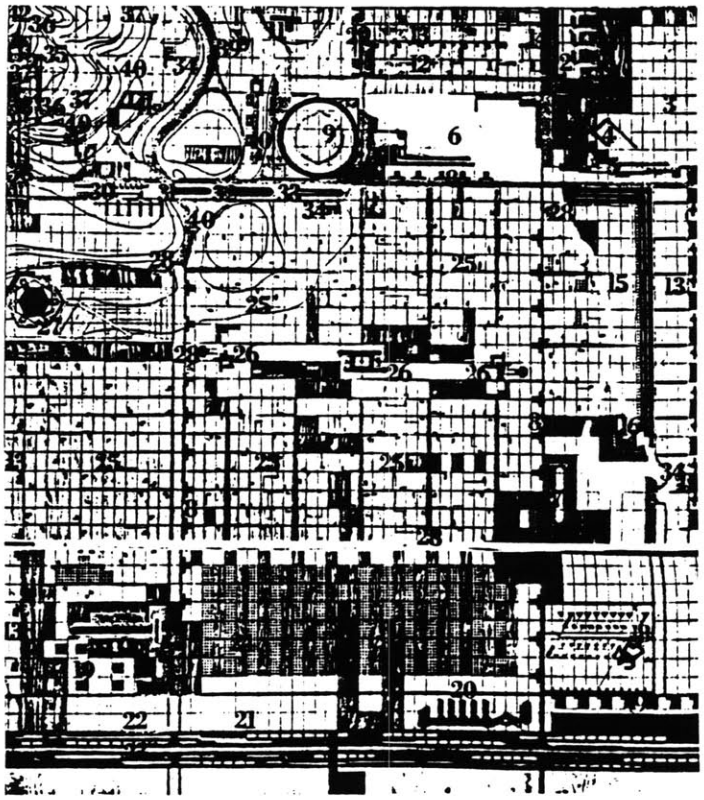
Plan of Broadacre City. From Fishman, Urban Utopias.

Figure 69



Broadacre City. From Cuicci, The American City.

Figure 70



Plan of Broadacres. (1) county seat—administration; (2) aerotor—post port and administration; (3) polo; (4) baseball; (5) clubs; (6) lake and stream; (7) crafts and county architect; (8) professionals; (9) stadium; (10), hotel; (11) sanitarium; (12) small industry; (13) small farm units; (14) small apartments; (15) interior park; (16) music garden; (17) merchandising; (18) automobile inn; (19) little factories and dwellings above; (20) factory assembly; (21) aerotor service; (22) aerotor factory; (23) main arterial; (24) vineyards and orchards; (25) homes; (26) schools; (27) temple, columbarium, and cemetery; (28) neighborhood guest houses; (30) scientific and agricultural research; (31) arboretum; (32) zoo; (33), aquarium; (34) luxurious dwelling (House on the Mesa); (35) Taliesin (equivalent); (36) luxurious homes; (37) water supply; (38) forest cabins; (39) country club; (40) apartment houses; (41) small school for small children; (42) automobile objective.

Plan of Broadacre City. From Cuicci, The American City.