A Thesis

Presented in Partial Fulfillment of the Requirements for
the Degree Master of Landscape Architecture in the
Graduate School of The Ohio State University

By

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The Ohio State University

1999

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ABSTRACT

Colonel Edward A. Deeds had an incredible impact on the history of Dayton, and the world through his entrepreneurial spirit and creativity. Among which, he was partly responsible for great advancements in the automobile, he led the United States into World War I airplane procurement, and led the charge to arrange for flood control in the Miami Valley. Deeds' biography also demonstrated that many historically significant events occurred on the Moraine Farm as well. One of the first private airstrips in the United States was built here, and the first guided missile was launched at Moraine Farm. The detailed history of the site also demonstrates that the Olmsted Brothers' Firm in Brookline, Massachusetts had direct impact on the design of the property. The house and grounds are a good example of the Country Place design style that was popular at the turn of the Century in the United States. As such an important historic figure in American History, his life should be remembered and celebrated. Making his home available to the public would be an excellent vehicle to reach this goal through interpretation of the historic significance of the site. The goal of this thesis was to document the history of the Deeds' Moraine Farm and determine the historic significance and integrity of the site according to the National Park Services' guidelines.

Deeds' biography was researched and a detailed history of the Moraine Farm was researched. The Secretary of Interior's Criteria for significance were then applied to the historical research to determine the significance of the site. The Moraine Farm demonstrated significance in three of the four criteria for significance. Periods of significance were chosen for each criteria of significance, which were appropriate for the Deeds Moraine Farm. The characteristics of the landscape for each of these periods were compared to the current conditions found on the farm. The analysis indicated that the integrity of many of the character-defining features was greatly diminished. The discussion then turned to the options of restoring many of the features that had been lost since 1955. It is imperative to have detailed documentation of every
landscape feature in order to implement any restoration or reconstruction. As many of the plans and construction documentation for most of the designed features on the farm are missing, it was decided that restoration or reconstruction was not a viable option for the Deeds Moraine Farm. It was decided that a preservation plan was the appropriate approach to retain the remaining character-defining features of the farm. A rehabilitation plan was also suggested for accommodating any new program elements to be introduced to the site. The rehabilitation would include an extra parking lot, visitor facilities, and signage for the property to interpret the historic significance of the site for the public.
To Sharon Sams,

My Mother and Greatest Fan
ACKNOWLEDGMENT

I would like to thank my committee for their time, effort, and encouragement during this process. Jot Carpenter offered his enthusiasm and support for the project. John Simpson provided an understanding of the ideal of what a thesis should be, and Paul Young brought a refreshing, non-Landscape Architecture perspective to the meetings. Thank you all for your support during this process.

Noel Dorsey Vernon has been a wonderful mentor in the study of the preservation of historic landscapes. The strength of this thesis has its foundation in her guidance. The time, effort, lengthy phone conversations and e-mails she selflessly devoted to this project is greatly appreciated. I would also like to thank Patricia O’Donnell for her direct, candid comments on the demands and desires of the private sector while defining the scope of this thesis.

I owe a debt of gratitude to the many people who assisted me in the data collection for this thesis. First, I appreciate the efficiency and professionalism of Catherine Lipper and the staff of the Frederick Law Olmsted National Historic Site. Their efforts made my trip to Boston, Massachusetts very productive. I would also like to thank Ed Keck and the staff at the Deeds Moraine Farm for their hospitality during a tour of Colonel Deeds’ magnificent home. Bill Love of Woolpert in Dayton, Ohio was particularly generous with his time, and resources. He provided many leads and generously donated a current aerial view of the site. Kerry Adams, of the Patterson Homestead, shared much of his research of the site and his memories of living in the house on Tait Road. Finally, much thanks to my friend Heather Harter, who selflessly took the time to visit the Library of Congress to copy over 100 pages of correspondence, cutting weeks of red tape.

I would like to thank all of my friends for their support during this process. Heartfelt thanks to Greg Zurlage and Susan Pestich of American Health Packaging. Without their flexibility and
belief in my abilities, I would not have been able to remain in graduate school, much less finish this thesis. I truly appreciate all they have done for me. Thanks to Lisa Oates-Campbell, who first directed me to search for a topic in Dayton, Ohio. She opened my eyes to the wonderful landscapes Dayton has to offer. Lisa was also a constant source of research leads, and took time to help me perform the current-conditions survey to identify the plant materials. I would like to thank Michael White who donated his expertise as an English Professor to proofread and verify the format of all the citations in this document. Finally, I wish to thank my friend Cara McLane for her weekly phone calls, near-daily e-mails of encouragement, proofreading notes, and advise during this process.

I finally would like to express my gratitude to my family. Without their support and generosity, I would not be here today. I would particularly like to thank my sister, Karen Frederick, for coming to the rescue, and offering me, and my neurotic pets, a place to stay during the past six months.
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Major Field of Study: Landscape Architecture
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INTRODUCTION

As people walk through a historic neighborhood with old houses and large trees, they might wonder "What is it about this place that makes it so special?" There is a certain aura about preserved historic landscapes that gives the observer a connection to the past. This aura can be described as a character-defining feature, which helps to provide understanding of the landscape's purpose. The National Park Service has provided a holistic framework to assist preservation professionals in maintaining these character-defining features in the face of increasing development pressure. The framework provided by the National Park Service offers guidelines for preparing Cultural Landscape Reports to identify and preserve these features. The goal of this thesis was to prepare a Cultural Landscape Report for an historic landscape in Ohio.

The Moraine Farm was the private residence of Colonel Edward Andrew Deeds, best known as the President and Chairman of the Board of the National Cash Register Company of Dayton, Ohio. Deeds also worked closely with Charles Kettering in establishing Delco, a company that revolutionized the automobile industry. The property is located in the Dayton suburb of Kettering, and its current size is approximately 15 acres. Moraine Farm is owned by the National Cash Register Company, and is used as a guest home for prospective customers attending equipment seminars.

Colonel Deeds acquired the property in 1912 to develop as his private home and a working dairy and farm. The Dayton Olmsted Historic Landscapes Survey, conducted in 1986, uncovered information that the Olmsted Brothers' Firm of Brookline, Massachusetts a very influential
firm in the history of landscape architecture, was retained to develop the property (Vernon 1988, 88).

Project Scope

The scope of this thesis project was to perform the steps necessary to create a Cultural Landscape Report (CLR) for the Deeds’ Moraine Farm. The project followed the guidelines established by the National Park Service in their Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes, (Brief 36) which has been accepted as the standard in the landscape preservation profession. Brief 36 defined a cultural landscape report as “The primary report that documents the history, significance and the history and integrity of the landscape including any changes to its geographical context, features, materials and use” (Birnbaum 1994, 3).

The project’s intent was to apply the landscape preservation methods established by National Park Service to this specific site. The premise of the research was that Colonel Deeds’ importance to Dayton’s history, with the possibility of an Olmsted Brothers connection, made the site significant enough to warrant thorough documentation and analysis.

According to Brief 36, a Cultural Landscape Report contains the following components:

1. Historical Research
2. Period Plans
3. Inventory and Documentation of Existing Conditions
4. Existing Conditions Plans
5. Site Analysis Evaluating Integrity and Significance
6. Historic Preservation Approach and Treatment Plan
7. Preservation Maintenance Plan and Implementation Strategy (Birnbaum 1994, 3-16)

The scope of this thesis project encompassed components 1-6, which are detailed under the methodology section.
Assumptions of Research

The primary assumption was that the research performed in this thesis was strictly an academic exercise. The Cultural Landscape Report was not prepared for a specific client who would have prepared a program for future use, or at least have specific goals or expectations. The proposed program for this thesis was fictitious; thus, the treatment plan should neither be considered a professional document, nor be used as the basis of a preservation maintenance plan and implementation strategy.

The second assumption for this thesis was that the National Park Service’s guidelines for evaluating, documenting, and treatment of historic landscapes were appropriate to use as a basis for preparation of this report.

Delimitations of Research

The research of this thesis was limited to encompass only the historic property boundaries of the Moraine Farm. This thesis did not include a complete Colonel Deeds biography, only enough to provide the historic context of his life to document the significance of the property. It was not the intention of this thesis to critique the design of the landscape features, only to document the integrity of the original design intent.

Justification and Literature Review

The justification for this research was broken into three categories: the historic significance of the person, the land, and the designers. Colonel Deeds, the owner of the property, is a very important historical figure. As his biography in Chapter Two of this thesis indicates, Deeds’ influence has been seen, not only in Central Ohio, but also across the country and the world. Colonel Deeds was instrumental in the inventions of the electro-magnetic engine and the self-starter, which revolutionized the automobile industry. He was responsible for getting important legislation passed to provide flood protection to the Miami Valley, and was a brilliant businessman, who provided the necessary leadership to turn failing businesses into thriving, successful enterprises. As documented in Chapter Two’s Moraine Farm site history, many of Colonel Deeds’ business and industrial activities were conducted on the Moraine Farm, which gives the property considerable historic significance. The Moraine Farm was the site where the
first guided missile was launched, and the location where the V-8 engine was developed. Colonel Deeds had the reputation for being an innovator in many areas of developing technology, and his home was known for being one of the first to incorporate many new inventions and technologies. The Moraine Farm had one of the first private airstrips in the United States, and Colonel Deeds had a private observatory installed in the house. Early investigation into the actual design of the property indicated a significant involvement of the Olmsted Brothers firm of Brookline, Massachusetts. As this firm had an incredible impact on the profession of Landscape Architecture, documentation of their work on this site justified further research.

As the field of historic landscape preservation is a relatively new profession, the body of literature has only begun to blossom within the last twenty years. H. Ward Jandl states in the foreword of the *National Park Service Reading List: Preserving Historic Landscapes*, “While the preservation of historic buildings has a long and distinguished history, the field of landscape preservation is still evolving. In recent years, we have seen a shift from documentation to interest in preservation maintenance” (Meier 1990, iii). Thus the discussion of the landscape preservation literature primarily focused on publications of the 1980s and 1990s.

The review of the literature supported Jandl’s statement that historic landscape documentation and inventories have been performed for a number of years; the documentation of historic American landscapes reaches back to 1933 and the Historic Architectural Buildings Survey (HABS). Paul Dolinsky discusses HABS’ role in documenting landscapes in his 1987 article in *Landscape Architecture*. Landscapes were documented along with the buildings in the 1930s. He cites “The Vale” in Waltham, Massachusetts in 1935 as being one of the first inventories to include large-scale site plans with botanical designations and site features (Dolinsky 1987, 87).

The earliest article to discuss landscape preservation maintenance uncovered in the literature review was an article in the July 1950 issue of *Landscape Architecture* written by Stanley Abbott. He addressed the fact that the landscape is alive, and by its very nature is meant to change. This is a critical issue in the preservation of historic landscapes, because the growth of the plant materials often alters the original design intent. Thus, in preparing a preservation master plan,
the preservationist must consider the significance of the historic plant materials versus the significance of the design intent. Abbott also began to establish the vocabulary of landscape preservation by using the phrase *character-defining features*: "Open spaces were critical on battle days: and the implication is strong that we should keep them cleared" (Abbott 1950, 153). A character-defining feature is an element in the landscape that is critical for the interpretation of the historic significance of the landscape. Character-defining features are defined in the analysis process to ensure that they are not destroyed during a rehabilitation process. The establishment of a common vocabulary for landscape preservation was instrumental in providing preservationists a base for future discussions with no misinterpretation.

The review of the literature found the first significant citations of landscape preservation issues in 1976. With the bicentennial anniversary of the Declaration of Independence, a renewed interest in preserving historic properties was growing in the United States; therefore, an entire issue of *Landscape Architecture* magazine addressed the topic of preserving historic landscapes. The issue was directed more towards landscape archaeology and most of the locations cited were in Europe, but this issue had an important role in stimulating interest in landscape preservation within the Landscape Architecture profession. Grady Clay’s article "Whose Time is this Place? The Emerging Science of Garden Preservation" critiqued the emerging profession of landscape archeology and introduced the other studies in the magazine (Clay 1976). Another article discussed potential uses and limitations of pollen analysis to correctly establish the type of plants on a historic site in Pompeii (Dimbleby 1976). Gerda Gollwitzer’s article "Great Garden at Hanover Returns to Original Design" discusses the methods used to restore a historic garden dating back to 1666 after extensive damage occurred during World War II (Gollwitzer, 1976). This issue of *Landscape Architecture* formed a foundation for further research conducted in the United States during the 1980s.

The primary goal for the literature published in the 1980s was to establish a common vocabulary and standard guidelines for historic preservation. Through the establishment of widely accepted guidelines, further research was able to be conducted in a concise, logical manner. The National Park Service published the primary publications, which established these guidelines. The first two publications were designed to guide preservation specialists in
nominating historic landscapes to the National Register of Historic Places. The first, National Register Bulletin 18: How to Evaluate and Nominate Designed Historic Landscapes, focuses on the designed landscape. Bulletin 18 defines a designed landscape as:

    A landscape that has significance as a design or work of art; was consciously designed and laid out by a master gardener, landscape architect, architect, or horticulturist to a design principle, or an owner or other amateur using a recognized style or tradition in response or reaction to a recognized style or tradition (Keller and Keller 1987, 2).

This publication is useful because the criteria necessary to nominate a landscape to the National Register allow the property to be assessed for historic significance, even if Register nomination is not a goal of the study. These criteria were used to analyze the significance of the landscape in this thesis.

The second publication, National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes, focuses on rural landscapes shaped by forces of nature and the pragmatic need to make a living. Bulletin 30 defines a rural historic district as:

    A geographic area that has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features. (McClelland et al. 1990, 1-2)

As the Moraine Farm was a rural site when it was first designed, the criteria specified in this publication provided insight to analyzing its significance as well.

Another publication the park service developed to assist in the standardization of preservation research was Preservation Brief 36: Protecting Cultural Landscapes (Birnbaum 1994). Charles Birnbaum meticulously outlined guidelines for preserving cultural landscapes. The methodology of this thesis was based on this brief's outline.

The final link in standardizing the process of preserving cultural landscapes came with the publication of The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes (Birnbaum and Peters 1996). This publication offers specific guidelines for the different treatment options for historic landscapes. These
guidelines were the primary resource when preparing the treatment options proposed in this thesis.

With the guidelines and general vocabulary in place, papers and articles discussing preservation treatments and projects became more prolific in the 1980s and 1990s. The discussion of specific preservation case studies for this thesis covered several different landscape scales, but concentrated on case studies of estates and private homes, which most directly correlate with the Deeds Moraine Farm.

A 1986 study of Olmsted and Vaux’s prototypical subdivision of Riverside, Illinois, discussed the issues of establishing a landscape rehabilitation and conservation program in the context of a public forum of commissions, village officials and residents. In their 1987 article, Cairns and Kesler discussed the options for conserving Riverside’s historic fabric, while restoring the important vegetation and landscape elements that provided Riverside’s landscape character. They emphasized the need to prioritize areas for restoration in order to work within a budget. This article presented how vegetation was a critical character-defining feature for Riverside (Cairns and Kesler 1987). The methodology of prioritizing preservation to stay within a budget presented in this article can be applied to the treatment plan for the Deeds Moraine Farm to introduce the process to National Cash Register as a realistic, viable course of action.

Patricia O’Donnell’s 1998 World Wide Web report on the Benjamin Franklin Parkway addressed the need to rehabilitate the trees along the length of the historic parkway in Philadelphia. The trees were in various stages of decay and decline. In analyzing treatment options, the researcher decided that total replacement of the trees was the most viable option. “When addressing a formal feature such as a linear parkway or boulevard, a phased approach is usually not successful in creating the visual and spatial organization of the historic design in the future” (O’Donnell 1998, http://www2.cr.nps.gov/hli/currents/ franklin park/summary.htm). The prevalent, character-defining feature of the original design is the consistent height of the trees. If the trees were replaced in phases, they would never have the consistent height necessary to provide the continuity of the design. The Benjamin Franklin Parkway case study reinforced the issues presented in the 1950 Stanley Abbott article. The fact that the trees had
reached maturity, the parkway provided an ideal, shady link between two important civic features in Philadelphia. However, many of the trees were showing the stress of years, and beginning to die out. Decisions needed to be made of whether the design intent of continuity along the parkway was more significant than the mature trees. While the Deeds Moraine Farm does not have any character-defining features at the same scale as the Benjamin Franklin Parkway, the fact that maturing plant materials can alter the original design intent is an important concept to understand when analyzing integrity.

In her 1987 article, Patricia O'Donnell used Boston's Emerald Necklace to discuss methods for establishing preservation objectives in the public park setting. She explored such issues as original design intent, park use, safety and security issues, environmental quality, public education, unified management, maintenance, and priorities. While the public park setting is much more complex than the Moraine Farm, this article helped to establish goals and objectives necessary to plan a successful restoration treatment (O'Donnell 1987).

Alicia Rodriguez discussed the issue of preserving a historic design in a public park against the pressures of development and new land uses in her 1997 article, "Can This Park be Saved." The urban park, Forest Hill, was donated to Cleveland by John D. Rockefeller, Jr. and designed by A. D. Taylor. Today it is a controversial site in Cleveland because many of the design restrictions laid down by Taylor were being disregarded, and many preservationists felt that the historic integrity was being compromised. The article discussed the issues of historic integrity versus the demand of current uses, and the responses the Cleveland Heights Council is making to these controversies (Rodriguez 1997). Due to the fact that a goal of this project is to convince a corporation to open the Deeds Moraine Farm to the public, Rodriguez's discussion of the roles that politics and funds can play in the preservation process is insightful.

Noel Vernon and Malcolm Cairns prepared a *Historic Landscape Preservation Master Plan for Hills and Dales Park* for the City of Dayton. While this publication documented a much more complex site than the Moraine Farm, the research methods presented were useful to this research. Hills and Dales Park was located very close, geographically, to the Moraine Farm, and
was also an Olmsted Brothers project. The Hills and Dales study’s method of how to analyze treatment options was insightful (Vernon and Cairns 1988).

The review of the literature pertaining to research of homes and estates addressed several important issues of the methodology in preparing Cultural Landscape Reports. All studies presented in this review followed the general methodology presented by the National Park Service’s Preservation Brief 36: Protecting Cultural Landscapes; however, different studies emphasized different sections of the CLR as they reflected differing site specific opportunities and constraints.

Lack of graphical documentation was a recurring issue in many of the case studies. Linden-Ward’s 1987 article on Stan Hywet Hall’s restoration discussed that only two of an estimated 300 drawings and plans remained. The preservation team was able to supplement the graphic documentation with photographs and approximately 100 letters written between the owner, Frank Seiberling, and the landscape architect, Warren Manning. The goal of the restoration efforts at the Lincoln Home National Historic Site in Springfield, Illinois, was to restore Lincoln’s home and the surrounding 12.24-acre site of the immediate neighborhood to increase the understanding of the Lincoln period (Harvey and Clark 1982). They had plentiful documentation of the home, but were unable to uncover any documentation of the immediate neighborhood. Their solution was to research the general character of Lincoln’s contemporary Springfield landscape and study the period’s literature on gardening to get a general prototype of what the landscape should be. The third study that dealt with a lack of available documentation was the boxwood garden restoration at Swan House in Atlanta, Georgia (Rodriguez 1987). The researchers had no as built site plan available, so they used historic photographs and archeological research to document the edges of the pathways. As much of the graphical documentation for the Deeds Moraine Farm was missing, these studies provided a framework of potion to apply to the analysis.

The review of the literature disclosed several different methods for dealing with issues pertaining to periods of significance and historic integrity. Zaitzevsky’s 1997 Cultural Landscape Report for the Frederick Law Olmsted National Historic Site dealt with documenting multiple periods
of significance. Due to the site's connection with Olmsted Sr., the Brothers' practice, and the Olmsted Associates' practice, they have produced period plans for each of these eras (Zaitzevsky 1997). The William Howard Taft National Historic Site's cultural landscape report noted that the land in front of the house maintained much of its integrity, while the land behind the house was significantly reduced in areas and major grade changes had been made (NPS 1993). The preservation team's solution to this dichotomy of integrity was to establish a partial restoration of the property. The CLR called only for restoration of the front of the house, while simply stabilizing the back so no further decay would occur. These solution for dealing with multiple periods of significance and varying levels of integrity provide a background for understanding similar issues that occur at the Deeds Moraine Farm.

Patricia O'Donnell's 1993 article about the Vanderbilt Estate in New York outlined the method for analyzing the historic integrity of a very complex site. The analysis was performed in multiple scales, building on historical research, graphic documentation, periods of significance, and existing conditions. The article demonstrates in a very clear, concise manner the steps necessary to perform the analysis of integrity (O'Donnell 1993).

Finally, several studies document treatment solutions for historic properties. The restoration process was so complex at Stan Hywet Hall that the preservation team decided to implement a thematic restoration, which they describe as restoring the spirit of Manning's design instead of exactly duplicating the original design (Linden-Ward 1987). The thematic restoration included reopening the original views, which had become overgrown. They wished to maintain the spatial organization of the specific outdoor rooms originally designed by Manning. It is necessary to prepare a treatment plan that is feasible to implement, and to divide the treatment plan by themes, such as views, is a good method to maintain control of the work and budget. Turner's 1987 article uses the restoration of the Magnolia Mound Plantation to discuss implementing the treatment of interpretive landscapes. It was critical for both of these restorations to enable the visitor to understand the purpose and social climates that were behind the design. The Magnolia Mound Plantation was a working plantation, so formal flower gardens would have been highly inappropriate. The grounds were restored to reflect a working plantation (Turner 1987). The need for the visitor to understand the historic context of the
landscape is imperative. The Magnolia Mound case study demonstrated how the design solution imbedded in the treatment plan can provide the appropriate historic context.

A review of the local literature in Dayton, Ohio was conducted to ensure that the Deeds Moraine Farm has not been studied in the manner of this thesis. The review uncovered that the Deeds Moraine Farm has been identified in an Olmsted Brothers Survey (Vernon and Cairns 1988) and the historic events that have occurred on the Farm were published in several secondary sources. However, the review did not uncover any documentation of a definitive study of the periods of significance or analysis of any remaining integrity at the Deeds Moraine Farm.

Methodology

Historical Research

According to the NPS Preservation Brief 36:

Research is essential before undertaking any treatment. Findings will help identify a landscape’s historic period(s) of ownership, occupancy and development, and bring greater understanding of the associations and characteristics that make the landscape or history significant.

A variety of primary and secondary sources may be consulted. Primary archival sources can include historic plans, surveys, plats, tax maps, atlases, U. S. Geological Survey maps, soil profiles, aerial photographs, postcards, paintings, newspapers, journals, construction drawings, specifications, plant lists, household records, account books and personal correspondence. Secondary sources include monographs, published histories, theses, National Register forms, survey data, local preservation plans, state contexts and scholarly articles.

Contemporary documentary resources should also be consulted. This may include recent studies, plans, surveys, aerial and infrared photographs, Soil Conservation Service soil maps, inventories, investigations and interviews. Oral histories of residents, managers, and maintenance personnel with a long tenure or historical association can be valuable sources of information about changes to a landscape over many years (Birnbaum 1994, 3)
The historical research for this thesis was conducted in two parts: a general biography of Colonel Edward Deeds and a detailed history of the site.

**Biography of Colonel Edward Deeds**

The Deeds’ history was compiled from secondary published sources and through a search of newspapers and personal papers. The intent of this research is to provide a general overview of Deeds’ influence in order to establish the historical context. A literature search was conducted to find secondary Deeds published sources. The following archives were searched for primary information about Deeds: Montgomery County Library, Dayton Collection, Montgomery County Historical Society, and the Denison University Archives. Colonel Deeds’ personal papers and archives are under the jurisdiction of the National Cash Register Company and were not accessible for this thesis.

**Detailed Site History**

Documentation of the Moraine Farm’s specific site history was very thorough, where the research was divided in three major phases of the site history: Pre-Deeds ownership, Deeds’ transformation of the site, Post-Deeds ownership. The pre-Deeds ownership was documented through the VanBuren Township maps available before 1912, the year Colonel Deeds acquired the site. As this was a rural site at the turn of the century, Sanborn maps, a tool that is frequently used to document historic sites, were not available. The Sanborn Company was an insurance company that frequently compiled maps of properties and homes for insurance purposes. These maps provide today’s researchers a record of the size and ownership of properties in the late 1800s and early 1900s. Dayton was very fortunate to have a book, commissioned by Colonel Deeds, describing the geologic conditions of the terminal moraine, which inspired the name of Deeds’ farm. This book, *The Geology of Dayton and Vicinity*, was consulted to document the underlying geology of the site.

Data collection for the Deeds transformation of the site was conducted through several means: A previous inventory of Dayton’s possible Olmsted related properties indicated that there was an Olmsted job number, 5506, associated with Moraine Farm (Vernon and Cairns 1988, 88).
There were two available archives to access for this information. The first was The Library of Congress Manuscript Division, which maintains approximately 100 pages of correspondence between Colonel Deeds and the Olmsted Firm for job number 5506 under The Records of the Olmsted Associates. A copy of the correspondence was obtained from the Library of Congress. The second archive was The Frederick Law Olmsted National Historic Site’s (FLONHS) archives had plans, photographs, and plant lists assigned to this job number as well. Research was conducted at the FLONHS, and all materials related to the Moraine Farm, job 5506, contained in this archive were reviewed.

The National Cash Register Corporation maintains an archive. However, the archives were unavailable for review. NCR was in the process of turning over maintenance of the archives to the Montgomery County Historical Society, and had a two-year moratorium on accessing the archives. Inquiries suggested that NCR had limited archives pertaining to the Moraine Farm because Colonel Deeds left NCR while the farm was still being developed. Negotiations to gain access to the archives maintained directly on the Moraine Farm site were unsuccessful; thus, any documentation of what archives might still be available in Deeds' private papers was unobtainable.

A search of the Woolpert Associates' archives in Dayton, Ohio, was conducted in an attempt to provide insight to the "as built" conditions of the site. Charlton Putnam, a surveyor from Providence, Rhode Island who was brought to Dayton by the Olmsted Firm to perform surveys of Olmsted projects, founded Woolpert. Due to this connection, there was a possibility that Woolpert's archives might have some information pertaining to Moraine Farm.

Noel Vernon's preliminary survey of Olmsted related sites in Dayton also documented a connection with the Siebenthaler firm in Dayton, Ohio (Vernon and Cairns 1988, 88). A review of their archives was conducted to discover if they had any design influence on the site.

The collection of historic photographs of the site was conducted through local searches of the Montgomery County Historic Society, the Montgomery County Library's Dayton Collection, and the City of Kettering's Planning and Engineering offices.
Limitations of Historical Research

The primary limitation of the historical research was that there was no access to Deeds personal archives. Therefore, there is not full documentation of every change made to the site. It is incumbent on future researchers to thoroughly research these archives to look for any references to work conducted on the property and to discover what other archives are available for review.

Period Plans

According to the NPS Preservation Brief 36:

In the case of designed landscapes, even though a historic design plan exists, it does not necessarily mean that it was realized fully, or even in part. Based on a review of the archival resources outlined above and the extant landscape today, an as-built period plan may be delineated. For all successive tenures of ownership, occupancy and landscape change, period plans should be generated. Period plans can document to the greatest extent possible the historic appearance during a particular period of ownership, occupancy, or development. Period plans should be based on primary archival sources, and should avoid conjecture. Features that are based on secondary or less accurate sources should be graphically differentiated. Ideally, all referenced archival sources should be annotated and footnoted directly on period plans (Birnbaum 1994, 5).

Period plans were generated based on materials obtained from the historic documentation obtained through the site history research. The primary resource for the period plans was the archives at the Frederick Law Olmsted National Historic Site. Historic photographs were consulted to verify that items documented on the period plans were actually built.

The Period plans were limited to subjects were sizes and shapes could be determined in plan. Thus, the period plans only document placement of buildings, hardscape features, and circulation. Trees and other vegetation had no definitive documentation, so they were not represented on the period plans. Cones of vision for the historic photographs were documented to provide a frame of reference.
Inventory and Documentation of Existing Conditions

According to the NPS Preservation Brief 36:

Both physical evidence in the landscape and historic documentation guide the historic preservation plan and treatments. To document existing conditions, intensive field investigation and reconnaissance should be conducted at the same time that documentary research is being gathered. Information should be exchanged among preservation professionals, historians, technicians, local residents, managers and visitors.

To assist in the survey process, National Register Bulletins have been published by the National Park Service to aid in identifying, nominating and evaluating designed and rural historic landscapes. Additionally, Bulletins are available for specific landscape types such as battlefields, mining sites, and cemeteries.

Although there are several ways to inventory and document a landscape, the goal is to create a baseline from a detailed record of the landscape and its features as they exist at the present. Each landscape inventory should address issues of boundary delineation, documentation methodologies and techniques, the limitations of the inventory, and the scope of inventory efforts. These are most often influenced by the timetable, budget, project scope, and the purpose of the inventory and, depending on the physical qualities of the property, its scale, detail and the interrelationship between natural and cultural resources. For example, inventory objectives to develop a treatment plan may differ considerably compared to those needed to develop an ongoing maintenance plan. Once the criteria for a landscape inventory are developed and tested, the methodology should be explained (Birnbaum 1994, 5).

Current conditions were documented on the site by creating a base map from the 1994 aerial photograph to document building and hardscape placement, and a tax map to locate the current property boundaries.

A site visit was conducted to document all current conditions of plant material and built features. Documentation of current character-defining features and condition was conducted. An attempt was made to duplicate angles of historic photographs to enable direct comparison for analysis.
Limitations of Current Conditions Data Collection

The researcher had limited access to the site. While visual sight reconnaissance was conducted, there was no opportunity to perform a current survey of the property or conduct archeological tests for documentation of remains of previous features. Current topographical information was unobtainable because a current survey of the property was not available.

Existing Conditions Plans

According to the NPS Preservation Brief 36:

Inventory and documentation may be recorded in plans, sections, photographs, aerial photographs, axonometric perspective, narratives, video — or any combination of techniques. Existing conditions should generally be documented to scale, drawn by hand or generated by computer. The scale of the drawings is often determined by the size and complexity of the landscape.

When landscapes are documented in photographs, registration points can be set to indicate the precise location and orientation of features. Registration points should correspond to significant forms, features and spatial relationships within the landscape and its surrounds. The points may also correspond to historic views to illustrate the change in the landscape to date. These locations may also be used as a management tool to document the landscape’s evolution, and to ensure that its character-defining features are preserved over time.

All features that contribute to the landscape’s historic character should be recorded. These include the physical features and the visual and spatial relationships that are character defining. The identification of existing plants should be specific, including genus, species, common name, age (if known), and size.

Once the research and the documentation of existing conditions have been completed, a foundation is in place to analyze the landscape’s continuity and change, determine its significance, assess its integrity, and place it within the historic context of similar landscapes (Birnbaum 1994, 5).

An existing condition plan was prepared based on the 1994 aerial and with the notes taken on site. The current conditions plan only documented the same materials that were documented on the period plans. The current conditions plan was limited to building placement, hardscape and circulation. All of the cones of vision for existing conditions were documented.
Site Analysis: Evaluating Integrity and Significance

According to the NPS Preservation Brief 36:

By analyzing the landscape, its change over time can be understood. This may be accomplished by overlaying the various period plans with the existing conditions plan. Based on these findings, individual features may be attributed to the particular period when they were introduced, and the various periods when they were present.

It is during this step that the historic significance of the landscape component of a historic property and its integrity are determined. Historic significance is the recognized importance a property displays when it has been evaluated. A landscape may have several areas of historical significance. An understanding of the landscape as a continuum through history is critical in assessing its cultural and historic value. In order for the landscape to have integrity, these character-defining features or qualities that contribute to its significance must be present.

Integrity is a property's historic identity evidenced by the survival of physical characteristics from the property's historic period. The seven qualities of integrity are location, setting, feeling, association, design, workmanship, and materials. When evaluating these qualities, care should be taken to consider change itself. For example, when a second-generation woodland overtakes an open pasture in a battlefield landscape, or a woodland edge encloses a scenic vista. For situations such as these, the reversibility and/or compatibility of those features should be considered, both individually, and in the context of the overall landscape (Birnbaum 1994, 10).

Analysis for significance was performed by applying the Secretary of the Interior's Four Criteria for Significance to the research conducted on the Deeds Moraine Farm. If the farm showed any attributes of the criteria, the period that most appropriately reflects the significance factor was determined. Physical elements that were character-defining for each period of significance were documented. These attributes were the basis for the analysis of integrity. Site analysis for the Moraine Farm was done through the direct comparison of historic period plans with the existing conditions. Changes in character-defining features were documented. The essential component that was considered in this phase was if the major design intent of the property has been maintained.
Historic Preservation Approach and Treatment Plan

Definition of Program

As the event of the New Millennium approaches, the Montgomery County Historical Society is implementing an aggressive program to increase the public awareness of Dayton and vicinity's rich history. The historical society wishes particularly to emphasize the far-reaching impact of some of the greatest minds of the twentieth century: the Wright Brothers, Charles Kettering, John H. Patterson, and Edward Deeds. As a function of this program, the Historical Society desires for the Moraine Farm, Colonel Edward Deeds' estate in Kettering, Ohio, to become accessible to the public. The property, currently owned by the National Cash Register (NCR) Company, is used as a guest home for prospective customers attending equipment seminars.

Montgomery County has contracted with the researcher to fully document the history of site, specifically how it reflects the life and accomplishments of Colonel Deeds. A report will be prepared that lists the character-defining features, provides the significance and integrity of the property, and recommends interpretation opportunities for tours. The report will offer recommendations for the most appropriate treatment option for the property. Montgomery County Historical Society plans to present this report to NCR to help convince them to open Moraine Farm to the public.

Treatment Options

According to the NPS Preservation Brief 36:

The Definitions of the treatment options are:

**Preservation:** the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.
Rehabilitation: the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical or cultural values.

Restoration: the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Reconstruction: the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location. (Birnbaum 1994, 13)

The treatment plan was based on the goals of the research program. The analysis of significance and integrity was applied to the program and features to maintain were documented.

Analysis of the different constraints and opportunities for all treatment options was conducted, then the most appropriate treatment option was carried through to a detailed report. The report demonstrates design solutions that may be appropriate in maintaining the character-defining features of the property, while accommodating any new program elements.
CHAPTER 2

HISTORICAL RESEARCH

Edward A. Deeds, A Leader in Industry
Colonel Edward A. Deeds was best known in Dayton, Ohio, as leading the National Cash Register Company through the Depression as its Chief Executive Officer; but, as his biography indicates, his influence was found to be much more expansive. Born to a humble farm life near Granville, Ohio, Deeds would achieve prominence through his associations with Charles Kettering, Orville Wright, his devotion to establishing flood protection for the Miami Valley, World War I airplane procurement, and by sitting on the boards of diverse companies. See Figure 1.

Edward Andrew Deeds was born on March 12, 1874, on a small farm near Granville, Ohio. He would grow up knowing the difficulties of farm life, to which he attributed much of his later success. “Linked with his simplicity is a rare sense of discipline, drilled into him by the rigors of his life on the farm” (Marcosson 1947, 338). Even as a small boy, he was always attempting to better himself. He received his teaching certificate at age 14, which certified him to teach orthography, reading, writing, arithmetic, geography, English grammar, physiology, and U. S. History. (Marcosson 1947) He often filled in as a substitute teacher during grammar school.

Deeds showed an early interest in inventions, often developing ideas to relieve many of his farm chores. He tried several options for churning butter and fashioned a crude alarm clock.
He was lucky enough to take a trip east to visit a cousin who took him to Thomas Edison’s laboratory, which piqued his interest in the possibilities of electricity.

Edward Deeds attended the Granville Academy in 1891. Although the Academy was a boarding school, Deeds did not live at the school. His parents still needed his help at the farm, so Deeds rose early to finish his chores before riding his horse into Granville for classes. He finished the three-year curriculum within two years.

Edward Deeds then worked his way through Denison University from 1893 – 1897. He lived at home for the first two years following a similar routine of his life at the Granville Academy: before-dawn chores followed by a horse ride to class. He was able to move to campus his last two years at Denison, and subsidized his education through a number of part-time jobs. He ran the college power plant, and was the janitor of Barney Science Hall where he attended the majority of his classes. He was employed by the following businesses off campus as well: Granville Electric Plant and Water Works, Scheidler Machine Works in Newark, Ohio, and was a typesetter for the Granville Times. Although Deeds was very busy working these jobs, he still found time to participate in many extra-curricular activities and was the Captain of the football team. He was a member of the Alpha Eta Chapter of the Beta Theta Pi Fraternity, where he and several of his close friends became infamous for pranks played on the Denison and Granville community.

The three principal actors in the comedy and tragedy now to be portrayed were Dorsey, Davis, and Deeds—known as the three D’s. ...The college bell was a terrible device. Someone gained prestige by stealing the clapper. Others took the bell rope. Davis and I did better than that. After fifty years methinks, I hear a splash and gurgle. I won’t say at which bridge, but it was Raccoon Creek. (Deeds 1947, 28)

After graduating valedictorian of the class of 1897, Deeds attended Cornell University for a short time until lack of funds forced him to quit and find a job. Thus in 1898, he moved to Dayton, Ohio, to begin his lifelong association with this city. Deeds was hired at the Thresher Electric Company as an engineer. His primary responsibility was to oversee installation of
electrical systems for the customers. During his 18-month tenure at Thresher, he experienced some travel and became known as a very efficient troubleshooter in the company.

The National Cash Register Company lured deeds away from Thresher in 1899. NCR needed a construction/maintenance engineer to oversee the electrification of the operation in Dayton. Deeds was offered the position, which paid $30/week, a substantial increase over his $12 weekly salary at Thresher. (Marcosson 1947, 71)

Deeds immediately began to make a name for himself at NCR. An incident involving a factory smokestack brought him to the attention of John Patterson, the founder and president of the company. Deeds noticed that the smokestack appeared to have several loose bricks that could endanger life and property. He reported the flaw to Frank Patterson, the president’s son, who did not take him seriously. Deeds then waited until Sunday, when the furnaces were idle, to climb the stack to photograph the loose bricks. Frank Patterson apologized for doubting him: “I apologize. Whatever you do in this plant hereafter will have my full support” (Marcosson 1947, 72). The incident was widely reported throughout the company, and “the action showed the kind of pluck that John H Patterson admired in his younger subordinates, and fixed Deeds’ star as rising” (Bernstein 1998, 86).

Deeds had the opportunity to take a year’s sabbatical from NCR during 1902 to oversee the Shredded Wheat Plant’s construction at Niagara Falls. At the age of 27, he was chairman of the Board of Engineers, head of everything related to construction. During his tenure in New York, he still returned to Dayton one week each month to complete the NCR electrification and the construction of the new powerhouse (Marcosson 1947, 79).

John Patterson noticed Deeds’ vacancy, “What has become of that resourceful young man who fixed the smokestack?” (Marcosson 1947, 81) and offered him the position of Assistant General Manager of NCR in 1903. While in this position, Deeds conceived the idea to electrify the cash register, which was operated by a crank. He performed the preliminary experiments to prove his theories were sound, but had too many responsibilities to carry them out to a final product. This led him to make the fortunate contact with Charles Kettering, a young engineer
from The Ohio State University, who was looking for a job. Deeds hired Kettering, and a long and fruitful association began.

Kettering spent five years at NCR, acquiring twenty-three patents, including one for the electronic cash register (Bernstein 1998, 86). During his time at NCR, Kettering and Deeds struck up a friendship based on their common interest of inventions regarding electricity, which led them to pursue a joint venture to invent electric accessories for the automobile. Deeds watched, with great interest, the growing automobile industry, and stated to Kettering: "There is a river of gold running past us, why can't we throw out a little dam and sluice some of it our way" (Bernstein 1998, 110).

Deeds and Kettering began their endeavor to improve the automobile by investigating an electric alternative to the unreliable magneto ignition. They worked evenings and weekends in the barn behind Deeds' home the summer of 1908, while keeping employment at NCR to pay the bills. This necessity gave rise to the name of "Barn Gang" to the group working on the ignition. Kettering decided that the magneto ignition could not control the sparks from the battery, and much of the battery's energy was wasted. His electric ignition could control the spark, and this ignition kept running while the engine was idle while extending the battery ten times longer than the magneto.

The electric ignition was ready to be marketed to the auto industry by the summer of 1909. Deeds and Kettering sold their ignition to Cadillac in 1909. Cadillac placed an order for 8000 ignitions to add to their 1910 model. Deeds and Kettering were caught completely unprepared for such a large order. They had no labor, manufacturing facilities, or even an incorporated company. Kettering immediately quit NCR to devote all his time perfecting the ignition to fit in the Cadillac model, and they incorporated the company under the name of Dayton Engineering Laboratory Company, or Delco for short.

Cadillac returned to Delco in 1910 to ask them to develop a self-starting mechanism to replace the highly temperamental crank to start the cars of the time. Kettering was convinced that he could develop an electric starter to turn over the engines. The electric "Self-Starter" was ready to be added to the 1912 model of the Cadillac. The patent on this invention propelled Deeds
and Kettering to incredible wealth and success. Within 18 months, Delco grew to employ 1200 people, and in June, 1916 they sold the company to United Motors, which later merged with General Motors. This transaction made both men millionaires. When Delco was sold in 1916, Deeds and Kettering began several other companies that led Dayton to become one of the most progressive cities in the country: Delco light, Dayton Research Laboratories, and the Dayton Wright Airplane Company.

Early in 1912, Deeds and Kettering purchased adjoining properties south of Dayton. Deeds’ property was called Moraine Farm, due to its location on the terminal moraines that ran through the area. This property would become the location of much exciting research, and many new inventions would be developed here. The first such development was the 8-cylinder engine developed for the Cadillac in the Moraine Dairy Barn. Many automobile manufacturers were promising that a six-cylinder engine would be developed in 1914. Cadillac stated that they would never carry a V6 in their line. However, Deeds and Kettering helped Cadillac compete by developing the V8 engine. Due to intense competition in the marketplace, secrecy was critical to corner the market. Thus the engine was designed and tested in the dairy barn on the Moraine Farm to keep their secret. Kettering and Deeds designed the V8 as a favor to Leland, the president of Cadillac, in gratitude for their support of Delco in the beginning (Marcosson 1947, 134).

March 23, 1913, was a critical date in Dayton’s history, and a date that would lead Edward Deeds towards a battle that lasted twenty years. On Easter Sunday 1913, the City of Dayton was inundated by a terrible flood that captured national attention. Three hundred people lost their lives in the Dayton flood, and property damage was an estimated $100,000,000 (Marcosson 1947, 142). This devastation spurred Deeds to lead the citizens of Dayton to lobby for Conservancy Legislation. While the Ohio Conservancy Act, which enabled counties to cooperate for flood prevention, was signed within a year of the flood, the law was very controversial, and repeal legislation was held up in courts until June 4, 1915. Deeds was instrumental in keeping the law intact. After the U.S. Supreme Court’s decision in June, the following article was written by George Burba, a noted Ohio Journalist. “But for E. A. Deeds the law which James M Cox gave to the people of the State would have been killed...he had
the most persuasive manner, that he had the most convincing ways of any advocate they had ever known... but for Deeds and the work that he did out in the open while in Columbus, the bill would have been repealed" (Marcossan 1947, 179).

Deeds was not only instrumental in keeping the Miami Valley Conservancy legislation alive, he also led a group to plan the flood control system to be implemented. Deeds was responsible for hiring Arthur Morgan, a renowned engineer specializing in flood control. After Morgan's initial inspection of the flood damage, he informed the conservancy board that prevention planning must be comprehensive, and take years of careful study and planning. He was pleasantly surprised to find Deeds' full support. Morgan later stated, "To an engineer who usually found his greatest handicap to be the difficulty of getting public support for thorough preparation, this recognition was like suddenly finding oneself in an engineer's utopia" (Bernstein 1998, 161).

The completion of the Miami Valley Conservancy project was so important to Deeds that he donated $180,000 to build the Conservancy Headquarters building (Bernstein 1998, 169). When Morgan wanted to explore a new idea in floodwater control, Deeds immediately offered the man-made pond on Moraine Farm to test a model of the system. Morgan's dam control system backed up floodwater behind a series of dams. However, the weight of the water behind the dam would propel the water through the opening with a destructive force. The hydraulic jump, an engineered device to slow water coming through the dam, was a series of obstacles below each dam's opening to pitch emerging waters back on themselves. Thus, dissipating most of the kinetic energy. The first definitive study of the principle of "hydraulic jumps" was conducted on the Moraine Farm during the summer of 1915 (Marcossan 1947, 197). The principle worked, and the hydraulic jump was implemented in the Miami Valley Conservancy project.

The event that propelled Edward Deeds into the national limelight was the United States' entrance into World War I. The declaration of war found the U. S. unprepared to compete with the Germans in the air. In April 1917, the aviation section of the signal corps consisted of 52 officers, 1100 enlisted men and 200 civilian employees. The United States had no aviation
industry to speak of, and lacked aeronautical engineers, skilled workmen, and aircraft plants. The appropriation program included obtaining 22,500 planes (Marcosson 1947, 225). When Edward Deeds was commissioned as a Colonel in the Army as the Chief of the Equipment Division of the Signal Corporation, he had an uphill battle to arrange for the procurement of aircraft.

Deeds decided that the best option to meet the demanding aircraft requirements of the war was to develop an American engine. Thus, Deeds arranged for two of the country's leading engineers to be locked in a hotel room in Washington D.C., until a design using only tested engine technology could be designed (Marcosson 1947, 237). The result was the Liberty engine, which was instrumental in the U.S. war effort, and pushed the aircraft industry forward after the war.

The procurement board did as well as possible, considering the poor condition the U.S. was in at the beginning of the war. 13,894 planes were constructed, and 41,953 engines, of which 24,475 were Liberty Engines, were manufactured by Armistice Day. (Marcosson 1947, 233) However, public opinion thought that airplane procurement was too slow, and an investigation into Deeds and the procurement board was led by a man named Gutzon Borglum. Borglum was a sculptor who tried to develop a type of aircraft during World War I. His aircraft model was not chosen to be produced for the Army, and Borglum felt that Deeds was profiteering from the war by giving contracts to the Dayton Wright Airplane Company. Borglum's official charge included "retardation of production, aeronautical ignorance, profiteering, and pro-German sympathy" (Bernstein 1998, 189). All charges against Deeds were dropped, and Borglum later became nationally renown for sculpting Mount Rushmore.

The United States needed new technology to gain an advantage in the air during World War I. Several of these technologies were developed at Moraine Farm, including the guided missile, the radiotelephone. Howard Rinehart, a famous test pilot, tested the Wright-Martin Company's Model V and Model R Planes at Moraine Farm. "The Bug", America's first guided missile, was particularly interesting. Several men who were leaders in their fields developed this inexpensive, expendable weapon. Orville Wright designed the propellers; Ralph deplane, a noted race car
driver, developed the four cylinder, 40 horsepower engine; and Charles Kettering developed the preset internal control system to guide the bug to the target, shut the motor off, and release the wings. The first missile was launched from the Moraine Farm, but none were used in combat (Johnson 1996, 63).

After the war, Colonel Deeds was instrumental in restructuring several businesses that were suffering through the Depression. Deeds led a syndicate that rescued the sugar market in Cuba in the 1920s. As president of the General Sugar Company, Deeds was responsible for improving working conditions, increasing research to improve yields, and installing airstrips that were later converted into Cuba’s major airports. Several of the other businesses Colonel Deeds was affiliated with include the Niles-Bement Company, Pan American, National City Bank, and he returned as President and chairman of the Board of National Cash Register in 1930. He was considered the driving force that increased NCR’s presence overseas and led them through the Depression.

Colonel Deeds was also involved in philanthropy. Both he and his wife, Edith, considered it the duty of those with means to give back to the community. The primary recipient of their generosity was Denison University. In 1917, Deeds “purchased and deeded properties adjoining the campus that increased the campus size five times” (Brown 1947, 24). He followed this gift with an endowment and annuity fund in 1919. He then sat on the Board of Trustees as the chairman of the Committee on Campus and Buildings through the 1920s. This leadership shaped the layout of the campus through a critical period of growth.

The colonel and his wife initiated several philanthropic projects in Dayton as well. They were responsible for the establishment of Carillon Park, which was meant to celebrate the inventions and advancements discovered in Dayton. Colonel Deeds also sponsored the commission of the Wright Memorial, and along with Kettering, established the Dayton Engineers Club.

Colonel Deeds was a self-made man, whose life has had a great influence over many people. However impressive his accomplishments, he always remained humble. In the foreword of his biography, Deeds states, “It has been my good fortune and privilege to have lived in interesting
times, to have been associated with interesting people, and to have been a part of projects which I believe have contributed something to our way of life.” (Marcosson 1947, xvii)

**Detailed Site History**

The series of Periods of the Pre-Deeds ownership of the Moraine Farm were documented through the use of sever Van Buren Township maps. The general study area are encircled on all three historic maps, see Figures 3, 5-6, along with the current USGS map for direct comparison. See Figure 4.

*Pre-Deeds Ownership: Geology of the site*

The Moraine Farm is named for the geologic formations that make up the site. The farm is located on the terminal moraine of a glacier. A moraine is a deposit of rock debris left by a glacier; the terminal moraine is formed at the down valley end of the glacier, where the piles of loose, unconsolidated rocks are pushed to their location by the forward motion of the glacier (Topinka, 1999).

The northeast corner of the Moraine Farm property reaches its high points along two ridges formed of the gravel debris of the glacier. The ridges are remarkably high, narrow, relatively straight and run in a southeastern direction. The high point of the ridge is approximately 100 feet above the Southeastern elevation of Stroop Road where the Moraine Park Station was located (Foreste 1915). See Figure 2. While the grade change toward the southeast is very steep, the moraine slopes more gently westward toward the river. The steep grade from the ridge changes to a rolling topography in the immediate vicinity of Deeds’ future house site, then finally slopes smoothly west towards the Miami River. This change in topography affords magnificent views westward towards the river.

*Pre-Deeds Ownership: 1851*

The 1851 Van Buren Township Map indicated that the general layout of this area had already been defined by the roads. Cincinnati Pike, today Dixie Highway, and Stroop Road are located on the map, but no names have been assigned. See Figure 3. There are several houses located on the western boundary along Cincinnati Pike: B.S.S., Cherry Four-Mile House, and J. Drayer.
A house under the name J. Treon is in the approximate location of the small house currently located on Tait Rd., and a home for Thomas Warner might be located to the east of the Deeds Farm. The map does not indicate topography, but the general location of the house between the road to the west and the river’s crossing at Stroop Road generally suggests the proximity of the property.

**Pre-Deeds Ownership: 1875**

The style of the 1875 Van Buren Township map makes analysis of the property difficult, but the fabric of the roads enables identification of the general location of Stroop Road and Cincinnati Pike. See Figure 5. John Eby has taken ownership of the property by 1875. There is rough topography drawn on the map indicating the general shape of the terminal moraine. The extra geographic shapes of this maps assists in verifying that the Thomas Warner property is directly east of the future Deeds property. John Eby appears to be the only landowner occupying the Moraine Farm location by 1875.

**Pre-Deeds Ownership: 1895**

The 1895 Van Buren Township map clearly shows John Eby as the deed holder for the property that the Deeds Moraine Farm will occupy. See Figure 6. There is a tract of 179.42 acres due east of Great Miami Pike (Dixie Highway) and an adjoining tract of 123 acres. The 1895 map is the first to indicate the location of the school, which was located on the east border of the Moraine Farm.

**Deeds Ownership: 1912 Farmstead**

**Property Boundaries**

The property Colonel Deeds acquired from John Eby was 172.64 acres, which extended east from Cincinnati Pike in an elongated rectangle. See Figure 7. The primary access road to the property is Stroop Road from the South. The farmstead site was located on the rolling portion of the property immediately west of the steep slope of the moraine, but with an elevation high enough to enjoy the westward vista sloping towards the river.
Land Use: Site

At the time of Deeds' purchase of the Moraine Farm, the primary land use for the property was to be a working farm. The early correspondence between Edward Deeds and the Olmsted Brothers firm centered around the placement of the house in relation to the immediate outbuildings. P. R. Jones, the primary landscape architect for the Deeds project, states in his site visit notes on March 4, 1912, "He is going to move the barn from present location to a point where it will form the nucleus of a future farmstead" (Jones 1912, 1). The early correspondence between the Olmsted Brothers and Deeds clearly demonstrated the fact that Deeds had originally intended to build his large house up on the ridge of the Moraine instead of its present location. The expectations of a formal drive to the top of the ridge to reach the main house was the inspiration of designing an attractive stone retaining wall to grade the drive. The design intent of a farmstead explains the utilitarian layout of the buildings in 1912.

Land Use: Region

The land use of the region around the Deeds Moraine Farm was rural. As the 1912 USGS map indicates, the primary road structure was laid out, but there were few side roads, which would be necessary to support smaller, suburban housing. See Figure 8.

Spatial Organization

The buildings of the farmstead were spatially organized to be inwardly focused. The farmhouse was located far enough back to be perched on a slope to enhance the view to the west. The greenhouse and office were located directly south of the house. The garage was located directly east of the office, with the barn located perpendicular to the garage, oriented on the north-south axis. See figure 9. A letter from Deeds to the Olmsted Brothers fully documents the types of buildings desired for the farmstead. "The house proper has been moved back approximately 35 feet...when it comes to locating the garage, the east end comes right on the brow of the hill...I decided to make an angle in the greenhouse and to have the gable front towards the house...it will make it possible to hide in the angle any compost...the chicken house was moved a little..." (Deeds 1912, 1). See Figures 10-13.
Circulation

The primary vehicular circulation was designed to enter from Stroop Rd. west of the farmstead. The entry drive climbs the hill toward the house, curving past the vegetable and flower gardens planted between the farmstead and the greenhouse. After passing the main entrance to the house, the drive splits off to the south to access the garage and barn. The upper yard was used for hitching horses to wagons. “We have shown a walled ramp from the lower to the upper yard so that horses may be brought up to be hitched to wagons or farm implements” (Jones 1912, 1). See Figure 9. The vehicular circulation had an option to go straight past the entrance of the house, and continue north heading up the large hill towards the ridge on top. Much emphasis had been placed on this road’s correct layout and grading in the early correspondence: Wednesday, March 6, 1912: “Staked out Farmstead group and road to main house site.” (Jones 1912, 1) “Re-staked a portion of the drive to the main house site in order to save cutting the limbs off some of the apple trees” (Jones 1912, 1).

Secondary vehicular access to the farmstead site was from Stroop Road. One accessed the area behind the greenhouse to enable coal delivery. The second route accessed the lower yard, where horses and cows were kept.

Vegetation

The Moraine farm had few existing trees on the farmstead site, but the slope heading up the hill to the ridge was scattered with trees. See Figure 16. There is no documentation of the exact location or species of the trees. Correspondence between the Deeds and the Olmsted Brothers did indicate the desire to add trees to the farmstead site. “He agreed to my suggestion of putting in some large trees (6" to 8" caliper) in vicinity of farmstead and would like to have it done this fall or winter” (Jones 1912, 1). The land between the two ridgelines contained an orchard bowl, but there was no documentation of the types of trees located within.

The farmstead group contained planned flower and vegetable gardens in the space between the farmstead house and the office. While no specific planting plans were available, the 1912 plan and photographs support the existence and general shape of these gardens. See Figure 12 and Figure 18.
Views/Vistas

One of the Moraine Farm’s most distinctive features was the beautiful distant view to the west. The location of the farm on the rolling topography of the terminal moraine was high enough that the view overlooks the gentle slope down to the Miami River. See Figures 17-19.

Small Scale Elements/Site Furnishings

The 1912 Moraine Farm landscape had several site furnishings. The Olmsted Brothers designed an entrance gate for the farm. Deeds stated, “please give details for two suitable posts at the entrance from the Stroop Road to the Farmstead. These posts should be set in a little distance from the road…It may be advisable to build a little masonry wing wall to make the entrance more attractive. At the same time, I do not want it to get too pretentious” (Deeds 1912, 1). As the historic photos indicate, the entrance was designed and installed by September 1912. See Figures 21-23. There was also a bird pond designed for the garden in front of the house. See Figures 24-25.

Deeds Ownership: 1921 Farmstead

Land Use

By 1921 the land use of the Moraine farm was moving toward a more recreational estate. The expansion of the main house to the current configuration had been completed, but the barn and other outbuildings were still in place. See Figure 26. However, the plan implies that these buildings were going to be moved by using dashed lines to indicate their location. The airfield and buildings were in place by 1921; thus, a working airstrip was one of the land uses by this time. See Figure 27.

Circulation

The circulation pattern of the 1921 farmstead was very similar to the 1912 pattern, with minor adjustments in response to the alteration of the house. The primary difference in circulation was that the vehicular circulation area near the house was paved. While photographs indicate a paving material for this area, there is no documentation of actual type of pavement installed. See Figures 28-30.
Vegetation

The 1921 plan for the Moraine Farm removed the gardens between the house and the office. The Olmsted archives has a detailed planting plan for the vicinity of the house, see Figure 36, with a full plant list. See Appendix B. Comparison of the historic photos with the plan and the plant list indicates that this planting plan had, at least partially, been implemented. See Figures 31-36. The planting surrounding the house had a diverse 73 types of plants.

Deeds Ownership: Post-1923 Country Place

The Moraine Farm Era, Post-1923 Country Place, is so named because while there is photographic documentation that the site was developed according to the following description, there is no documentation to indicate the exact years these features were added. The plans and construction documents for these features were not been uncovered during this research, so the designers responsible for the additions are unknown.

Land Use

The post-1923 Country Place was no longer used for farming purposes. As documented in an Olmsted Brothers site visit, the barn and other outbuildings were moved off the site in 1923. “New garage has been built and barns, etc. are being moved away” (Whiting 1923, 1). Deeds transformed the Moraine Farm into a small estate with the sole purpose to create a “…family place where he could indulge his tastes for outdoor life, carry out private scientific experiments, and commune with the stars” (Marcosson 1947, 356). With the change of land use, recreational accessories began to appear in the landscape: A paved tennis court, a croquet court, a gun club, and the plane landing garden. See Figures 37-38. The Moraine Farm’s South Field still operated during the post-1923 period.

Land Use: Region

In 1927, Deeds developed the property due south of the Moraine Farm as a golf course and country club, which became known as the Moraine Country Club. The development of the country club, while providing a service to the community also ensured that the open view to the south would be maintained.
Historic Context

When the Moraine Farm entered the post-1923 Country Place phase, it was considered an example of the Country Place Era design philosophy. According to Newton, in *Design on the Land*, characteristics of the Country Place Era include:

> “Meticulous care for detail, for proportion and scale, simple clarity of spatial structure, clarity of circulation, rightness of relation between form and material, usually short and general restrained plant lists, understatement and reserve rather than exaggeration” (Newton 1971, 428).

The Moraine Farm exhibited many of these characteristics.

Circulation

The general circulation scheme has not changed from the 1921 Farmstead era. However, with the removal of the office and greenhouse, a circular turnabout was added for the porte-cochere of the main entrance of the house. This era demonstrated a change in the layout of Stroop Road as well. The road was routed curving south from the farm, which lengthened the western entry drive considerably while extending the green space in front of the house. See Figures 37-38.

Vegetation

The post-1923 Country Place era demonstrated many more designed planting areas than the previous era. Aerial views show designed gardens surrounding the tennis court and the front entry had a screen to direct views and a garden behind it. The island within the vehicular circle of the porte-cochere contained a designed garden as well. The plan of the perennial garden obtained from Siebenthaler seems to match the general configuration of this garden, as seen in the aerial photograph, but it there is not enough documentation to verify that it was the installed garden. See Figures 37-39. Planting beds were added to the west slope of the house as a setting for the formal airplane-landing garden. See Figure 38.

Small Scale Elements/Site Furnishings

The post-1923 Country Place era introduced several small scale elements on the Moraine Farm landscape: the paved tennis court with out building, see Figures 40-41, the gun club on the
northwest corner of the meadow, see Figure 42, the formal airplane landing garden and pilot’s ready room, see Figure 43-44, and the retaining wall located by the garage which matched the style of the landing garden. These elements were character-defining features for the era of the farm.

Post - Deeds Ownership: 1950’s Country Place

The post-Deeds ownership of the Moraine Farm began with circumstances surrounding the death of the Colonel’s wife. As Deeds thought that he would precede his wife in death, he willed the Moraine Farm to her; Mrs. Deeds had, in turn, willed the property to Denison University. When Mrs. Deeds proceeded the Colonel in death in 1949, the property of the Moraine Farm transferred to Denison University. Consequently, Colonel Deeds was in real danger of losing his home. The first phase of post-Deeds ownership of the Moraine Farm occurred while the Colonel was still alive and living on the property. When Denison University decided that they could not use the property as a secondary campus or research center, they decided to sell the property. National Cash Register purchased the house and immediate surroundings to allow Colonel Deeds to live out his remaining days at his beloved home.

Property Boundaries

The primary change in the 1950s came from the sale of South Field to a developer named Huber who planned a subdivision of 1,850 small homes on the property. The sale reduced the property size of the Moraine Farm by 125 acres (Wolfe 1957, 1). See Figure 47.

Land Use

Other than the loss of the airfield, the land use for the Moraine Farm remained the same through the fifties until the Colonel’s death in 1960. See Figures 45-46.

Views/Vistas

The sale of South Field to Huber had an obvious impact on the views from the farm. The once open field that lay to the west of the Moraine Farm was covered by small homes. However, the distant view to the hills beyond remained open. As the Moraine Country Club’s golf course remained in place, the view to the south maintained its sylvan quality.
Figure 1: Colonel Edward A. Deeds

Source: Macrossan 1947
Figure 2: Topography of Deeds Moraine Farm
Figure 4: USGS Quadrangle Map - Dayton South - 1991
Figure 8: USGS Quadrangle Map - Dayton South - 1912.
Source: Courtesy of The National Park Service, Frederick Law Olmsted National Historic Site

Figure 9: 1912 Farmstead Plan
Figure 10: 1912 Farmstead House

Figure 11: 1912 Farmstead Garage and Office
Figure 12: 1912 Farmstead Office and Greenhouse
Figure 13: 1912 Farmstead View From Stroop Rd.
Figure 14: Approach Road to Hilltop Site

Figure 15: Approach Road on Upper Ridge
Source: Courtesy of The National Park Service, Frederick Law Olmsted National Historic Site

Figure 16: View North up hill from 1912 Farmstead house site

Source: Courtesy of The National Park Service, Frederick Law Olmsted National Historic Site

Figure 17: View South from the Ridge
Figure 18: View Due West from the edge of Vegetable Garden

Figure 19: View to the southwest from ridge
Figure 21: 1912 Farmstead Entry Gates

Source: Courtesy of The National Park Service, Frederick Law Olmsted National Historic Site

Figure 22: 1912 Farmstead Entry Gate Detail

Source: Courtesy of The National Park Service, Frederick Law Olmsted National Historic Site
Figure 23: Olmsted Brothers Detail for Entry Gate
Figure 24: Olmsted Brothers’ Bird Pond Details

Figure 25: Bird Pond Installed 1912 Farmstead
Figure 27: Deeds Landing Field, Circular Object is a “Deeds” Logo

Figure 28: 1921 Farmstead – Entry, Drop off
Figure 29: 1921 Farmstead – Entry Drive

Figure 30: 1921 Farmstead Entry From Stroop Rd.
Figure 31: View of Back Entry to Observatory

Figure 32: View of Southwest corner of house
Figure 33: View of Front Entrance to Observatory

Figure 34: Foundation Planting Front of the House
Figure 35: Planting Bed in Front of the House

Figure 36: Olmsted Brothers Planting Plan - 1921
Figure 38: Post - 1923 Country Place Aerial View from the West

Source: Courtesy of National Cash Register - Deeds Moraine Farm
Figure 40: View of Tennis Court and Out Building from Upper Floor of House

Figure 41: View of Tennis Court from hill with House in the background
Figure 42: View of Gun Club with Airplane Landing in Foreground
Figure 43: Airplane Landing Garden

Source:Courtesy of National Cash Register - Deeds Moraine Farm
Figure 44: Pilot Ready Room of Airplane Landing Garden
Figure 45: 1950s Country Place Aerial Photograph – Property Boundaries
CHAPTER 3

PERIOD PLANS
Figure 48: 1912 Farmstead Period Plan

Based on National Park Service Frederick Law Olmsted National Historic Site Archive 5506, Plan #11
CHAPTER 4

INVENTORY AND DOCUMENTATION OF EXISTING CONDITIONS

Upon arrival at the Deeds Moraine Farm, the visitor is immediately impressed by the grandeur of the house, the predominant feature on the landscape. The first impression is that much of the historic fabric must have been lost: the approach drive is asphalt, there is a modern parking lot in front of the house, and the foundation plantings are commonly used *Taxus, Buxus* and *Viburnum*, with young plants. However, the spirit of this home’s elegant past is still very evident upon entering the site. See Figures 51-52.

**Property Boundaries**

The current property boundaries of the Deeds’ Moraine Farm encompass 15.552 acres. All the remaining property has been sold off. The acreage immediately surrounding the house reaches approximately 400 feet shy of Tait Road, and stretches 526 feet north midway through the meadow. The property that fills the rest of the meadow belongs to Kettering Hospital. See Figure 53.

**Land Use**

The current use for the property is a guesthouse for prospective customers of the National Cash Register Corporation.

**Land Use – Region**

The area surrounding the Moraine Farm has become increasingly suburban. The Huber homes are still located due west of the site, and high-end residential condominiums have been built on
the hill where Deeds' lodge was located. The area due south is still used by the Moraine Country Club for their golf course. See Figure 54.

**Spatial Organization**

The main house is set back approximately 250 feet from Stroop Road, and is laid out in an east-west orientation. A guesthouse is located east of the main house, on axis with the southwest corner of the west wing. It also has an east-west orientation. The garage and utility building is perpendicular to the guesthouse reaching south. The main house has an open view to the south overlooking Stroop Road. The area immediately in front of the house is level, then the grade steeply sweeps down to the four lane road. See Figures 55-56.

**Circulation**

Vehicles may access the site via two curb cuts: one to the west end of the property, and one to the east. Neither appears to be the primary access, and both have an understated, wooden sign indicating the property as Moraine Farm. See Figure 57. The west access point enters the site due north, then makes a near ninety degree turn to the east to run nearly parallel to the house, up slope to the parking lot located southwest of the primary entrance to the home. The asphalt parking lot accommodates 18 cars. Vehicles can proceed west under the porte-cochere, then circle around a grass island to return to the parking lot. The vehicular access from the east immediately curves away from Stroop Road to the west, and leads to the garage and service parking for the site, which lies north of the drive. The drive continues west to meet up with the west access drive in the parking lot. The site also accommodates vehicular traffic heading north between the west wing of the main house and the guesthouse. The paved drive continues north approximately 50 feet past the back of the main house, then makes a U-turn to head back down to the garage and service parking. At the point of the U-turn, the grass path indicates that the road continued at this point uphill into the volunteer, scrub growth. Tracking this historic road into the scrub, a stone retaining wall to the east and west of the road is discovered, leading uphill until it is abruptly halted by the new grading for the housing on top of the hill. See Figure 56.
Vegetation

The current vegetation on the Moraine Farm generally consists of trees scattered across the property. The ages and species vary across the landscape, but several trees appear to be historic. There is a very modern foundation planting around the house. It includes the commonly used species of *Viburnum*, *Taxus*, and *Buxus*. There is a small rock garden on the east side of the property adjacent to the retaining wall that leads to the garage. The NCR staff utilizes a small area due north of the rock garden in the summer to grow vegetables for use in the guesthouse. See Figures 59-61.

Views/Vistas

The view to the west overlooks the Huber Housing development, but a distant view of the hills beyond the Miami River is available. The view to the south encompasses the Moraine Country Club Golf Course. See Figures 62-63.

Small Scale Elements/Site Furnishings

Very few small-scale elements are located on the farm. The grass island directly in front of the house contains a large bell, and several terra-cotta pots are scattered in the side yard in front of the garage. There are several light poles scattered around the grounds as well. See Figures 64-65. Figure 66 indicates the area where the tennis court was previously located.
Figure 55: Current Conditions Aerial View

Source: Courtesy of Bill Love, Woolpert
Figure 57: Deeds Moraine Farm: Entry Sign

Figure 58: Remains of Olmsted Retaining Wall
Figure 59: Rock and Vegetable Garden

Figure 60: Entrance to Observatory – Handicap Accessible
Figure 61: Vegetation at Observatory entrance

Source: Photograph by Cheryl Sams
Figure 62: Current View – South

Figure 63: Current View – Northwest
Figure 64: Terra Cotta Pot adjacent to Vegetable Garden

Figure 65: Bell located in center of Porte-Cochere Island
Figure 66: Previous location of Tennis Court

Source: Photograph by Carson Combs
CHAPTER 5

EXISTING CONDITIONS PLANS
CHAPTER 6

SITE ANALYSIS OF SIGNIFICANCE AND INTEGRITY

Statements of Significance
The method used for evaluating the significance of the Moraine Farm was the National Register Criteria for Significance, as described in Chapter 1.

Criterion A: Association with events that have made a significant contribution to the broad patterns of our history
As the Edward Deeds biography demonstrates, several historically significant events have occurred on this site. The following chart lists the event, the year the event occurred, and the corresponding historic period of the Moraine Farm.

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Historic Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of the V8 Engine</td>
<td>1914</td>
<td>1912 Farmstead</td>
</tr>
<tr>
<td>Installation of Air Field</td>
<td>1916</td>
<td>1912 Farmstead</td>
</tr>
<tr>
<td>Research of Hydraulic Jump</td>
<td>1916</td>
<td>1912 Farmstead</td>
</tr>
<tr>
<td>Dayton Wright Airplane Company, Research Div.</td>
<td>1917</td>
<td>1912 Farmstead</td>
</tr>
<tr>
<td>Development of the Bug, Guided Missile</td>
<td>1918</td>
<td>1912 Farmstead</td>
</tr>
<tr>
<td>First Private Airplane</td>
<td>1928</td>
<td>1923 Country Place</td>
</tr>
</tbody>
</table>
As the majority of historically significant events occurred during the 1912 Farmstead period for the Moraine Farm, it is the period of significance for Criterion A and the integrity of the landscape must be based on this period.

**Criterion B: Associated with the lives of persons significant in our past**

As the biographical information presented in Chapter 2 clearly demonstrates, Colonel Edward Deeds is a historical figure of national importance. Thus, the home of an important historical figure would qualify as being historically significant according to Criterion B for the National Register.

The period of significance for the association with Colonel Deeds should be determined differently than the period of significance associated with important events. As Marcosson states in Deeds' biography, "He built and developed it as a family place where he could indulge his tastes for outdoor life, carry out private scientific experiments, and commune with the stars" (Marcosson 1947, 356).

Deeds saw the Morzine Farm as a retreat from his hectic business life, and the landscape had many character-defining features of these desires, including the airplane landing garden, the gun club, the tennis court, croquet court, and the observatory. These features were prevalent in the 1923 Country Place period; thus, it should be considered the period of significance for association with a historic figure.

**Criterion C: Embody the distinctive characteristics of a type, period, or represent the work of a master.**

The historical context of Moraine Farm has established it as an example of a design in the Country Place Era. It particularly demonstrated the Country Place Era characteristics of simple clarity of spatial structure, clarity of circulation, and generally restrained plant lists. Documentation of the Olmsted Brothers' involvement in the original design supports this classification, as they were leading designers in the movement.

The period of significance for criterion C is the 1923 Country Place period.
**Criterion D: Have yielded, information important in prehistory or history**

The Moraine Farm does not contribute to criterion D.

**Landscape Integrity**

**Criterion A: Association with events that have made a significant contribution to the broad patterns of our history**

As the period of significance for Criterion A is the 1912 Farmstead, the landscape's integrity has been completely compromised. Every feature of the 1912 farmstead has been altered or removed. Pieces of the original circulation are woven into the current fabric, but materials have been altered.

- The Barn, where the V8 engine was developed, still exists. However, it has been moved off the site to the Moraine Country Club on the south side of Stroop Road.

- South Field, the site of the first private airfield, the Dayton – Wright Airplane Company, and the site for development of the guided missile, has been developed as the Huber House subdivision.

- The Moraine Farm Lake, the site of the test of the hydraulic jump for the Miami Valley Conservancy Project, retains much of its integrity. The pond exists in its original form, and in its original location. However, the pond’s setting has changed since the period of significance, and is no longer part of the existing Moraine Farm property.

- The character-defining landscape feature for Deeds’ 1928 Sikorsky, the first plane built for a private commission in the United States, was the formal airplane landing located on the slope west of the home, on axis with the music room. Most of the historic photographs of Moraine Farm from this era included a shot of the landing with the Sikorsky parked, awaiting Deeds. However, the entire airplane landing has been removed and much of the area south of its location has been regraded to accommodate the new entry drive from Stroop Rd.
Criterion B: Associated with the lives of persons significant in our past

As discussed in the statement of significance for Criterion B, Colonel Deeds considered the Moraine Farm as his retreat to enjoy life's pleasures. Thus, the visitor to the farm should be able to interpret Deeds' desires and pursuits from the features of the landscape. The 1955 period plan, representing the post 1923 Country Place period, clearly demonstrates several landscape features that defined Deeds' interests. As mentioned under Criterion A, the airplane-landing garden was very symbolic of the Colonel's interest in aviation. The Colonel had a skeet shooting range established on the north side of the field behind the house, as shooting was one of his passions. Finally, the plan shows the recreational features located off the northeast corner of the house: The tennis court and pavilion, the croquet court, and a swimming pool. All of these features have been removed. Therefore, the integrity of the recreational interpretation of the Moraine Farm has been severely compromised.

However, one of the primary features that drew Colonel Deeds to purchase Moraine Farm is intact: the breath-taking view sloping away from the house towards the river. While the subjects within the view have changed with the South Field covered by Huber Houses, and the GM Factory visible in the distance, the observer can see a great distance over the Miami Valley from the Moraine Farm property. The specific view from the Music Room window down Stroop Rd. looks remarkably the same as it did during the post-1923 Country Place Era.

Criterion C: Embody the distinctive characteristics of a type, period, or represent the work of a master.

The general feeling of the Moraine Farm is reminiscent of the Country Place Era, but there are modern additions that detract from the integrity of the design. The primary feature that compromises the integrity of the design is the current foundation planting around the house. The young shrubs and groundcover are clearly planted according to 1990s suburban design standards.
CHAPTER 7

PRESERVATION APPROACH AND TREATMENT PLAN

After the establishment of the significance and integrity of a property, the next step is to analyze the site to decide the best way to proceed with a preservation approach. The analysis of this thesis is based in the philosophy of the Secretary of the Interior’s Standards for the Treatment of Historic Properties. These standards are designed to give the philosophical framework to provide a holistic approach towards the preservation process (Birnbaum 1996, 6). The Secretary’s Standards are general guidelines to be applied towards all historic resource types: buildings, structures, landscapes, districts, etc. The Guidelines for the Treatment of Cultural Landscapes assist in applying the Standards specifically to landscapes.

Definition of Program

As the event of the New Millennium approaches, the Montgomery County Historical Society is implementing an aggressive program to increase the public awareness of Dayton and vicinity’s rich history. The historical society wishes particularly to emphasize the far-reaching impact of some of the greatest minds of the twentieth century: the Wright Brothers, Charles Kettering, J.H. Patterson, and Edward Deeds. As a function of this program, the Historical Society desires for the Moraine Farm, Colonel Edward Deeds’ estate in Kettering, Ohio, to become accessible to the public. The property, currently owned by the National Cash Register (NCR) Company, is used as a guest home for prospective customers attending equipment seminars.

Montgomery County has contracted with the researcher to fully document the history of site, specifically how it reflects the life and accomplishments of Colonel Deeds. A report listing the character-defining features, providing the significance and integrity of the property, and
recommending interpretation opportunities for tours will be prepared. The report will offer recommendations for the most appropriate preservation treatment for the property. This report will be presented to NCR to help convince them to arrange for the farm to be opened to the public.

**Discussion of the Preservation Approach Options**

The selection of the most appropriate preservation approach for the Deeds Moraine Farm was a detailed process. The following discussion demonstrates the necessary steps to make the decision of appropriate treatment. Each approach is applied to the property with a discussion of the ramifications of that approach to the site. As a result of the discussion, the most appropriate method is chosen, and the details of the treatment plan are then outlined. The four types of approaches are preservation, rehabilitation, restoration, and reconstruction. Each type as applied to the Deeds Moraine Farm is detailed below.

**Preservation Option**

*The Secretary of the Interior's Standards for the Treatment of Historic Properties* defines preservation as:

**Preservation**: the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project (Birnbaum and Peters 1996, 18).

A preservation approach for the Moraine Farm will encompass the need to document and preserve any historic materials and features remaining on the site. This process includes evaluating the condition of the historic materials to determine the amount of intervention necessary. The preservation treatment will not attempt to reverse any design changes made to the property since the period of significance. The treatment will not attempt to replace or
replicate any lost features. Due to the lack of integrity of many of the historic features of the Deeds Moraine Farm, the preservation approach is a viable option as the treatment plan.

Rehabilitation Option

The Secretary of the Interior's Standards for the Treatment of Historic Properties defines rehabilitation as:

Rehabilitation: the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical or cultural values. (Birnbaum and Peters 1996, 48)

The primary reason to select the rehabilitation approach is the need to alter the site to accommodate a new program. The rehabilitation approach for the Moraine Farm will attempt to stabilize and preserve any existent historic features on the site. The rehabilitation plan will need to thoroughly analyze the site, making notes of areas where historic integrity is strong, and documenting any character-defining features. A rehabilitation plan will accommodate new uses, while not sacrificing any of the historic character of the site. It will be possible to restore and replace any damaged or lost features, provided adequate documentation is provided. It is not the goal of a rehabilitation treatment to capture a specific time in the history of the site. Any changes to the site that have obtained historic significance in their own right may stay.

The primary reason to select a rehabilitation approach for the Deeds Moraine Farm will be if the property is to be altered to a full time house museum, as this change in program for the property will require several facilities not currently available at the farm. The increased usage for the property will most likely require an additional parking lot and a visitor center. The goal of the rehabilitation plan will be to accommodate these new features while not sacrificing the historic features or spatial relationships of the site.

Restoration

The Secretary of the Interior's Standards for the Treatment of Historic Properties defines rehabilitation as:

Restoration: the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive
upgrading of mechanical, electrical and plumbing systems and other code-
required work to make properties functional is appropriate within a restoration
project. (Birnbaum and Peters 1996, 96).

A restoration plan will select a period of significance for the site and set forth to recreate that
period’s landscape character. Any features that have been lost would need to be replaced,
provided that there is adequate documentation. Any features that have been added in the
interim that does not reflect the period of significance would need to be removed. The goal for
a restoration project will be to capture a snapshot of a particular point in history. Thus, features
that never existed together historically will not remain.

The example of the Deeds Moraine Farm offers a good opportunity to demonstrate the
process of a restoration plan. According to Criterion A of the National Register Criteria for
Significance: association with historic events, the Deeds Moraine Farm’s period of significance
was the 1912 Farmstead. Research has also uncovered abundant documentation for this
period: plans, photographs, and building blueprints. Thus restoration of the spatial organization
of the buildings will be possible. However, restoring the site to the 1912 farmstead is not
practical because this period was before the significant additions were made to the estate
house. The house would need to be returned to the 1912 configuration, and the office,
greenhouse, garage and barn would need to be returned to their original locations. A 1912
farmstead restoration plan will also need to remove the current garage and outbuildings located
on the farm. Thus, it is impractical to implement a restoration to the 1912 farmstead.

Another option for restoration is to restore the Deeds Moraine Farm to the post-1923 country
place period. As indicated in the analysis section, the spatial orientation of the primary
buildings is much like the present configuration: thus, restoration to this period of significance
is much more feasible. However, many of the character-defining features of this period are
missing: the tennis court, the gun club and the Sikorsky landing pad garden. As character-
defining features of the period, it is necessary to reconstruct these landscape features on the
site. However, reconstructing lost features is only a viable option if there is adequate
documentation of the elements. At this time, there is no photographic evidence of these items
available for review. The original design and construction documents are not available.
Additionally, when these items were removed, significant regrading occurred and consequently there is no archeological evidence of their location in the landscape. The lack of documentation of these character-defining elements in the landscape makes a restoration to the post 1923 Country Place period unfeasible.

Reconstruction

The Secretary of the Interior's Standards for the Treatment of Historic Properties defines rehabilitation as:

Reconstruction: the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location. (Birnbaum and Peters 1996, 128).

The reconstruction treatment option is very similar to aspects of the restoration period. The difference between the two lies in the amount of the historic fabric that has been lost. Restoration provides guidelines for the restoring cultural landscape features, whereas reconstruction will provide guidelines to recreate an entire non-surviving landscape with modern material. Designs that were never implemented cannot be reconstructed, and the reconstructed landscape must be clearly designated as a modern recreation of an historic landscape. Due to the fact that there is a large margin for error in a reconstruction, it is not recommended as a treatment option unless there is adequate physical and written documentation.

Reconstruction is not a viable treatment option for the Deeds Moraine Farm due to the lack of documentation for the non-surviving landscape features.

Selection of the Appropriate Preservation Approach

Due to the small amount of remaining integrity of the Deeds Moraine Farm, together with the lack of documentation for the most feasible restoration period, the approach recommended for the Deeds Moraine Farm is mixed approach of Preservation with a minor Rehabilitation to
accommodate any future program changes and to replace any noncontributing landscape features on the site.

Preservation Treatment Guidelines

According to the Secretary of the Interior's Standards for the Treatment of Historic Properties the primary goals for the preservation treatment is to identify, retain, and preserve historic materials and features (Birnbaum and Peters 1996). This section will list the primary components of the landscape, then document the historic fabric remaining in the Deeds Moraine Farm that will need to be stabilized and protected.

Spatial Organization and Land Patterns

Comparing the 1955 aerial to the present day aerial indicates that the spatial organization of the buildings is identical. No major building has been added or removed since the 1955 photo. It is important to preserve this spatial organization. A complete survey of the buildings should be conducted documenting any decay or maintenance needs.

The two photographs also indicate the integrity of the spatial organization of the north side of the house to the tree lines surrounding the field. The trees are much denser on the slope today than during the periods of significance, but the tree line has not encroached into the field. As the final remnant of the landing strip, it is imperative to maintain this spatial organization. This preservation will be tricky due to the fact that part of this field is no longer part of the Deeds Moraine Farm Property. It is recommended that Montgomery County Historical Society gains ownership of the remaining field property, or at least arranges for an historical easement.

The final aspects of spatial organization that are critical to maintain are the views to the west and the south. While the development of the Huber Homes has drastically changed the view to the west in the 1950’s, the higher elevation of the house affords a distant view over the homes to the west toward the river. This view has not changed much since the height of the Deeds’ ownership. This view should be preserved through careful pruning of the trees and careful consideration of the location of any new plantings. By no means should any building additions
be made west of the main house. Fortunately, the view to the south should retain its integrity due to the location of the Moraine Country Club golf course. The view retains a pastoral effect.

Topography
The primary goal for the preservation treatment regarding topography will be to obtain a full survey of the current topography to evaluate any subtle changes in the topography over time, which might indicate an erosion problem. Another indication of topographic problems would be any leaks or dampness in the foundations of the buildings. Any evidence of erosion on the moraine slopes should be stabilized through the least invasive method possible.

Vegetation
The initial step for the preservation of vegetation will be to obtain a complete inventory of the trees and shrubs on the site. Each tree should be listed, including its approximate age and current condition. After assessing the age and condition of the trees, any trees in poor condition will be stabilized and repaired if possible. A maintenance program will be established to maintain the health and general shapes of the trees.

Circulation
As indicated in the analysis section, the circulation of the Deeds Moraine Farm has been generally maintained, although replaced with modern asphalt. While there have been several changes to the general layout of the circulation, such as the parking lot, and the approach drive, every effort should be taken to maintain the quality of the asphalt to keep the road system in good repair.

Structures, Furnishings, and Objects
The Deeds Moraine Farm retains several structures and furnishings on the site that will be important to retain. The primary object is the large bell located on the front lawn. This bell is a good representation of the habits of Edith Deeds, who liked to collect bells. She was responsible for the large carillon located in Carillon Park in Dayton. She collected bells on her travels and the one located on the front lawn was obtained in Puerto Rico.
Further research will need to be performed to determine the importance of other site features. There are several terra cotta pots scattered around the yard, and their history should be documented. There are also light fixtures scattered around the property that should be documented for age.

A very significant remaining object on the site is the plaque indicating “Moraine Farm 1912” located on the pillar of the portico. This plaque can be traced to an Olmsted Brothers’ design, and had been salvaged from the gateway. This plaque needs to be assessed for its condition, and any maintenance necessary to maintain its condition will be performed.

**Rehabilitation Treatment Guidelines**

*Accommodation of New Site Program*

The primary goal for the rehabilitation treatment is to accommodate the new usage of the property as a museum. Due to the restrictive size of the site, it is recommended to limit the access to a controlled number of people at a time. A compromise permitting the property to remain an asset for the National Cash Register Company while also making the historic resource available to the public will be to only allow public access to the site on the weekends when the company will not be using the site for functions. Reservations should be made for tours to control the traffic on and off the site.

Even though access to the site is to be limited, there will be several design alterations necessary to accommodate the new usage for the property. While the parking lot immediately in front of the main house can accommodate 18 cars, a second lot would alleviate congestion resulting from overlap between appointment times. The best location for additional parking would be to expand the parking area adjacent to the garage system.

Another necessary addition to the site would be the installation of a visitor’s center and gift shop. This area will serve to hold visitors until their designated appointment, include offices for tour employees, and house the ticket booth. The preferred option for a visitor’s center will be to convert the garage area to accommodate this function.
Non-contributing Features

As demonstrated in the discussion of existing conditions, the primary noncontributing feature at the Deeds Moraine Farm is the foundation planting around the main house. Rehabilitation allows for the replacement of features in the landscape that detract from the historic integrity of the site. There is documentation of the original foundation planting designed by the Olmsted Brothers for the house after the expansion of 1921. The documentation also includes photographs indicating that a more complex planting was installed. It is recommended that this planting plan be restored.

Interpretation of Historic Landscape

The final goal of the Restoration Treatment for the Deeds Moraine Farm will be to provide features in the landscape to assist in the interpretation of the historically significance of the landscape. This is particularly important due to the fact that not much of the integrity remains. The most straightforward, simple way to accomplish this goal will be to install unobtrusive signs around the property containing historic photographs and text indicating the significant features of the landscape.
Chapter 8

Discussion

This section will summarize the results of the research conducted in this thesis and discuss the conclusions made regarding the research. The discussion will then turn towards a self-evaluation of this research, discussing the strengths, weaknesses, and opportunities for future research for this topic. Finally the discussion will cover the Landscape Architect's role in the future of Historic Landscape Preservation.

Conclusions

As demonstrated in chapter two, Colonel Edward Deeds had an incredible impact on the history of Dayton, and the world through his entrepreneurial spirit and creativity. Among which, he was partly responsible for great advancements in the automobile, he led the United States into World War I airplane procurement, and led the charge to arrange for flood control in the Miami Valley. Deeds' biography also demonstrated that many historically significant events occurred on the Moraine Farm as well. One of the first private airstrips in the United States was built here, and the first guided missile was launched at Moraine Farm. The detailed history of the site also demonstrates that the Olmsted Brothers' Firm in Brookline, Massachusetts had direct impact on the design of the property. The house and grounds are a good example of the Country Place design style that was popular at the turn of the Century in the United States. As such an important historic figure in American History, his life should be remembered and celebrated. Making his home available to the public would be an excellent vehicle to reach this goal through interpretation of the historic significance of the site.
Periods of significance were chosen for each criteria of significance that were appropriate for the Deeds Moraine Farm. The characteristics of the landscape for each of these periods were compared to the current conditions found on the farm. The analysis indicated that the integrity of many of the character-defining features was greatly diminished. The discussion then turned to the options of restoring many of the features that had been lost since 1955. It is imperative to have detailed documentation of every landscape feature in order to implement any restoration or reconstruction. As many of the plans and construction documentation for most of the designed features on the farm are missing, it was decided that restoration or reconstruction was not a viable option for the Deeds Moraine Farm. It was decided that a preservation plan was the appropriate approach to retain the remaining character-defining features of the farm. A rehabilitation plan was also suggested for accommodating any new program elements to be introduced to the site. The rehabilitation would include an extra parking lot, visitor facilities, and signage for the property to interpret the historic significance of the site for the public.

Self-Evaluation

The process of preparing this Cultural Landscape Report for the Deeds Moraine Farm was an excellent exercise to apply the National Park Service guidelines for historic preservation of landscapes. This process offered the opportunity to discover the wonderful landscape legacy Ohio has to offer, which is often overlooked.

The primary strength of this thesis lies in the documentation of the Olmsted Brothers' influence on the design of the 1912 Farmstead. The Frederick Law Olmsted National Historic Site provides very thorough and well documented archives for the firm's projects; thus, it is possible to be confident that the analysis of their involvement in the design process is accurate. Another strength of this project is the analysis of significance and integrity of the Moraine Farm. The National Park Service's guidelines provided a coherent, holistic approach to analyzing the significance and integrity that it is possible to be very confident in the analysis.

The weaknesses of the thesis lie in the lack of documentation for many historically significant features in the landscape: the trees, the topography, and many of the post-1923 Country Place
features. While photographs were discovered that supported the existence of these features, no plans, schematic drawings, or correspondence were found to support the size, designers, and precise locations of these features. This lack of documentation precludes any ability to reconstruct or restore any of these character-defining features in the landscape.

The primary reason for the lack of documentation was the inability to access National Cash Register’s archives. While it is not guaranteed that these archives contained any documentation or clues about these features, not knowing what is contained in the archives leaves a very large gap in the assessment. As an example, conclusions of the Olmsted Brothers’ involvement were made before the research trip to Boston was scheduled. The correspondence and notes of the Olmsteds discussed a formal garden to the west of the house. Conclusions were made that this must have been the garden installed on the property until all the plans were reviewed and none of them matched the configuration represented in the historic photos; thus, is it necessary to access all possible records and archives to make informed decisions.

The recommendations for continuing this research would be to attempt to fill in the gaps in the documentation by conducting a complete survey of the trees and topography of the site. The trees should be assessed for approximate age and condition, and the topography will need to be compared to historic plans to assess any problems with erosion. The next step would be to access the NCR archives to attempt to discover the details about the features in the landscape, which have no written documentation. The goal for uncovering this remaining documentation is to ensure that an appropriate level of significance is applied to these features. It is possible that these features were designed by a locally or even nationally significant landscape architect. Related research could be conducted on the connection of Colonel Deeds and the Olmsted Brothers. The Deeds biography indicated that he hired the Olmsted Brothers firm to design the Wright Brothers Memorial and Carillon Park. It would be very interesting to make a survey of the Olmsted projects in the Dayton area and determine if the projects had any connection to Colonel Deeds.
Landscape Architect’s Role in Historic Preservation

The fundamental role for landscape architects should be to be stewards of our cultural landscape. Landscape Architects must become aware of our cultural resources and take appropriate steps to retain them. A Landscape Architect can accomplish this through membership in historic preservation organizations and educating themselves to their local preservation issues. Another way for Landscape Architects to protect our cultural heritage is to design new development that is historically compatible with existing historic landscapes. If an historic landscape must be altered, at the very least, it is incumbent on the Landscape Architect to document the conditions currently found on the site for future reference. It is in the best interest of the Landscape Architecture profession to take the lead in the movement to preserve our cultural landscape. Preserving America’s cultural heritage will help us all to connect with our past, and provide students living examples of our landscape history.
APPENDIX A

DEEDS BIOLOGICAL TIMELINE

I. Childhood
   A. Pre-College
      1. Born March 12, 1874 near Granville, Ohio
      2. Learned discipline through difficulties of farm life
      3. Early interest in inventions
      4. Granville Academy 1891-1893
   B. Denison University
      1. Subsidized education through various jobs
         a. College Power Plant
         b. Janitor, Barney Science Hall
         c. Granville Power Plant and Water Works
         d. Scheider Machine Works, Newark
         e. Type Setter, Granville Times
      2. Extra Curricular Activities
         a. Captain of football team
         b. Beta Theta Pi Fraternity: Alpha Eta Chapter
         c. Infamous for pranks - quote
      3. Graduated Valedictorian, 1897
   C. Cornell University
      1. 1898: Attended one semester
      2. Lack of funding: quit to find job

II. Early Dayton Years
   A. Moved to Dayton 1898
   B. Employed at Thresher Electric Company
      1. Oversaw installation of electrical systems
      2. Experienced travel
      3. Reputation for Troubleshooting
   C. National Cash Register Early Years
      1. 1899: NCR hired as construction/maintenance engineer
      2. Climbed smokestack to verify loose bricks: Came to J.H. Patterson’s attention
      3. Star began to rise at NCR
      4. Sabbatical year in 1902 to oversee construction for Nabisco: chairman of the Board of Engineers at age 27.
      5. Patterson noticed Deeds’ absence, and promoted to the Assistant General Manager of NCR.
6. Deeds hires Charles Kettering to NCR
   a. Hired to assist in electrifying the cash register
   b. Kettering acquired 23 patents while at NCR
   c. Deeds discussed opportunities in automobile industry with Kettering.

III. Kettering/Deeds Cooperation
   A. The Barn Gang
      1. Improve ignition system for automobiles
         a. Worked evenings/weekends summer 1908
         b. Magneto ignition unreliable; electric can control spark extend battery tenfold
         c. 1909: Kettering quits NCR to devote all time to ignition
         d. 1909: Cadillac orders 8000 to put on 1910 model; not prepared for order, needed to incorporate and arrange to subcontract labor.
   B. Delco Incorporated: September 1909, Instant success
      1. Dayton Engineering Laboratory Company
      2. Electric Self starter developed for 1912 Cadillac-took place of crank
      3. Within 18 month Delco employed 1200, another year 2000
      4. 8 cylinder Cadillac developed in Moraine Dairy Barn to maintain secrecy, not compensated, developed as gift to Leland
   C. Sold to United Motors-consolidation of motor accessory and parts companies
      1. June 1916
      2. Deeds leaves company in 1917
   D. Delco Light
      1. Electric generators for farmhouses
      2. Sold to GM in 1919
   E. Dayton Research Laboratories
   F. Dayton Wright Airplane Company

IV. Departure from NCR
   A. Sherman Antitrust Trial
      1. February 22, 1912: 3 counts of violating SAA
      2. J.H. Patterson and 23 upper management indicted
      3. Conspiring to create a monopoly, unlawfully monopolizing the trade in cash register, and holding and carrying on a business created by a monopoly
   B. Conviction
      1. February 13, 1913: guilty verdict on all counts
      2. Sentenced Patterson $5000, and 1 year in prison. All other defendants, fines only
   C. Overturn
      1. U. S. Circuit Court of Appeals in Cincinnati overturned the conviction of Patterson et al on charges of criminal violation of the antitrust statutes.
      2. Trial court had erred in permitting NCR attorneys to present evidence that the NCR activities had been provoked by patent infringements of competitors.
      3. Flood rescue had made Patterson a national hero, politically dangerous to convict him of a crime.
   D. Departure
      1. Within a few months of overturn fired all co-defendants
      2. “One of them got me into this mess” (Allyn 1967, p 41)

V. Dayton Flood
A. Flood
1. March 23, 1913
2. 300 deaths – $100,000,000 property damage (Marcosson, 142)
3. Patterson & NCR – Citizens relief committee
4. NCR Plant Relief camp.
5. Patterson spearheaded cleanup
6. Deeds out of the country for the flood
7. Returned immediately

B. Fight for Conservancy
1. Deeds rally center for prevention
2. All counties involved must work together
3. Hired Arthur E. Morgan
4. Ohio Conservancy Act signed 2/17/14
5. Supreme Court’s upholding decision 6/4/15
6. Dayton Flood Committee established Jan 1915-purposeto lobby Ohio Congress to uphold Conservancy Act

C. Miami Conservancy Project
1. Deeds donated conservancy headquarters building $180,000 (Bernstein, 169)
2. Hydraulic jumps tested in Moraine Pond; first definitive study of the principle (Marcosson 1947, 197)
3. Arranged for bonds to be issued for conservancy during a war. Personally requested Secretary of Treasury McAdoo for the funds in November 1917.

VI. World War I
A. Commissioned as Colonel
1. May 17, 1917: Appointed to Aircraft Production Board
2. August 24, 1917 commissioned Colonel in the army, Chief of the Equipment Division of the Signal Corps.
3. Resigned from all business associations in Dayton except for Board of the Miami Conservancy District.

B. Aviation Procurement
1. Failure to prepare for war contingency: April 1917 aviation section of signal corps consisted of 52 officers 1100 enlisted men 200 civilian employees. No aviation industry, lacked aeronautical engineers, skilled workmen, and aircraft plants
2. Program included 22,500 planes –10,000 for training 12,500 for service (Marcosson 1947, 225)
3. Liberty Engine Developed. “There is only one thing to do and that is to build an all-American engine. Let us put all our money down on it.”
4. Requirements: A maximum of power and efficiency combined with a minimum of weight; capable of running as required at practically its maximum power and speed during a long percentage of its operating time; consumption of fuel and oil must be as limited as possible in order to conserve space and weight (Marcosson 1947, 236-237)
5. J. G. Vincent and E. J. Hall locked in hotel room until a design using only tested engine technology could be designed.
6. By Armistice Day, 13,894 planes constructed, 41,953 engines of which 24475 Liberty 1,078,000,000 nearly 65% of appropriation for aviation returned to treasury (Marcosson 1947, 233)

C. Relieved of Duty: May 24, 1918

D. Aircraft Investigations

1. Gutzon Borglum lead charges of “retardation of production, aeronautical ignorance, profiteering, and pro-German sympathy” (Bernstein 1998, 189).

2. Borglum complained of mismanagement, Wilson gave authority to investigate, March 21, 1918, NYT broke story of Borglum’s report

3. Lead to Senate investigation & Hughes Report

4. The evidence with respect to Colonel Edward A. Deeds should be presented to the Secretary of War to the end that Colonel Deeds may be tried by court-martial
   a. Conveying information to the Dayton Wright Airplane Company in an improper manner.
   b. Giving a false and misleading statement with respect to the progress of aircraft production. (Marcosson 1947, 273)

   a. Deeds had transferred ownership of all Dayton Company Stock
   b. The statements … are in accord with what Col. Deeds apparently believed and had reasonable cause to believe to be the facts. (Marcosson 1947, 293)

E. Developments at Moraine Farm

1. Dayton Wright Airplane Company 1917, experimental Station research and development section

2. 1918, First guided missile, “the Bug” (Johnson 1996, 63)
   a. Missile Specifications
      1) length: 12 ft 6 in
      2) height: 4 ft 8 in
      3) weight: 530 lbs. (loaded with 180 lbs. of high explosives)
      4) Speed: 120 miles per hour
      5) Range: 75 miles
   b. Designed by leading men in research
      1) Orville Wright: Propeller
      2) Ralph deplane, Noted Race Car Driver: Engine-4 cylinder, 40 horsepower
      3) Charles Kettering: Preset internal control system
         a) Guide Missile to target
         b) Shut motor off
         c) Release wings
   c. Less than 50 Bugs manufactured, none used in combat.

3. Radio telephone Dr. Frank Jewett

4. 1916 one of the first private landing fields in the U.S.

5. Wright-Martin Company tested its Model V and Model R Planes. Howard Rinehart, famous test pilot, tested these planes here

6. Orville Wright developed his split flap that made dive-bombing possible.

VII. Business after War

A. General Sugar – Havana Cuba

1. 1922 General Sugar Co.
2. 1927 Deeds Elected President
3. 1937 Merger w/ Vertientes President/chairman of the Board based out of Delaware
4. 1942 Delaware corporation dissolved – Cuban
5. 1946 Deeds Retires
6. Improvements: working conditions; increased research to improve yields; put in airstrips which became airports in Cuba

B. Niles Bement
1. Heavy machinery: drills lathes, planers, heavy machine tools cranes
2. 20's recession – lack of cohesion w/in company (many previous mergers) divisions were competing with each other
3. Deeds comes in 1925-assesses company is overly centralized. De-centralization

C. Return to NCR
1. 1930 Returned to bring NCR out of the depression
2. Restructured stock offering manner
3. Emphasized the fact that research and engineering were the heart of the business
4. 1936 arranged for Old River – one of the finest industrial recreation centers in the country. (Marcossen 1947, 102)
5. Increased company’s presence over seas. Department of Community Relations, department to see that the NCR discharges to the full its responsibilities to the community. (Marcossen 1947, 109)

D. Other Associations
1. Pan American
2. United Aircraft Corporation
3. Sat on boards of directors of 28 corporations

VIII. Philanthropy
A. Denison University
1. 1917 Purchased and deeded properties adjoining the campus that increased campus size five times (Brown, 1947)
2. Deeds endowment and annuity fund in 1919 aggregate well over 1.5million
3. Early 20's sat on the Board of Trustees as chairman of Committee on Campus and Buildings
4. Sat on the Board of Trustees through 1950.
5. Deeds Field and Stadium
6. 1923 Edith Deeds matched all money raised for new fraternity house

B. Carillon Park
1. Location: previous swamp health hazard
2. Carillon, Edith’s contribution
3. History of Dayton, and examples of inventions of the area
4. Olmsted Brothers

C. Wright Memorial
1. cooperative with Miami Conservancy District, NPS and a small group of friends
2. Hired Olmsted brothers
3. Built of granite from NC
4. Mound builder connection

D. Dayton Engineers Club
1. 1914 Engineers Club of Dayton
2. “To cement friendship to educate youth, to foster all types of engineering work in Dayton, and to hold ever aloft our devotion to the truth.” (Marcosson 1947, 139)

IX. Death: July 1, 1960.
**APPENDIX B**

**OLMSTED PLANT LIST: PLANTING ABOUT HOUSE, PLAN NO. 69**

Courtesy of the National Park Service, Frederick Law Olmsted National Historic Site

Col. E. A. Deeds  
Moraine Farm  
Dayton, O.

**PLANTING ABOUT HOUSE**  
Plan No. 69  
File No. 5506-C

Olmsted Brothers  
Landscape Architects  

Brookline, Mass.  
March 31, 1921.

<table>
<thead>
<tr>
<th>NO.</th>
<th>NAME</th>
<th>SPACING</th>
<th>QUANTITY</th>
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<tbody>
<tr>
<td>1.</td>
<td>Juniperus virginiana glauca</td>
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<tr>
<td></td>
<td>Blue-leaved Red Cedar</td>
<td></td>
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<tr>
<td>2.</td>
<td>Syringa vulgaris Sou. de Ludwig Spaeth</td>
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<tr>
<td></td>
<td>Purple-red Hybrid Lilac</td>
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<td>3.</td>
<td>Syringa vulgaris Belle de Nancy</td>
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<tr>
<td></td>
<td>Rose Hybrid Lilac</td>
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<td>4.</td>
<td>Juniperus pfitzeriana</td>
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<tr>
<td></td>
<td>Pfitzer’s Juniper</td>
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<tr>
<td>5.</td>
<td>Syringa vulgaris Pres. Grevy</td>
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<td></td>
<td>Blue Hybrid Lilac</td>
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</tr>
<tr>
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<td>Juniperus pfitzeriana</td>
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<td>Pfitzer’s Juniper</td>
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<td>Juniperus virginiana glauca</td>
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<td>Blue-leaved Red Cedar</td>
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<td>8.</td>
<td>Pinus montana mughus</td>
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<td>15</td>
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<tr>
<td></td>
<td>Dwarf White Pine</td>
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<td>9.</td>
<td>Cotoneaster dielsiana</td>
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<td>11</td>
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<td></td>
<td>Graceful Rose Box</td>
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<tr>
<td>10.</td>
<td>Taxus cuspidata, spreading form</td>
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<tr>
<td></td>
<td>Japanese Yew</td>
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<td></td>
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<td>No.</td>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Height</td>
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<td>11.</td>
<td>Pinus montana mughus</td>
<td>Mugho Mountain Pine</td>
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<tr>
<td>12.</td>
<td>Taxus cuspidata brevifolia</td>
<td>Dwarf Japanese Yew</td>
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<tr>
<td>13.</td>
<td>Taxus sieboldii</td>
<td>Siebold’s Yew</td>
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<tr>
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<td>Pachysandra terminalis</td>
<td>Japanese Spurge</td>
<td>6 in.</td>
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<td>16.</td>
<td>Rosa hibernica gravesi</td>
<td>Irish Rose</td>
<td>2 ft.</td>
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<td>17.</td>
<td>Cotoneaster horizontalis</td>
<td>Spreading Rose Box</td>
<td>1.5 ft.</td>
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<tr>
<td>18.</td>
<td>Potentilla tridentata</td>
<td>Cinque-foil</td>
<td>6 in.</td>
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<tr>
<td>19.</td>
<td>Rosa hugonis</td>
<td>Yellow Climbing Rose</td>
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<tr>
<td>20.</td>
<td>Daphne cneorum</td>
<td>Garland Flower</td>
<td>18 in.</td>
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<tr>
<td>23.</td>
<td>Hypericum calycinum</td>
<td>Aaron’s Beard</td>
<td>9 in.</td>
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<tr>
<td>24.</td>
<td>Ilex glabra</td>
<td>Inkberry</td>
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<td>25.</td>
<td>Euonymus radicans vegetus</td>
<td>Round-leaved Evergreen Creeper</td>
<td>2 ft.</td>
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<tr>
<td>26.</td>
<td>Ampelopsis veitchi lowii</td>
<td>Cut-leaved Boston Ivy</td>
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<tr>
<td>27.</td>
<td>Cornus florida rubra</td>
<td>Red Flowering Dogwood</td>
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<td>28.</td>
<td>Cotoneaster Simonsii</td>
<td>Simon’s Roxe Box</td>
<td>3 ft.</td>
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<td>29.</td>
<td>Rosa rugosa Conrad F. Meyer</td>
<td>Ramanas Rose</td>
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<td>30.</td>
<td>Hypericum moserianum</td>
<td>Gold Flower</td>
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<tr>
<td>31.</td>
<td>Phlox subulata alba</td>
<td>Moss Pink</td>
<td>9 in.</td>
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<tr>
<td>32.</td>
<td>Diervilla rosea</td>
<td>Pale Pink Wiegela</td>
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<tr>
<td></td>
<td>Name</td>
<td>Height</td>
<td>Quantity</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------</td>
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</tbody>
</table>
| 33. | Spiraea thunbergii  
Snow Garland                           | 2.5 ft. | 20       |
| 34. | Syringa vulgaris Michael Buchner  
Pale Lilac Hybrid Lilac                     |        | 4        |
| 35. | Philadelphus avalanche  
Hybrid Mock Orange                        | 3 ft.  | 22       |
| 36. | Elsholtzia Stauntonii  
Purple Mint Shrub                          |        | 4        |
| 37. | Cydonia japonica maulei  
Japanese Quince                                    | 3 ft.  | 22       |
| 38. | Hybiscus syriacus The Banner  
Dbl. Blue Rose of Sharon                    |        | 1        |
| 39. | Clematis montana rubens  
Red Clematis                                      |        | 4        |
| 40. | Rosa Sargent  
Pink Climbing Rose                              |        | 1        |
| 41. | Rosa Hiawatha  
Carmine Climbing Rose                           |        | 1        |
| 42. | Rosa Silver Moon  
White Climbing Rose                              |        | 1        |
| 43. | Wisteria multiflora  
Blue Wisteris                                      |        | 1        |
| 44. | Rosa Dr. Van Fleet  
Shell Pink Climbing Rose                         |        | 2        |
| 45. | Rosa American Pillar  
Cherry Climbing Rose                             |        | 2        |
| 46. | Clematis Ramona  
Soft Blue Clematis                                |        | 1        |
| 47. | Retinospora filifera  
Thread-branched Cypress                          |        | 2        |
| 48. | Taxus cuspidata upright form  
Japanese Yew                                       |        | 1        |
| 49. | Juniperus pfitzeriana  
Pfitzer's Juniper                                  |        | 3        |
| 50. | Rosa Lady Duncan  
Salmon Pink Climbing Rose                        | 2 ft.  | 12       |
| 51. | Exochorda grandiflora  
Pearl Bush                                         |        | 1        |
| 52. | Rosa rubrifolia  
Red-leaved Rose                                   | 3 ft.  | 34       |
| 53. | Pyrus niedzwetzkyana  
Flowering crab                                    |        | 1        |
| 54. | Kerria japonica  
Globe Flower                                      | 3 ft.  | 14       |
<table>
<thead>
<tr>
<th>No.</th>
<th>Species Name</th>
<th>Height</th>
<th>Quantity</th>
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<tr>
<td>55.</td>
<td>Syringa vulgaris Mme. Lemoine Hybrid Lilac</td>
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<td>56.</td>
<td>Rosa spinosissima Scotch Rose</td>
<td>2 ft.</td>
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<td>57.</td>
<td>Pyrus floribunda atrosanguinea Dark Red Flowering Crab</td>
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<tr>
<td>58.</td>
<td>Juniperus sabina procumbens Dwarf Savin</td>
<td>2.5 ft.</td>
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<tr>
<td>59.</td>
<td>Taxus canadensis American Yew</td>
<td>2.5 ft.</td>
<td>22</td>
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<tr>
<td>60.</td>
<td>Euonymus radicans acutis Evergreen Creeper</td>
<td>2 ft.</td>
<td>35</td>
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<tr>
<td>61.</td>
<td>Aspidium acrostichoides Christmas Fern</td>
<td>12 in.</td>
<td>40</td>
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<tr>
<td>62.</td>
<td>Aspidium spinulosum Wood Fern</td>
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<td>63.</td>
<td>Cornus florida Flowering Dogwood</td>
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<tr>
<td>64.</td>
<td>Syringa vulgaris Prinz Notger Hybrid Lilac</td>
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<tr>
<td>65.</td>
<td>Populus nigra fastigiata Lombardy Poplar</td>
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<td>66.</td>
<td>Thuja occidentalis Arbor Vitae</td>
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<td>67.</td>
<td>Thuja occidentalis Arbor Vitae</td>
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<tr>
<td>68.</td>
<td>Ampeloplas Veitchii Boston Ivy</td>
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<tr>
<td>69.</td>
<td>Leucothoe Catesbaei Leucothoe</td>
<td>2 ft.</td>
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<tr>
<td>70.</td>
<td>Mahonia aquifolium Mahonia</td>
<td>2 ft.</td>
<td>42</td>
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<tr>
<td>71.</td>
<td>Syringa sanguinea rubra major Red Hybrid Lilac</td>
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<tr>
<td>72.</td>
<td>Ligustrum regelianum Regels Privet</td>
<td>3 ft.</td>
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<tr>
<td>73.</td>
<td>Cotoneaster horizontalis penpusilla Spreading Rose Box</td>
<td>18 in.</td>
<td>16</td>
</tr>
</tbody>
</table>
LIST OF REFERENCES


