DEATHSCAPES: DESIGNING CONTEMPORARY LANDSCAPES TO SOLVE MODERN ISSUES IN CEMETERIES

by

JESSICA FAITH HIGGINS

Under the Direction of Marianne Cramer

ABSTRACT

Cemeteries have been lost in the modern landscape of today. These once celebrated spaces are today labeled as taboo -- only to be visited on mournful occasions. However, by applying the modern landscape issues of sustainability, community open space and respecting and aiding the healing process to cemetery design, deathscapes can once again function as an integral element of the neighborhood fabric. This thesis explores cemetery history and present in search of design elements for a contemporary burial site that addresses these issues.

INDEX WORDS: Cemetery design, Deathscape, Landscape Architecture, Sustainable cemetery, Modern cemetery, Park cemetery, Graveyard, Cemetery

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DEDICATION

To Dave, Wena, Danielle and Robert, for always pushing me forward.

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CHAPTER 1

INTRODUCTION

Introduction

Burial grounds, graveyards, cemeteries, memorial parks and deathscapes; while all of these words describe the same type of space within a community, each word conjures a different vision. Burial grounds are thought of to be archaic and primitive while graveyards bring visions of Medieval church-side grounds with wooden crosses or even Horror films. Cemeteries are packed full of stone monuments, giant spindly oak trees and black crows. Memorial parks are common, grassy spaces that are typically only visited for funerals. Deathscape is not even a word in the English dictionary. Perhaps some may think it the name of a new Stephen King novel. This thesis, however, proposes the term as the future of cemeteries – where designs with death become a part of the lives of the living. A future where a cemetery once again becomes a part of a sustainable community fabric and is used as a public green space on a daily basis while still serving the needs of those in mourning or who have expired.

Research Question

This thesis explores modern issues with cemetery design in the west. As communities continue to expand and place more pressure on natural resources, cemeteries must adapt in order to allot these resources to the living. Healthy communities require outdoor public spaces in which to interact with nature as

well; however, cemeteries are mainly used as spaces for burial and mourning, not community open spaces. The question then becomes: How can cemetery design change to address the modern issues of sustainability and community open space while respecting and aiding the healing process?

Purpose of Research/Significance

Today, cemeteries in America are an underutilized resource. Issues with design, governance and public sentiment have removed cemeteries from communities and labeled them as taboo ground. The purpose of this thesis is to explore why and how these developments took place and develop possible solutions. By addressing the issues explored in this paper, cemeteries can become part of a sustainable community while also functioning as a space of mourning and healing.

Methodology

Using Deming and Swaffield's Landscape Architecture Research as a guide, a variety of research methods were used to explore both historic and modern interpretations of sites. Historical interpretive research methods along with research from secondary sources built a foundation of information to interpret cemetery design development through time. Descriptive strategies, such as direct observation, secondary description and case studies, were employed to gain a greater understanding of current use in three selected sites (Chapter 3, Case Studies). Interpretive strategy "ethnography" also was employed to explore these case studies. Formal and iconographic analysis of cemetery design history and three case studies yielded a comprehensive list

of design elements that should be applied to contemporary cemetery designs. This list of elements was then applied to a proposed site in Athens, Georgia, as the projective design strategy “design as research”. This “design as research” proposal was then evaluated for its successes and failures as a solution to the issues discussed.

Research Limitations/Delimitations

Limitations

Personal observations for each case study were conducted over a five-day period due to limited travel time and funding. Studies also were carried out during the winter months (November and January); therefore, activities observed are likely more common during seasons with more temperate weather. These observations were performed at different times of the day using two methods: walking and sitting. All activities and visitors to/on the site could not be recorded due to time constraints and the size of each site. These observations were only used to determine types of activities performed on the site, as well as how frequently the site is visited and method of access (vehicular/pedestrian).

How site design aids the healing process from grief has been extrapolated from elements promoting contemplation in a space. While no research was found listing exact design elements or qualities that directly help heal a sense of loss and grief, there is evidence that exposure to nature speeds and aids physical and mental recovery in older, terminal and injured patients. This exposure to nature coupled with the mental processes involved in grief may aid in the healing process by promoting contemplation.

Delimitations

In this paper, detailed historic and current research was limited to cemetery design in the northwestern hemisphere. Various cultures and religions, while referenced, are omitted in detailed research. Due to their historical significance in the West, this paper focuses on Christian and secular traditions. While the research question states that sustainability will be discussed and assessed, the current definition of sustainability as “people, planet, profit” will be bypassed. Instead, this paper will focus on environmental sustainability in order to specifically discuss community open space as a separate issue, as well as eliminate the discussion of economic profit in detail. While issues with governance/profit are discussed, the examination of current cemetery profits and their sustainable/unsustainable practices will be left for further research.

Thesis Structure

Chapter 2 starts with a comprehensive look at cemetery design history, focusing on how designs were sustainable, used as community open space and respected and aided the healing process. Research and analysis of modern contemplative spaces was used in order to extract themes and design elements from cemeteries of the past. The end of each section/time period concludes with a matrix of elements in each category (Sustainability, Community Open Space and Healing Process) that was used in the design(s) discussed. The research explaining the premise for these elements is discussed later in Chapter 4. Chapter 3 details three case studies examining each site’s history as well as current issues and observations. Chapter 4 offers an interpretation of

the findings from Chapters 2 and 3, drawing design conclusions. Chapter 5 uses the findings from Chapter 4 to develop a new cemetery design. Finally, Chapter 6 evaluates the proposed design employing the criteria from Chapter 4 and discusses implications for further research.

CHAPTER 2

HISTORY OF CEMETERY DESIGN

Pre-Nineteenth Century Burial

Ancient Burial

For millennia, humans have ritualized death. As man transitioned from hunting and gathering to agriculture, the need arose for a dedicated space for burials. With the shift to agriculture, the development of religion often followed with ideas of life after death. Services and ceremonies with song, dance, treasures and provisions were components of the ritual carrying the dead to the next life. The burial ground developed into an integral part of ancient communities, a place where every resident would rest before their journey onward.

Today, little is known about these early rituals other than what the artifacts burials left behind imply. Some debates among archeologists place the earliest intentional human burials in southwestern Eurasia during the Middle Paleolithic Age, more than 100,000 years ago. Burial grounds such as Skhul Cave in Israel reveal burial practices similar to those performed throughout the centuries up to the present. Archeologists have found similarities with body positions reflecting the rising and setting sun and moon cycles, body paint, pit and mound burial

structures, and grave goods such as jewelry, food, water, tools and everyday objects (Smirnov, 1989).

In the Neolithic Era, Shahr-e Sukhteh (5,000 BCE), near where the borders of Pakistan, Afghanistan and Iran meet today, food, water, dishes, flowers and other quotidian objects were discovered buried among the nearly 250 graves; supplies in preparation for each body's Resurrection Day. The burial ground, set between the two large settlement areas of the city, reveals a distinct separation between the space of the living and a space of the dead while still maintaining a close proximity (Sajjadi, Foruzanfar, Shirazi & Baghestani, 2003). A majority of the graves excavated indicates a preference for digging individual graves for each newly deceased resident, regardless of the cultural practice of material reuse. The exact reason for this is not known today, although it has been speculated that the excess space of the area provided residents the opportunity to simply expand the cemetery as opposed to exhuming remains to reuse a space (Piperno & Tosi, 1975). However, the community's resistance to disinter the dead also could be a reflection of religious beliefs that prohibited disturbing the dead.

Permanent settlements around the world later began to develop more elaborate methods for disposal of the dead. Remnants of customs placing bodies in earthen mounds and pits were common throughout Western Europe and the Americas. Viking tumuli (burial mounds) are found throughout Sweden, Norway, Britain, Finland and mainland Europe from the eighth through the twelfth centuries. Similar structures by Pre-Colombian Native Americans in

Figure 2.1: Nacoochee Indian Mound, White County, Georgia. *Photo by Author.*

North America from the thirty-fourth century BCE through the fifteenth century CE can still be seen in the United States, scattered throughout the Midwest and the South (Figure 2.1). Pharaohs and the wealthy of ancient Egypt built mounds of stone called stabas, later developing into true pyramids. Mayans and some Native American tribes used caves or carved tombs into mountains and hillsides. Other societies developed their landscapes for the departed horizontally instead of vertically. Etruscans constructed elaborate necropoli with streets dug into the earth like trenches and large structures resembling homes containing several rooms with stone beds. Like the Etruscans, ancient Greeks also constructed necropoli with group tombs; however, later the custom transitioned to individual graves. Citizens of ancient Athens and ancient Rome often practiced cremation before transitioning to individual graves as well. Tombs were located outside

the city, often along highways in vaults, as these ancient societies often feared propinquity to the dead (Sloane, 1991). In fact, the ancient Roman Law of the Twelve Tables states: “no dead body [was allowed to] be buried or cremated inside the city” (Sloane, 1991, p.17).

Each culture placed provisions for the afterlife, similar to those found in the earliest of burials, including food, water and tools in the tomb. Bodies frequently were adorned with jewelry and extravagant clothing. Wealthy Egyptians were often buried with more elaborate provisions, such as furniture, mummified pets and even mummified slaves. Even though rituals and burials differed from region to region and within a region, this common theme throughout the western hemisphere drove historic burial practices. However, as Christianity grew to be the predominant religion in the West, a shift in beliefs regarding the afterlife resulted in a more codified and simplified burial ritual and technique.

Early Christian Era Burial (1 CE – 1400 CE)

After the fall of the Roman Empire, populations across Western Europe and the Mediterranean, once under Roman occupation, were predominantly Christian. Christianity drew upon early Jewish traditions of burial including washing the deceased with spices and aloes, wrapping the body in white linen before interment. The body was now seen as an empty vessel, without the soul and thus without personhood. Although early Jews left offerings of food, personal items and sometimes lamps inside the grave with the body, this tradition is no longer practiced (Hillers & Kashani, 2007). Perhaps these were the remnants

of Paleolithic traditions. However, later Jews and early Christians left no goods like food, water, furniture or slaves buried with the body; these provisions were not needed for the Christian afterlife. The body simply needed to be preserved, as a whole, for the resurrection. For bodies of unnatural death, such as murder or accident, the entire body's flesh and blood needed to be buried together (Hillers & Kashani, 2007). The white linen wound around the body would often encompass clothing or rags stained with the blood of the victim in order to bury the body as whole (Hillers & Kashani, 2007). Bodies were commonly buried directly in the ground or tomb, resting on a bier; later Jews and Christians would adopt the coffin. With this, a simplification of ceremony took place. Bodies were buried on consecrated ground in simple wooden caskets. These consecrated (or sanctified) grounds were often located church side and although research has not yielded conclusive evidence of when Christians began to use consecrated grounds for cemeteries, the practice was widespread throughout Christian Europe for two millennia. A eulogy was often read and the body interred in a grave with a simple wooden cross or headstone. Flowers left by the grave were frequently the extent of articles left for the dead. Early Christian beliefs held death in a positive light, as a joyful moment and as a reward for good life and a relief for those sick and suffering (McCane, 1997).

Renaissance Burial (1400–1600 CE)

In the Middle Ages, previous burial practices were called into question. Prior to this time, cemeteries were typically placed within the churchyard, often located close to the heavens on the top of a hill. Graves were very shallow and

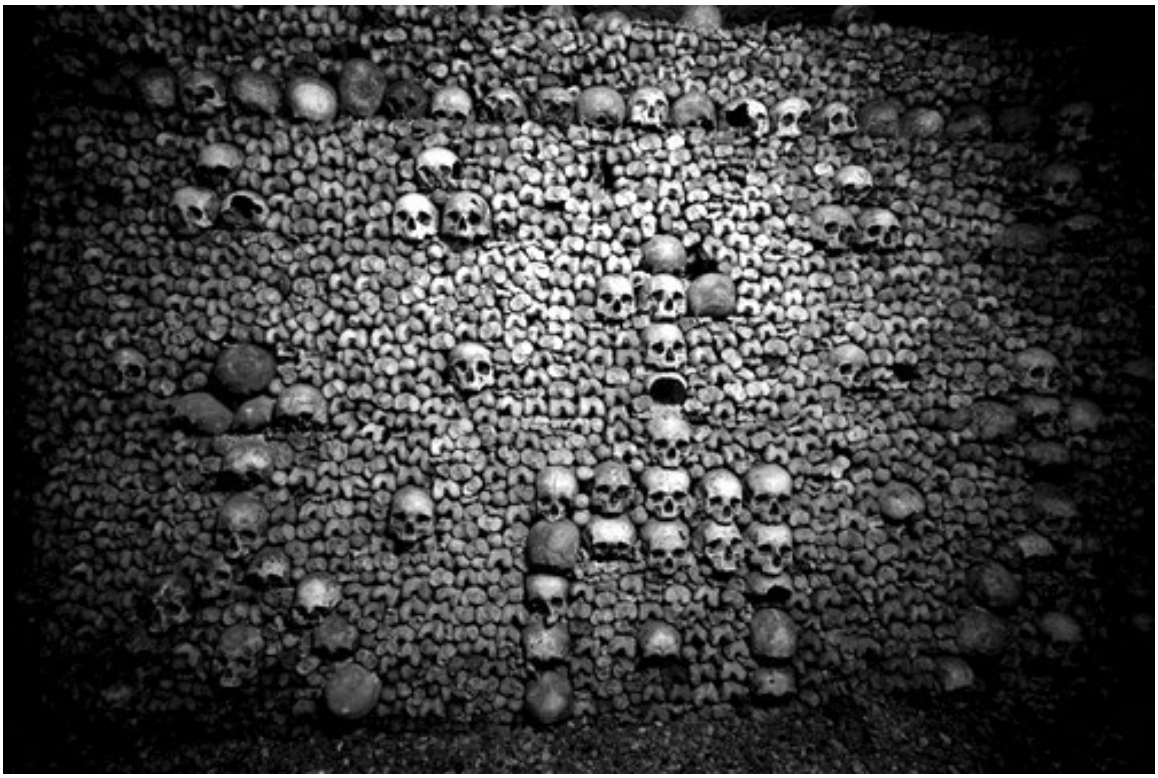


Figure 2.2: Cemetery of the Innocents Ossuary, Paris, France.
Photo by Stephen Alvarez.

often reused due to a limited amount of consecrated ground in the town. In the past, it was common to exhume bodies once decomposed in order to reuse the grave. The bones of the deceased were gathered and placed, collectively, in a community or family ossuary (Figure 2.2). However, during the Middle Ages many graves contained several decomposing bodies at once. The bubonic plagues that tore through Europe during the sixth and seventh centuries, and again in the mid-fourteenth century (Black Death), resulted in thousands of shallow graves. Negative attitudes about the wilderness and its association with “evil” and the unknown prevented residents from expanding burial grounds outside the town; therefore, bodies still infested with fleas and disease were concentrated around the church. The Christian majority of the town was exposed

to the disease-infested grounds at least once a week when attending service. Additionally, rain water runoff often carried toxins from decomposing bodies downhill into the town's water supply. England was one of the first countries to react. In 1665, as a result of the Great Plague of London, a new law was enacted, requiring all remains to be buried at least six feet underground.

A social geography of these Christian churchyards reveals a segregation of citizens who passed with a "good death" from those who suffered from "bad death". Most Christians, regardless of the condition of death, were buried east-west, with feet towards the east and heads towards the west. There is no definitive answer for why this particular orientation has been used for centuries. For many Christians today it is believed this orientation is to await Judgment day and view the coming of Christ. However, looking back to pre-Christian burial practices and, in particular, societies with celestial-based religions, this tradition is likely the result of centuries of influences from other cultures. For Christians in the Middle Ages, placement within the grounds often denoted a citizen's place in the afterlife. Those from a "good death", who died of natural causes or were killed prematurely, were placed on the south, west or east side of the church (Worpole, 2003). Bodies from a "bad death" – those who committed suicide, criminals and unbaptized children – were buried on the north side of the church, where the sun never penetrated (Worpole, 2003). As plagues devastated Europe, grave space was at a premium. Social lines disappeared as the churchyard filled up from south, east and west to north.

With the Renaissance, burial customs once more became an intricate and elaborate affair. Like the Pharaohs of ancient Egypt, the wealthy, royalty and even Popes began commissioning large elaborate above-ground tombs of marble and stone, often covered with intricate carvings and dramatic statues, frequently well before death. Many chose to be interred in the church as well, within naves and chapels as well as in the floor. Funeral processions for these social elite often were huge affairs attended by entire cities and foreign dignitaries and the tombs themselves were often used for political reasons as much as for preparation for resurrection. Sometimes rival families would construct elaborate tombs and headstones to overshadow one another. Families also would purchase plots adjacent to that of their rivals' in order to erect demeaning statues or structures.

Figure 2.3: Cimitero Comunale, Syracuse, Sicily. *Photo by Author.*

In the early to mid-Renaissance vegetation began to disappear from cemeteries. With large and small plagues still ravaging Europe and the New

World, the public remained apprehensive over the root causes of disease. Vegetation was suspect so removing plants from cemeteries, the last resting place of infected citizens, was seen as a possible solution. Trees were sometimes left; however, weeds, grasses and perennials were promptly removed not only from the tops of graves but in between grave sites as well (Figure 2.3). Toward the end of the Italian Renaissance in the sixteenth century, the Catholic church publicly supported this notion with an edict proscribing vegetation within cemeteries (Jeane, 1989). These practices carried over to the New World, taking root in early settlements.

Colonial Burial in America (1600 – 1800 CE)

Through the end of the nineteenth century, cemeteries in the New World continued simplistic pre-Renaissance burial techniques. Simple headstones or wooden crosses were commonly found throughout the colonies both before and after the American Revolution. Coffins often were not used prior to English immigration in the eighteenth century, as supplies were scarce. Time was limited as well, leaving little for grieving. Therefore, traditional cloth bound bodies were placed directly into consecrated ground around churches and missions. The majority of English immigrants continued to bury a majority of their dead in churchyards as well. With the addition of the family unit to the colonies, we see a reemergence of the use of coffins. Puritan New Englanders, however, created secular graveyards in accordance with their passive rebellion against “papist” practices (U.S. Department of the Interior, 1992). Many New England towns built community cemeteries away from the church on secular grounds. Here we

Figure 2.4: Wormsloe Plantation Cemetery, Savannah, Georgia. *Photo by Author.*

find simple wooden crosses or headstones marking individual graves along with some of the first markers absent of traditional Christian iconography (such as skulls).

In the southern colonies, as plantations grew so did the need for graveyards outside of the traditional township. Large tracts of land between neighbors resulted in private plantation cemeteries, still found today throughout the South (Figure 2.4). Here we often find graveyards clear of vegetation ("scraping"); perhaps remnants of the Renaissance edict from the sixteenth century (Jeane, 1989). By the turn of the eighteenth and nineteenth centuries, hilltop folk cemeteries began to reflect a unique style of burial to the South. Scraping, typically performed once or twice a year by the community, was

regarded as respect for the dead and a reflection of cleanliness and tidiness. Mounded graves along with wooden or stone markers demarcated one grave from another. Decorations such as shells, personal items and toys would often adorn each headstone to help distinguish the interred. It is not until the nineteenth century that we see a shift in American views of death and the idea of the cemetery as a public space.

Findings

Table 2.1: Pre 19th Century Burial Findings

Time Period of Burial	Sustainability	Community Open Space	Healing Process
Ancient	+direct ground burial +cremation		+placing of goods
Early Jewish/ Christian	+direct ground burial +biodegradable coffins +grave reuse		+placing of goods
Renaissance			
	-ground scraping		
Colonial	+direct ground burial +biodegradable coffins +biodegradable headstones	+community grave clean up	+placing of goods +headstone/burial individuality
	-ground scraping		

Table 2.1 displays the positive (+) and negative (-) elements of each time period effecting sustainability, community open space and the healing process. Sustainability, community open space and the healing process in pre-nineteenth

century society were not of primary concern. Early societies often molded their rituals around supplies available to them and space, thus performing sustainable burial practices unintentionally and often purely out of necessity for survival. Prior to the Industrial Revolution, towns and cities found no immediate need for community green spaces, especially in cemeteries. During these times, cities and towns often were much smaller and less dense and therefore still maintained a closer relationship with the natural environment. However, how ancient societies viewed death and transitioned through the healing process can only be speculated by studying their remains. There is reason to believe that recovering from loss was aided by religious explanations of what happens after death. Before the development of Christianity, adorning corpses with jewelry and leaving goods for the deceased to carry with them to the afterlife perhaps comforted the living with a sense of a temporary parting instead of permanent loss. Physical forms of burial often reflected sky and earth meeting, such as tumuli, pyramids and mounds as well. These were possibly an expression of the afterlife meeting reality, or heaven meeting hell in order to explain what happened to a loved one after death.

Rural/Park Cemetery Movement

Through the end of the nineteenth century, America trailed behind most European design trends. Before the American Revolution, France had begun to question the accepted social norms imposed on the country by the aristocracy and church leaders. The 1740s began a period known for its “dechristianization” of burial practices (Etlin, 1984). Instead, a scientific approach was applied to

the design of cemeteries. Overcrowding in urban cemeteries had remained a problem, especially in larger European cities like Paris and London. Reports of “effluvia” and “maisma”, foul smelling air, and “dissolved semi-liquid human flesh” in urban graveyards, drove the public to search for a sanitary solution for disposing of the dead (Pregill & Volkman, 1999, p.456). Because urban cemeteries were creating unhygienic conditions in the city churchyards, the French reform movement, beginning in the 1740s, aimed to push cemeteries, slaughter houses, prisons and hospitals outside the city limits.

Then in 1760 the Industrial Revolution began in Great Britain, spreading throughout Western Europe and eventually to the United States. Virtually overnight, cities in Europe and England changed. Mills, factories and smokestacks multiplied. Thousands of workers migrated into the city. Urban living conditions quickly grew hazardous and cramped as land within the city became extremely valuable. Spaces containing vegetation in the new industrial cities were rare. Overcrowding became a major issue and the city became a toxic living environment. In 1799, after the French Revolution, the reformist ideal to remove cemeteries from inside the city limits of Paris finally gained momentum. The health concerns from 60 years prior still existed at the turn of the century; however, the new industrialized environment of Paris and a newer philosophical outlook led citizens to reevaluate the designs of cemeteries as well as their geographic locations.

This new philosophical view, later known as Romanticism, began with the Industrial Revolution and would carry through the nineteenth century and

Victorian Era. The European, and later American, public rejected the rational study of nature and sociopolitical standards previously established in the Age of Enlightenment in favor of a sentimental and idyllic view of nature. With this came a new view of death and the afterlife. Over the past few centuries, the church used society's natural fear of the afterlife as a tool to maintain a pious and benevolent population. What was once a celebrated moment of freedom from pain and suffering had become the feared Day of Judgment with unbaptized infants sent to limbo. Romantic society rejected this philosophy, viewing death as not an ending but the beginning to a new journey (Sloane, 1991). Children who died were revered for their eternal purity and innocence (Figure 2.5). Death became a safe place away from the harsh realities of what was seen as a cruel world (Snyder, 1991). Early Romantic writers like Edward Young and artists like John Constable also influenced European design. Their

Figure 2.5: Victorian Children's Grave, Bon Adventure Cemetery, Savannah, Georgia. *Photo by Author*

depictions of landscapes were dominated by wild forests, endless meadows and glassy lakes. The Arcadian landscape of classical white tombs set amongst the waters and woods of gardens came into fashion as early as the middle of the eighteenth century. Poet Alexander Pope erected an obelisk, set amongst a tree grove in his personal garden, in memory of his mother. Later, in 1778, French revolutionary writer Jean-Jacques Rousseau was interred in a modest tomb amid poplars on the Île des Peupliers at Ermenonville. This act of burying a nonroyal outside the predefined space of a graveyard reveals a rejection of an aesthetic canon dating back over 1,000 years (Sloane, 1991).

After decades of reforms and years of design competitions amongst Parisian architects, Père Lachaise cemetery was created in 1804. Placed outside the bustling streets of Paris, on the former hilltop estate of Françoix d'Aix de la Chaise (confessor to King Louis XIV), Père Lachaise became the first rural/park cemetery. The once finely manicured estate was transformed with long winding walkways amongst elaborate monuments and massive trees with breathtaking vistas of Paris. The sublime, the beautiful and the picturesque English aesthetic theories, developed in the 18th century, were applied to the cemetery landscape for maximum aesthetic impact (Sloane, 1991). The French bourgeois flocked to the cemetery, eager to escape the chaos and cacophony of the industrial city and immerse themselves in nature. American and European tourists made special trips to Père Lachaise as well, with some traversing the cemetery before visiting the city itself (Sloane, 1991). The design caught on and quickly spread throughout Western Europe and England.

However, such ideas were slow to take root in America. Ties with the French developed during the American Revolution were broken at the start of the French Revolution in 1789. Romanticism did not establish in the New World until the 1830s because of a fundamental difference in attitudes toward nature. While the European developments of cities over centuries allowed urban citizens to detach from nature much earlier, Americans, even in the early 1800s, still struggled with nature daily. From battles with the forest for agricultural land to skirmishes with Native Americans over territories, nature was an obstacle for Americans to overcome, not embrace and idealize (Sloane, 1991). However, as the Industrial Revolution took hold in America in the 1820s, citizens in large industrial cities began to feel the urge to reconnect with nature, just as the Europeans did decades prior. The River School of painting, with its grand views of the untamed American landscapes, rose from this need to rediscover nature and its Creator (Wolff) . The American philosophy of Transcendentalism also branched off Romanticism in the 1830s. This philosophy, among other beliefs, stressed stewardship of the land, direct experiences and simple living (Pregill & Volkman, 1999).

By 1831, Mount Auburn Cemetery was established just outside Cambridge, Massachusetts. Inspired by Père Lachaise in design and location, the cemetery brought public attention comparable to its European counterpart. Thousands flocked to the serene oasis of this garden of stone and memory, where visitors found “a programmed sequence of sensory experiences” intended to provoke a sense of melancholy and the sublime (Linden-Ward, 1989).

Figure 2.6: Engraved view of Lowell Lot, Mount Auburn Cemetery, 1847. *Engraving by James Smilie.*

The paramount elevation of nature over man's built structures provided an environment where visitors could immerse themselves in the outdoors (Figure 2.6). A short-lived partnership with the newly formed Massachusetts Horticulture Society resulted in an arboretum on the cemetery grounds, further showcasing Mother Nature's creations. Americans were thrilled to accept this new concept celebrating society's newfound love of nature and meditation over memory.

The tourism industry was quick to respond, offering guidebooks, tours and eventually established public transportation directly to the cemetery via horse-drawn trolley. Mount Auburn eventually gave into pressure from the public for

facilities and in 1861 provided restrooms for visiting women and children. Later a Reception House selling snacks and providing shelter for those waiting for public transportation was added as well. The hordes of visitors eventually became a problem for the cemetery trustees. Vandalism, graffiti and inappropriate loud behavior by visitors resulted in a number of restrictions and tighter security. Mount Auburn hired more guards and posted specific visiting hours for visitors who possessed no direct affiliation with the interred. For several years, Sundays were reserved for those visiting family within the cemetery and carriage access was restricted to those with a pass or ticket.

These issues did not prevent the spread of rural/park cemeteries throughout the United States. Even after the end of the Industrial Revolution in the 1870's, the movement persisted throughout the Victorian Era, eventually paving the way to public parks. Socially conscious landscape architects Fredrick Law Olmsted and Calvert Vaux, inspired by the open unprogrammed spaces available to the public in these rural/park cemeteries, eventually designed New York City's Central Park in 1857. The design characteristics of rural/park cemeteries – their dominating presence of vegetation, passive spaces and use by the public as a recreational green space – materialize in the Olmsted-Vaux design (Figure 2.7). Both Olmsted's parks and the rural/park cemetery were influenced by the romantic English landscapes of the 18th and 19th centuries.

The rural/park cemetery movement's interest in sanitary disposal of bodies and preservation of space for parks eventually lead to a renewed interest in cremation as well. Up until the eighteenth century, cremation in the Christianized

Figure 2.7: Central Park, 1894. *Photo by J. S. Johnston.*

West was rarely practiced. The Catholic church proclaimed cremation unacceptable for Christian burial as early as the 1600s (Sloane, 1991). The act was viewed as the destruction of the body before its resurrection, preventing the dead from entering the Christian afterlife, and the cemetery was considered the "resting place" for the corpse while it awaited judgment (Sloane, 1991). However, with the Industrial Revolution, the societal concerns of hygiene and the new mechanized efficiency of life gave way to a new school of thought concerning cremation. The cremation reform movement was small, relatively unsuccessful in America, and mostly confined to upper and middle class citizens such as lawyers and doctors, despite its advocacy for social equality and lower prices (Sloane, 1991). However, the movement harnessed the same issues and concerns over burial that initially resulted in the rural/park cemetery movement and applied

the logic to cremation. Supporters were drawn to the scientific and practical nature of cremation, arguing that the process was simply an acceleration of natural decay with the elimination of dangerous “effluvia” and “maisma” gases (Sloane, 1991). Nevertheless, the movement lost momentum in the United States as Christians continued to argue against the practice, insinuating that it reflected pagan beliefs and rituals. In 1886, the Roman Catholic Church officially forbade the practice through a Vatican edict (Bachelor, 2007).

Figure 2.8: Stockholm Crematorium, Stockholm, Sweden. *Photo by Author.*

Rural cemeteries were ground-breaking designs of their time. For the first time in over 1,000 years, society actively responded to current burial issues and created new design solutions. These oases from industrial conditions in the city gave way to the urban parks of today and stressed the importance of man’s connection to nature. The former health issues with graveyards, prior to

the rural/park movement, became driving factors in the study of microbiology, later changing burial techniques in the twentieth century. With time, however, cities continued to expand and many of the issues rural/park cemeteries strove to resolve once again became problems. By the 1870s, cities grew around the once remote cemeteries, bringing noise, pollution and crime with it. Concerns with grave robbers and overcrowding (with no restrictions on monuments) as well as view obstruction plagued many of the rural/park cemeteries in the East.

Findings

Table 2.2 displays the positive (+) and negative (-) elements of each cemetery discussed effecting sustainability, community open space and the healing process. The rural/park cemetery movement communicates society's need for community open space and the healing process in nature. Again, we see an absence of intentional sustainable design. However, sustainable amenities such as direct public transportation access and planted park-like designs rose from a societal need for a public greenspace. The heavy passive recreational use of these cemeteries by all classes became an important step in why and how cemetery spaces were designed in the future. The elaborate, and in many cases intimate, designs of headstones and tombs coupled with the ease and comfort of lamenting by a grave in a park setting encouraged mourning in public spaces. This transformed the cemetery into a landscape aiding the healing process as well.

Table 2.2: Rural/Park Cemetery Movement Findings

Cemetery/Movement	Sustainability	Community Open Space	Healing Process
Père Lachaise	+planted space increase +minimal turf +large trees	+used as public park +drew international community use	+provides journeys + vistas +headstone individuality +architectural symbolism +atmosphere (culture) promoted contemplation and grieving +paramount presence of nature
	-large suburban footprint		
Mount Auburn	+planted space +minimal turf +direct public transportation access	+used as public park +direct public transportation access	+provides journeys +vistas +headstone individuality +architectural symbolism +atmosphere (culture) promoted contemplation and grieving +paramount presence of nature
	-large suburban footprint	-community misuse led to more stringent security	
Cremation	+small footprint	+provides more space for community use	+personalized options for display/location

Lawn Park Cemetery Movement

By the 1850s, after 20 years in America, the rural/park cemetery movement was in its prime. Tension inside the United States between the Northern and Southern states was nearing its breaking point; however, this did not prevent cemetery trends from filtering down into southern cities such as Atlanta. In 1851, Adolph Strauch, a Prussian-born horticulturalist trained in England, began a tour of the United States. Strauch's friend and mentor, European park reformer Prince Herman von Puckler Muskau, encouraged Strauch to travel and broaden his knowledge of design. By 1852, Strauch had journeyed through Texas and up the Mississippi River to Cincinnati where an old acquaintance persuaded him to permanently settle. Strauch's work on the suburbs and estates in the area quickly became known and in 1855, after he was asked to critique the design of Spring Grove Cemetery, was offered a design position on the Spring Grove staff. Training in England gave Strauch a preference for the English romantic landscape style, favoring large expanses of turf (Figure 2.9). He criticized the disorganized clutter of headstones and fences he found in Spring Grove. The cemetery association agreed and Stauch soon began work.

A marsh in the center of the property was consolidated and converted into a series of small ponds, drying several sections which were converted into plots. Strauch then removed the outer wall of the cemetery, replacing it with a sloping roadway and rows of dwarf pines. Strauch's designs concentrated on the overall effect of the cemetery. He aimed to remove all individual and family plot fences

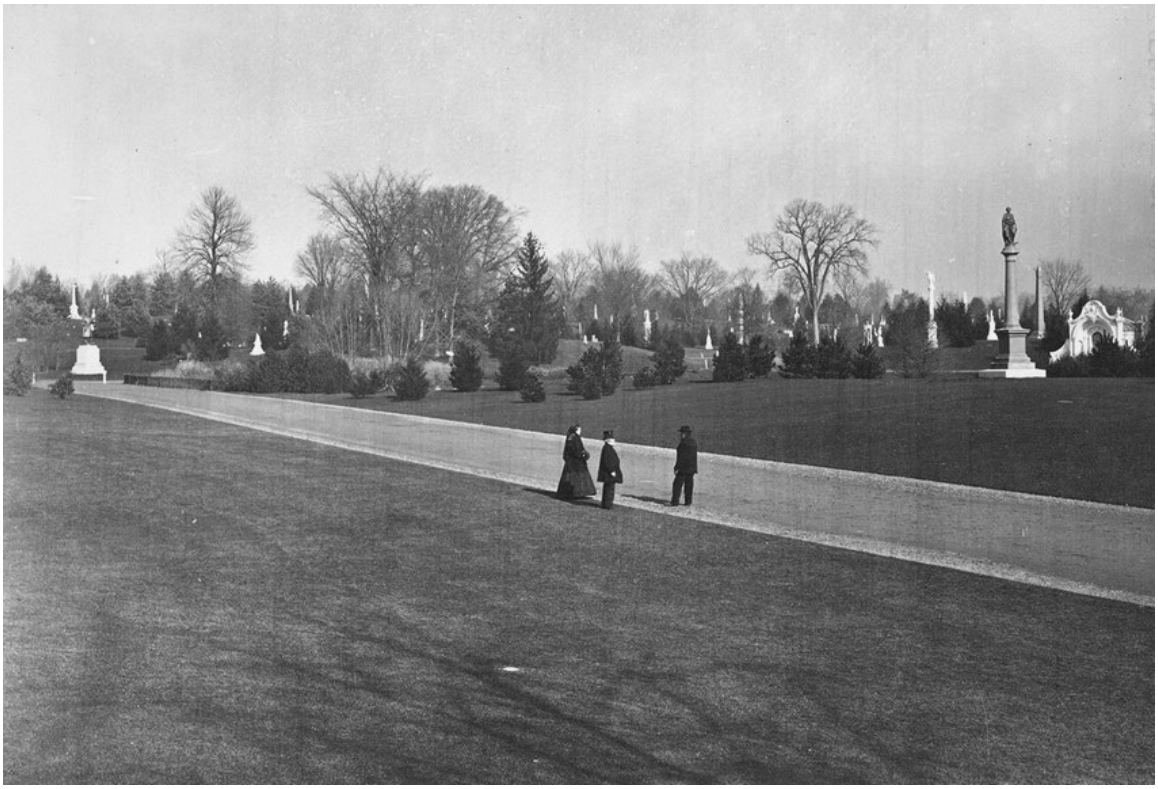


Figure 2.9: Historic Spring Grove Cemetery, Cincinnati, Ohio. *Image courtesy of Spring Grove Cemetery.*

and demarcations as well as restrict family plots to one artistic and individualistic monument surrounded by small simple headstones for each interred individual. He believed in the power of art and statuary in the landscape and supported families to create sculptural monuments, not monotonous obelisques and columns. Strauch also understood that monuments were indicative of family and community pride: excluding such objects would hinder each family's individual expression.

It was promptly observed, however, that in order to achieve a successful uniform landscape with appropriate monuments, changes were needed in the governance and maintenance of cemetery plots. In 1859, Strauch accepted a new permanent position as the superintendent on the cemetery staff. This

precedent has changed cemetery management to this day. The new position allowed Strauch to not only continually design the cemetery as it expanded, but also make critical decisions pertaining to individual lots. New monuments erected in the cemetery required his approval before construction. Slowly, the cemetery plots transferred from individual ownership, maintenance and care to perpetual care. Both new plot owners and those who already owned plots were given the option to buy perpetual care at the time of plot purchase or pay an annual fee (Sloane, 1991). Private gardeners and family plot fences were slowly pushed out of the cemetery and maintenance crews sodded and cared for the expansive lawns and trees throughout the property.

Advances in technology from the Industrial Revolution allowed for the meticulous upkeep of large-scale turf. The lawn mower was invented in 1827 and patented in England in 1830. Traditionally, turf was allowed to grow much longer than what is acceptable today, primarily due to the slow and cumbersome tool of the trade: a scythe. By the 1860s, lawn mowers became available, making the meticulous upkeep of turf easy and affordable.

Strauch's new lawn park cemetery plan, however, was not met with open arms. While the cemetery association and fellow designers such as Frederick Law Olmsted supported Strauch's design plans, many plot owners and members of the community opposed the changes. As workers began demolition of the cemetery walls in 1855, lot-holders called on local police to end the work arguing that such changes required approval from family members of the deceased (Sloane, 1991). Strauch also found resistance from the community

as he controlled monument styles and refused to allow elaborate displays of individual expression once applauded by romantics. Strauch was accused of "Anti-American eccentricities" and "heathen principles" as he began transitioning the cemetery to a lawn park (Sloane, 1991). Maintenance and funding quickly became issues, too. While the lawn mower made lawn care more efficient, the vast expanses of turf required large crews of maintenance workers, especially during the summer and fall. Prices for perpetual care continued to rise, often forcing lower classes to purchase nonendowed individual spaces along the perimeter of the grounds where family members were often separated. For middle and upper classes, handing over plot maintenance to the cemetery further distanced families from the deceased. Survivors were no longer left with the responsibilities of grooming their family's plots. Still, the lawn cemetery, even in its more simplified form, attracted visitors interested in walking, picnicking and taking in the views.

Findings

Table 2.3 displays the positive (+) and negative (-) elements of each cemetery discussed effecting sustainability, community open space and the healing process. In many ways, the lawn park cemetery movement continued the trends set by the rural/park cemetery movement. However, the transition to large expanses of turf with high water demands and private ownership with perpetual care eventually led many lawn park cemeteries to financial troubles. Nevertheless, these cemeteries continued to provide public park space for the surrounding communities. The small restrictions on headstones allowed for a

more uniform space with intermittent statuary rather than the dissonant stones of the rural/park cemeteries. Winding pathways continued to provide vistas and contemplative journeys for visitors and those in mourning as well.

Table 2.3: Lawn Park Cemetery Movement Findings

Cemetery/Movement	Sustainability	Community Open Space	Healing Process
Spring Grove Cemetery		+used as public park	+provides journeys + vistas +family headstone individuality +architectural symbolism +reduction of stimuli
	-large expanses of turf -private ownership and perpetual care		

The American Civil War

With the Civil War beginning in 1861, distance between family and the deceased increased. As soldiers died on battlefields far from home, new industries sprung up to aid families to bring their loved ones back. Issues with decomposing bodies, especially in the southern summer heat, created a demand for innovative solutions. New technologies for caskets made of steel with air-tight linings and refrigerated railroad cars were in high demand. Still, often these innovations could only slow or contain decomposition, and family members were often forced to identify loved ones who were already in later stages of decay.

The emerging profession of embalming finally took hold in these hard times. Previously only used for preserving medical cadavers for study, embalmers often followed troops around and set up quarters awaiting battles during the war (Faust, 2008). While their services were expensive and often unsettling to soldiers, there was a constant demand. Families were able to identify bodies and given the chance to say their farewells to the deceased prior to burial.

Before the war, individuals often passed away in the home. The body was often washed and dressed by a relative before being placed in the coffin. A wake was often held in the parlor of the home before the funeral procession drove (often with a carriage or, for the poor, a bier) to the cemetery for a graveside service. With the body already now prepared by the embalmer, families simply needed to hold the wake and purchase a plot. With cramped conditions in the city, middle and lower class families often could not afford housing with parlors large enough to hold the traditional wake. Families began to use funeral parlors provided by undertakers to hold wakes. By the end of the war it was common for bodies to never enter the home again after passing on the battlefield or in a hospital (Sloane, 1991). The family was nearly completely removed from death. No longer did one pass away in the home, have family prepare a body, hold the wake in the home or have family maintain the grave.

For many families, graves were no longer close to home. Hundreds of soldiers were buried in unmarked or mass graves. Often men were buried with personal items for identification if their families later exhumed and reinterred the body elsewhere closer to home. Others were simply wrapped in whatever cloth

could be found (often burlap sacks) and lowered into graves with nothing else. Coffins were considered a luxury and very few, mostly high-ranking officials, were buried in them. Toward the end of the war, soldiers were frequently reduced to numbers for identification; however, no methods were completely successful (Faust, 2008). In 1864, Arlington National Cemetery in Virginia was established as a burial ground for Civil War Soldiers after cemeteries in cities and towns were reportedly filled by soldiers earlier in the war. Here, Strauch's lawn plan was applied. The original wooden grave markers were later replaced by government-issued white headstones that give the cemetery a professional uniform appearance today.

Memorial Park Cemetery Movement

The privatization of cemeteries, growing use of embalmers and expanding services of undertakers continued to grow after the end of the Civil War in 1865. In 1862, Louis Pasteur discovered the modern form of pasteurization. This, along with other medical innovations of the turn of the century, resulted in a drop of death rates across Europe and America. Society continued to distance itself from death, and the funeral industry began to form. The South began its long recovery from its loss and the North continued to urbanize. In 1893, Chicago hosted the World's Columbian Exposition in celebration of the 400th anniversary of Christopher Columbus' discovery of the New World. The fair presented a new view of the world, a design of neoclassical white stone monuments and buildings along planned city grids and lanes. From this exposition, the City Beautiful Movement formed and with it, a new attitude towards green spaces

in the city and urban planning. Strauch's lawn park cemetery style quickly spread throughout the North. However, Strauch's original vision was only used as a template and many of the issues he strove to solve once again became problems. In an attempt to mimic both the lawn park plan and the City Beautiful Movement, the public began to place oversized monuments in the cemeteries. Stauch believed that "gaudiness is often mistaken for splendor and capricious strangeness for improvement" (Sloane, 1991, p.104).

With the turn of the twentieth century, there arrived a new solution to these issues. Doctor Hubert Lewright Eaton is accredited for founding not only one of the most famous and controversial cemeteries to this day, but also the memorial park concept and the modern funeral industry. After a failed silver mining operation in Nevada, Eaton journeyed to Los Angeles, California, in 1912. He took a job as a salesman and manager for a small dilapidated six-year-old cemetery on twelve acres in the hills of Tropico (present day Glendale). This cemetery, called Forest Lawn, experienced a 250% sale increase in the first year of Eaton's employment, primarily due to his "before need" plans (Rasmussen, 2000). These "before need' packages – often including embalming, casket, headstone, plot and funeral services – were sold to individuals before death in order to ease pressure of funeral expenses on family members. By New Year's Day 1917, just three months before America entered into World War I, Eaton decided to completely revamp the cemetery (which had grown to 55 acres) into what is now known as the memorial park style.

Eaton built off of Stauch's plans and the lawn park cemetery movement, favoring the overall effect of the cemetery over individual monuments. Expansive hills of perfect rolling turf, broken only by evergreen trees, punctuated by classical statuary comprised the bulk of the cemetery. In a cemetery now titled Forest Lawn Memorial Park, small, flat bronze plaques are set just below ground level marking each grave, rendering them a secondary element in the landscape (Figure 2.10). To those visitors standing atop or at the foot of a hill, the headstones are virtually invisible, giving the cemetery the essence of an English landscape park. Eaton persuaded new pre-need customers to relinquish their "monument privileges" with a 10% discount on packages for headstones conforming to his new vision of memorials (Rasmussen, 2000). The cemetery continued to expand and by 1930, two chapels (replicas of a 600-year-old English church and a legendary Scottish church) were built on the property hosting not only funerals, but weddings as well.

Figure 2.10: Plaques of Forest Lawn Memorial Park, Glendale, California. *Photo by Author.*

The memorial park plan had an unprecedented effect on the American funeral industry. The consolidation of amenities into the full-service funeral home has allowed society to completely distance itself from death. While this makes funeral planning easier for citizens, it supports compartmentalization of the funeral industry. Strict regulations of headstones into simple memorial plaques allows for a more uniform look and demonstrates equality; however, it also creates an impersonal and manufactured environment. These memorial plaques, once believed to provide easier cemetery maintenance, actually cost more to maintain. In areas plagued by earthquakes and expanding/contracting soils, plaques shift, costing hundreds of dollars to level again. Lawn care has become a major issue due to diseases, fungi and water restrictions in arid environments. Limitations on personal decorations, as well as a lack of seating, hinder activities associated with the healing process as well. Nonetheless, the memorial park design quickly spread throughout the United States to climates without the means to support it.

Findings

Table 2.4: Memorial Park Movement Findings

Cemetery/Movement	**Sustainability**	**Community Open Space**	**Healing Process**
Forest Lawn Memorial Park		+used for weddings	+reduction of stimuli
	-large expanses of turf -private ownership and perpetual care	-strict rules for behavior/use	-limits headstone individuality

Table 2.4 displays the positive (+) and negative (-) elements of Forest Lawn Memorial Park effecting sustainability, community open space and

the healing process. With the memorial park movement, there was a shift in emphasis from community open space and aiding the healing process to ease of maintenance and profit. Although the chapels opened up for weddings as well as funerals, the grounds were no longer used for park space due to strict rules for behavior. The placement of headstones flush with the ground allows for a more uniform space with attention drawn to cheerful statuary; however, such restrictions on personalization of plaques likely impeded the healing of mourners. Eaton's expansive use of turf in a drought-plagued region also endangers future water allocation to residents of Los Angeles. As water prices increase in the future, so does the risk of draining remaining perpetual care funds to water the site's turf.

Woodland Cemetery Style

With the twentieth century, the difference in cemetery design styles between America and Europe grew significantly. As post-World War America boomed with industry, cemetery design continued with the privately owned, business-oriented memorial park plan. However, in 1907, pre-war Munich, Germany hired Hans Grässel to create a series of smaller public cemeteries. Rejecting the large acreage and paramount monuments of the rural/park and lawn park cemetery styles, which were still in use, Grässel created Munich Waldfriedhof. Constructed beneath the canopy of a large forest, Waldfriedhof was later known as the first woodland cemetery. Grässel's intent was to create a cemetery where the headstones and the presence of the body were secondary to that of nature and the forest. However, Grässel's design closely followed the

Figure 2.11: Skogskyrkogården Path, Stockholm, Sweden. *Photo by Author.*

established rural/park cemetery design standards and is now simply considered "a formal variation," and not a considerably new design style (Constant, 1994). With World War I, innovative cemetery designs were put on hold in Germany; however, the woodland style quickly spread north to Scandinavia.

Today, the most famous example of a woodland cemetery style is The Woodland Cemetery (Skogskyrkogården) in Stockholm, Sweden (Figure 2.11). In 1915, architects Gunnar Asplund and Sigurd Lewerentz won an international competition for the design of Stockholm's new cemetery. The design and construction took over 25 years to complete, and today is not only a UNESCO World Heritage Site, but also a major tourist attraction, home to over 100,000 graves, a public park and more importantly a feasible model for future for

cemetery design (“Världsarvet Skogskyrkogården”). The site was originally an abandoned gravel quarry, overgrown for years by pine trees and destined to be a metro stop along a new line. Funded and run by the city of Stockholm, the designers strictly limited the use of Christian or other religious icons in order to preserve the Swedish outlook of religious freedom and diversity. The design focused instead on the healing power of nature with more pagan and specifically Nordic iconography (Constant, 1994). The designers kept the pine forest that had overgrown the site and used local materials such as stone and wood to tie the elements of the site design together with the surrounding landscape.

With the success of Skogskyrkogården, woodland cemeteries multiplied throughout the Nordic and Germanic countries in the following years. After World War II, cemetery designers with socialist ideals strove for an environment of equality. In 1952, The General Cemetery in Doorn brought the woodland cemetery style to The Netherlands, with Dutch modifications, to emphasize the more secular nature of government and modern societal ideals (Clayden & Woudstra, 2003). Wim Boer’s design included maintaining the existing forest, an auditorium to serve as a secular chapel, room for expansion, a columbarium and a separate but equal area for Catholic ceremonies. The site contains no spatial hierarchy either through plot size or headstone regulations. Unlike previous designers, Boer separated the vehicular traffic of the site from the pedestrian traffic. A parking lot for cars near the auditorium is provided for visitors and processions; however, those wishing to venture into the site are forced to proceed by foot beyond that point. Boer used the existing woodland not to create

a protective canopy like Skogskyrkogården, but instead used it to create a series of rooms and boundaries framing clearings where headstones are placed.

Many woodland cemetery designs also incorporated areas for disposal of cremains. Although the 1886 Catholic Church edict barred many Christians from cremation in southern Europe and America, the decree had little effect on Scandinavian citizens at the turn of the twentieth century. The liberal and practical stance of Scandinavians towards disposal of the dead coupled with strict views of separation between church and state allowed cremation to flourish in the region. In 1884, due to popular demand, arrangements were made by the government to construct a crematorium just north of Stockholm ("Cremation in Scandinavia," 1884). Later, England legalized cremation through the Cremation Act of 1902. Eventually, the Catholic Church lifted the ban on cremation in 1963 and by 1966 Catholic priests were permitted to officiate during cremation ceremonies.

Although surrounded by controversy since the 1600s, cremation today offers a variety of choices to those who select it as a final means of burial. Beginning in the first half of the twentieth century, England and Scandinavia offered memorial gardens as a final resting place for scattered cremains. These spaces offer a variety of approaches, with some as manicured landscaped gardens with rosebushes and hedges while others are wild woodland or open meadows like Skogskyrkogården. Many survivors, however, choose to scatter ashes in a place of great significance to the deceased such as a mountain, lake or at the base of a tree. Cremains have the option for burial as well, allowing

grieving family and friends to lament at a headstone. Others may choose to purchase a small niche in a columbarium, which also allows grieving relatives to visit a demarcated spot. There is always the alternative to display the ashes in an urn in a survivor's house as well. The flexibility of a final resting place for cremains makes cremation the most versatile burial option today.

Findings

Table 2.5: Woodland Cemetery Style Findings

Cemetery/Movement	Sustainability	Community Open Space	Healing Process
Munich Waldfriedhof	+maintained existing forest		+paramount presence of nature
Skogskyrkogården (The Woodland Cemetery)	+maintained existing forest +public funding and ownership provide perpetual care +site reuse +use of local materials	+used as public park +direct public transportation access	+provides journeys + vistas +headstone individuality +architectural symbolism +paramount presence of nature
General Cemetery	+maintained existing forest +pedestrian emphasis		+paramount presence of nature
Modern Cremation	+small footprint	+provides more space for community use	+personalized options for display/location

Table 2.5 displays the positive (+) and negative (-) elements of each woodland cemetery effecting sustainability, community open space and the

healing process. The woodland cemetery movement was, in many ways, the continuation of the rural/park cemetery movement and the lawn park cemetery movement philosophies and ideals. Many of the same amenities to the healing process and community open space carried through the late 1800s and into Munich Waldfriedhof and Skogskyrkogården. There is, however, a major increase in sustainability. The Woodland Cemetery introduced the preservation of the natural environment of existing sites as well as site reuse. A shift of governance back to the state allows a tax-funded perpetual care fund for the preservation of the space. With public ownership of the site, citizens once more can use the space as a public park as well.

Contemporary Cemetery Design (1960 – 2000 CE)

By the second half of the twentieth century, the role of the cemetery in postmodern society came under examination. Cemetery Almere-Haven in The Netherlands, built in 1975, concentrated on the functionality of a cemetery as a part of the urban fabric rather than as a separate entity located inside an urban setting. Christian Zalm designed the cemetery as a member of a larger team designing the new community of Almere. The Projectburo Almere planning team envisioned a new town where all aspects of daily life were combined, not separated as previously practiced (Clayden & Woudstra, 2003). The first items built in this ideal community were the public house and Cemetery Almere-Haven in order to “create public awareness, acceptance and identity [with the] new community” as a “public space” (Clayden & Woudstra, 2003, p.200). The designers placed the cemetery close to the center of the community

on two artificial mounds along a dyke in order to raise the plots above water level. A bike path and sidewalk connecting the neighborhood and the town center runs through the cemetery, promoting its use in daily life. The cemetery edge remained undefined with no walls or boundaries in order to continue an uninterrupted flow though the community. Instead of placing strict regulations on headstones, Zalm created a series of small rooms defined by trees and hedges. In these rooms, he allowed a variety of headstone sizes and shapes, believing freedom in grave design works within small spaces, creating “limited chaos” and “variety” (Clayden & Woudstra, 2003).

In 1985, cemetery designers in Spain devised a plan in stark contrast to the cemetery designs of the past two hundred years. The Igualada Cemetery in Barcelona, Spain, is reminiscent of the elaborate below-ground necropoli of the Etruscans rather than the lush grounds of the cemeteries in northern Europe and in America (Worpole, 2003). Here, designers Enric Miralles and Carme Pinós designed a journey into the sandy earth of a dry river valley where rough, unfinished materials evoke an abandoned construction site (Figure 2.12) (Robinson, 2010). Gabions and sculptural elements with rusting untreated mild steel and weeds colonizing cracks and crevices age the site and give a sense of expiration. The site contains a sequence of mausoleums in concrete walls with sliding steel doors. Unlike the pristine lawns and woodlands of other designs, the slow descent to the desert floor and placement of corrosion-susceptible mild steel enhance a sense of finality and death in the space. According to Clayden & Woudstra, the use of these elements allow the community to foresee the end of

Figure 2.12: Igualada Cemetery, Igualada, Spain. *Photo by Andrew Kroll.*

the site's existence and therefore, create a maintenance plan so it may "continue [to] provide a valuable resource to the community and the environment" (Clayden & Woudstra, 2003, p.206).

Fifteen years later, in 2000, architect César Portela envisioned a cemetery that stood in defiance of nature, rather than acceptance of its decay. Along the Costa da Morte in Spain, the cemetery at Finisterra (Fisterra) is composed of fourteen granite cubes, each holding twelve burial niches and placed with separate "axis mundi" ("César Portela," Worpole, 2003). The white cubes of timeless stone are placed along a seaside cliff amongst native grasses and shrubs, facing defiantly into the salty breezes and waves of the Atlantic Ocean, "listen[ing] to the infinite echo of the horizon" (Worpole, 2003, p.189). The long


Figure 2.13: Finisterra Cemetery, Costa da Morte, Spain.
Photo by Loft Productions

vistas provided from each tomb and the constant sounds of the ocean provide a peaceful place for visitors to contemplate and bathe in the presence of nature (Figure 2.13). The site "is a fundamentally timeless space, in its plastic and poetical expression of the eternal within the spatial and temporal limits of the human being...the sphere where a transcendental relationship between man and 'the beyond' is established and developed" ("César Portela").

Findings

Table 2.6 displays the positive (+) and negative (-) elements of each contemporary cemetery discussed effecting sustainability, community open space and the healing process. A study of contemporary cemetery design reveals a response to some of the major issues of past designs through history. A shift

to xeriscaping, using native plantings and limiting turf, actively acknowledges problems with water shortage and invasive/exotic species. Designers are showing concern for how spaces are used, how cemeteries fit in a community, as well as a site's future use once fully occupied. Many design elements for contemplation borrow from the previous movements. Several rural/park and lawn cemetery design elements such as vistas, subtraction of stimuli, water and headstone individuality have been reapplied in modern designs as well.

Table 2.6: Contemporary Cemetery Design Findings

Cemetery/Movement	Sustainability	Community Open Space	Healing Process
Cemetery Almere-Haven		+used as public park +used as a greenway	+headstone individuality
Igualada Cemetery	+xeriscaping +no turf	+future allowance for site reuse by community	+inner focus +emphasizes time and natural decay
Fisterra Cemetery	+native planting		+water +vistas +reduction of stimuli
		-undeveloped area	

Natural Burial

The concept of giving the cemetery back to the land was later incorporated into the most recent design style: natural burial. Although the concept of natural burial took place with the beginning of mankind, its reintroduction as a viable burial option began in 1993 with Carlisle Cemetery in the United Kingdom.

Natural burial officially came to the United States five years later in 1998 at the Ramsey Creek Preserve in South Carolina. Natural burial's reduced cost, elimination of embalmment, simple headstones, connection to nature and sustainability appeals to a new generation of environmentally conscious citizens (Worpole, 2003). Colney Wood in Norwich, England, opened in 2000 to provide protected space where the human body could once again turn back to earth. Here, headstones marking individual graves must be biodegradable like the bodies they mark. Although this system contradicts the 5,000+-year-old urge humans have had to create a permanent mark on the earth, the idea has been met with open arms by citizens who possibly see that graves only need to be temporary as a location of grief for those who have survived the deceased. Colney Wood lies on 12 acres of trust-protected land where only native species can be planted and uncremated bodies must be buried in simple, biodegradable coffins. The site was designed in order to slowly repair the "past mismanagement" of the site as it moves back to its natural state (Worpole, 2003).

In the United States, the natural burial concept has been more slowly accepted. However, in 2006, the Monastery of the Holy Spirit, a Trappist monastery in Conyers, Georgia, opened its 2,200 acres of protected grounds to natural burial. Here, at Honey Creek Woodlands, deliberate absence of design evokes untouched Georgia wilderness (Figure 2.14). The cemetery offers burials for unembalmed full bodies and cremated remains in both forest and meadow landscapes. Activities such as hiking and walking to explore the natural beauty of the woodlands are encouraged via dirt trails. Hiking guidelines can be found on

the cemetery website for those who have purchased burial rights or are family members of the deceased.

Figure 2.14: Honey Creek Woodlands, Conyers, Georgia. *Photo by Author.*

However, this site is not only a cemetery. It is a small tract of land embedded into a large protective corridor surrounding Honey Creek and the heavily polluted South River. The corridor and cemetery serve as natural stream buffers and wildlife habitat. Snapping turtles, swamp rabbits, wild turkey, coyotes, bobcats, deer and countless birds are found throughout the property. To protect these creatures and their habitat, Honey Creek Woodlands uses forest management and remediation (like controlled burning) to maintain a healthy forest. The cemetery has also placed strict rules on its more than 300 total burials. All remains must be placed within 100% biodegradable containers (wood, wicker and wool coffins are common), and all markings or decorations must be natural or biodegradable. For those wishing to place a headstone on their grave, small, natural flat stones carved with the deceased's name and

dates are available. Cedar grave-side benches can be purchased from the monks at the monastery and plants native to the area may be planted on or near the graves. Many families simply allow nature to take over the burial mounds, allowing the plots to eventually merge with the natural environment. Although very little design is visible in the cemetery, strong themes of natural decay and becoming one with nature pervade the site.

Findings

Table 2.7 displays the positive (+) and negative (-) elements of the natural burial cemeteries effecting sustainability, community open space and the healing process. Natural burial was the reaction of a new generation to issues plaguing cemeteries today. This dramatic reversal of practices from modern Memorial parks and the funeral industry exposes a new desire for low impact, sustainable burial options. Emphasis on using the site as a space for forest, meadow and stream reparation as well as burial show future planning and the preservation of natural space is of upmost importance as time moves on. By restricting elements added to the sites to biodegradable materials, unembalmed bodies and native plants, those interred in the space are allowed to decay naturally and again become a part of the natural environment. While these rules restrict what may be placed graveside by visitors, the act of personalizing a grave or headstone is not hindered and still promotes a healthy healing process.

Table 2.7: Natural Burial Findings

Cemetery/Movement	Sustainability	Community Open Space	Healing Process
Colney Wood	+biodegradable headstones +native plantings +biodegradable coffins +site reparation +trust protected natural site	+trust protected community space	+headstone individuality +grave gardens +journeys +inner focus +paramount presence of nature
			-non-biodegradable decorations restricted
Honey Creek Woodlands	+biodegradable headstones +native plantings +biodegradable coffins +site reparation +trust protected natural site +no embalmed bodies	+allows hiking and walking	+grave gardens +journeys +inner focus +paramount presence of nature
		-restricted to plot owners/family	-non-biodegradable decorations restricted -headstones restricted to those provided

Historical Findings

Table 2.8: History Findings

Cemetery/Movement	Sustainability	Community Open Space	Healing Process
Pre-Ninteenth Century Burial	+direct ground burial +cremation +biodegradable coffins +grave reuse +biodegradable headstones	+community grave clean up	+placing of goods +headstone/burial individuality
	-ground scraping		
Rural/Park Cemetery Movement	+planted space +minimal turf +direct public transportation access	+used as public park +direct public transportation access +drew international community use	+provides journeys +vistas +headstone individuality +architectural symbolism +atmosphere (culture) promoted contemplation and grieving +paramount presence of nature
	-large suburban footprint	-community misuse led to more stringent security	
Lawn Park Cemetery Movement		+used as public park	+provides journeys +vistas +family headstone individuality +architectural symbolism +reduction of stimuli
	-large expanses of turf -private ownership and perpetual care		

Memorial Park Cemetery Movement		+used for weddings	+reduction of stimuli
	-large expanses of turf -private ownership and perpetual care	-strict rules for behavior/use	-limits headstone individuality
Woodland Cemetery Movement	+maintained existing forest +public funding and ownership provide perpetual care +site reuse +use of local materials +pedestrian emphasis	+used as public park +direct public transportation access	+provides journeys + vistas +headstone individuality +architectural symbolism +paramount presence of nature
Cremation	+small footprint	+provides more space for community use	+personalized options for display/ location
Contemporary Cemetery Design	+xeriscaping +no turf +native planting	+used as public park +used as a greenway +future allowance for site reuse by community	+headstone individuality +inner focus +emphasizes time and natural decay +water +vistas +subtraction of stimuli
		-undeveloped site	

Natural Burial	+biodegradable headstones +native plantings +biodegradable coffins +site reparation +trust protected natural site +no embalmed bodies	+trust protected community space +allows hiking and walking	+headstone individuality +grave gardens +journeys +inner focus +paramount presence of nature
		-restricted to plot owners/family	-non-biodegradable decorations restricted -headstones restricted to those provided

Table 2.8 displays the positive (+) and negative (-) elements of each cemetery movement effecting sustainability, community open space and the healing process. Through each historical movement, societal views of the role of the cemetery are reflected through its design and placement. Pre-nineteenth century burials in Europe and North America focused on the utilitarian aspect of the cemetery, often performing sustainable burial practices as a result of necessity, not choice. The space remains community property and is used on a daily basis; however, it is not used as a community open space. While religion may have developed as a way to cope with death and explain its mysteries, cemetery design provided little to help and aid the healing process of those mourning within its boundaries. With the rural/park cemetery movement, however, there was a dramatic reversal of these practices. The cemetery became a part of the community and through design displayed numerous methods to help with the healing process and stimulate contemplative thought.

Again, sustainability was of little concern; however, the Romantic love of nature and subsequent park-like setting of rural/park cemeteries made these spaces green once more.

After the reintroduction of the cemetery into public life in the late 1700's, a renewed interest in cemetery design led to at least five new cemetery design movements over the next 200 years (Figure 2.15). Each movement responded to the previous movement's issues and to society's view of the graveyard. With the lawn park cemetery movement, emphasis on the overall appearance of the cemetery and the popularity of the English lawn style resulted in a less sustainable design. However, the style continued to draw park users and promoted the healing process. The memorial park movement continued in this direction, attempting to suppress the cemetery's ambiance of death and replace it with a cheerful English park setting.

The woodland cemetery movement and subsequent contemporary design and natural burial then became society's reaction to sustainability issues within the cemetery setting. Many of the techniques used to promote healing and contemplation in past designs were reapplied with a sustainable intent. Woodland cemeteries and some contemporary cemeteries began to draw community users again as well. Natural burial, however, unveiled a complete shift in cemetery design goals from preservation and memory to decay and disappearance. The new green society of today responded to global issues by focusing on the sustainable aspect of the cemetery, allowing community open space to be of less concern. Many design aspects of the healing process, again,

have carried over to natural burial; however, design techniques are focused on preserving the natural setting with no artificial elements such as artificial water features and hills. Still, while the paramount presence of nature in natural burial is a key design factor for aiding the healing process, many people today find the leap to natural burial from traditional memorial park burial too great. Currently, there are no statistics on the number of memorial park style cemeteries existing in the United States. However, by using Athens, Georgia, as an average American town model, it can be estimated that two out of three cemeteries in the United States are memorial park style. In order to truly alter the state of burial today, the author believes that a middle ground must be found in order to promote use by a societal majority.

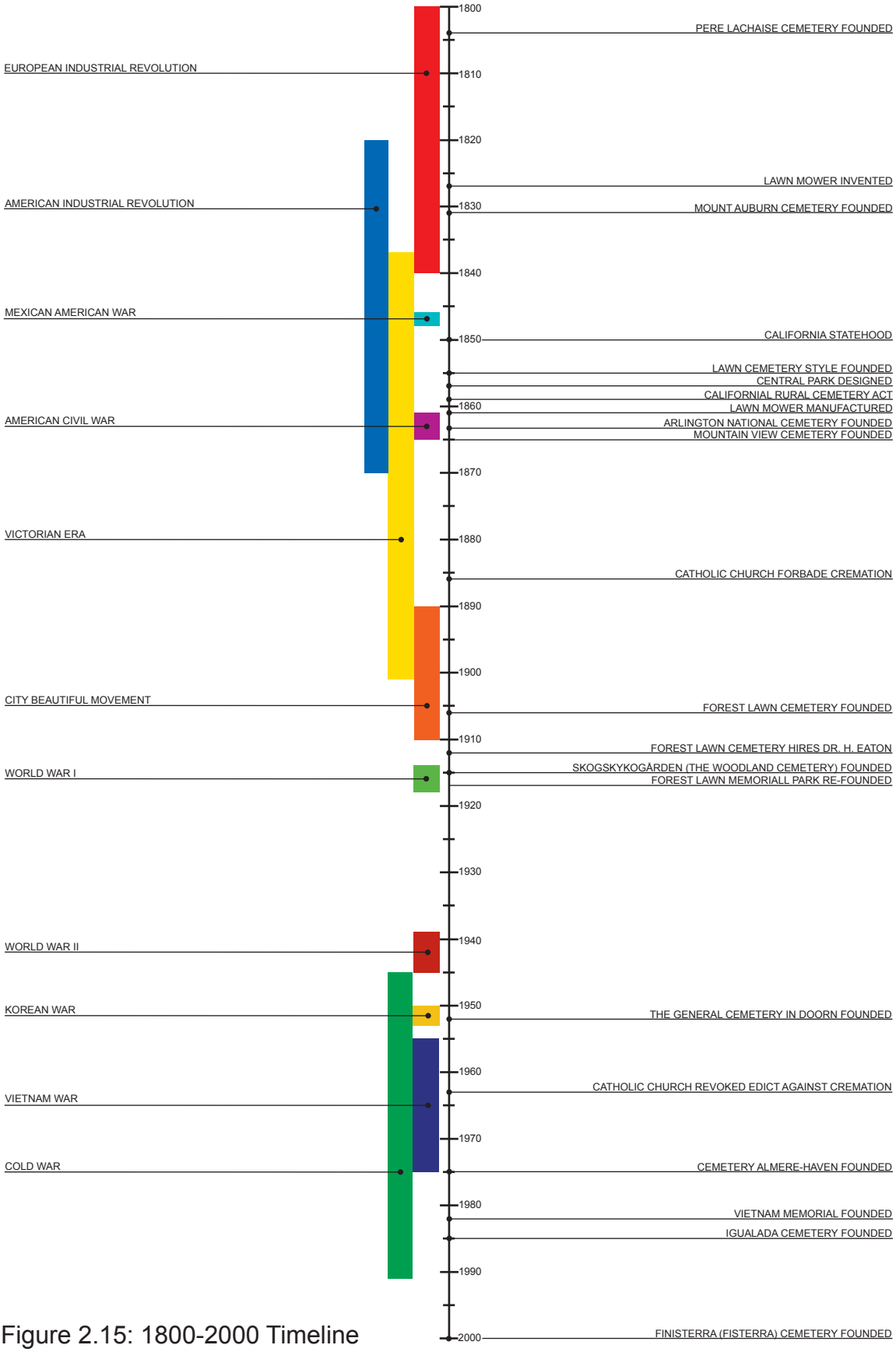


Figure 2.15: 1800-2000 Timeline

CHAPTER 3

CASE STUDIES

With time, many cemetery design styles of the past centuries have been taken out of context in modern society. Stone etchings have washed away along with the deeper meanings and reasoning behind them. In many cases, cemeteries have taken on very different appearances than originally designed, thus the public not only views the space of a cemetery in a differing light, but also uses it differently. Through the eyes of a modern individual unaware of burial history, ossuaries and carvings of skulls on headstones may appear grim or satanic. The Victorian traditions of picnics on graves and cheerful Saturday afternoons at the cemetery are often seen as disrespectful and inappropriate today. However, the design of these cemeteries is also a crucial factor to their modern function. In this chapter, three cemeteries from three major cemetery movements are studied in detail. Selection criteria for these case studies included: (1.) one rural/park cemetery (Mountain View Cemetery), one memorial park cemetery (Forest Lawn Memorial Park) and one woodland cemetery (Skogskyrkogården), (2.) a minimum size of 200 acres, (3.) established before 1963 (50 years), (4.) currently active use, and (5.) a minimum of 100,000 interments. Personal observations of current use, character and ambiance are discussed in relation to design. Also, a detailed argument reviews how each site

serves as a community open space, exhibits sustainable aspects and aids in the healing process.

Mountain View Cemetery (Oakland, California)

By the middle of the nineteenth century, the West Coast was racing to catch up with modern trends of the East. In 1848, the end of the Mexican American War brought California into the United States, and two years later in 1850 the territory was granted statehood. On the East Coast in 1857, Frederick Law Olmsted had partnered with Calvert Vaux to begin plans for the now world famous Central Park in New York City. In 1854, the eager young California legislature passed a series of laws that reshaped cemeteries and the funeral industry in California. These laws legally defined public graveyards in the State of California, claiming that any one space containing “six or more human bodies...constitutes the place a cemetery” and “thereof are declared to be a public use in respect to which the right of eminent domain may be exercised” (McKinney, 1922, p.994). Subsequently, the 1859 California Rural Cemetery Act was passed in order to create nonprofit associations charged with the upkeep of these lands and allocation of plots.

In 1861, war broke out between the North and the South in the eastern portion of the United States. California’s minimal involvement (securing territories and sending supply shipments eastward) allowed for fairly undisturbed growth and development during the war. On December 26, 1863, a collection of East Bay Pioneers in Oakland, California, declared their local town cemetery

fully occupied and decided upon acquiring land to establish a new rural/park cemetery under the 1859 Rural Cemetery Act. Twelve men were subsequently elected as trustees for the new cemetery which was to be located atop a hill on 200 acres of land sold to the association by one of its members (Association). The following year, the association secured Frederick Law Olmsted to create a master plan for the cemetery.

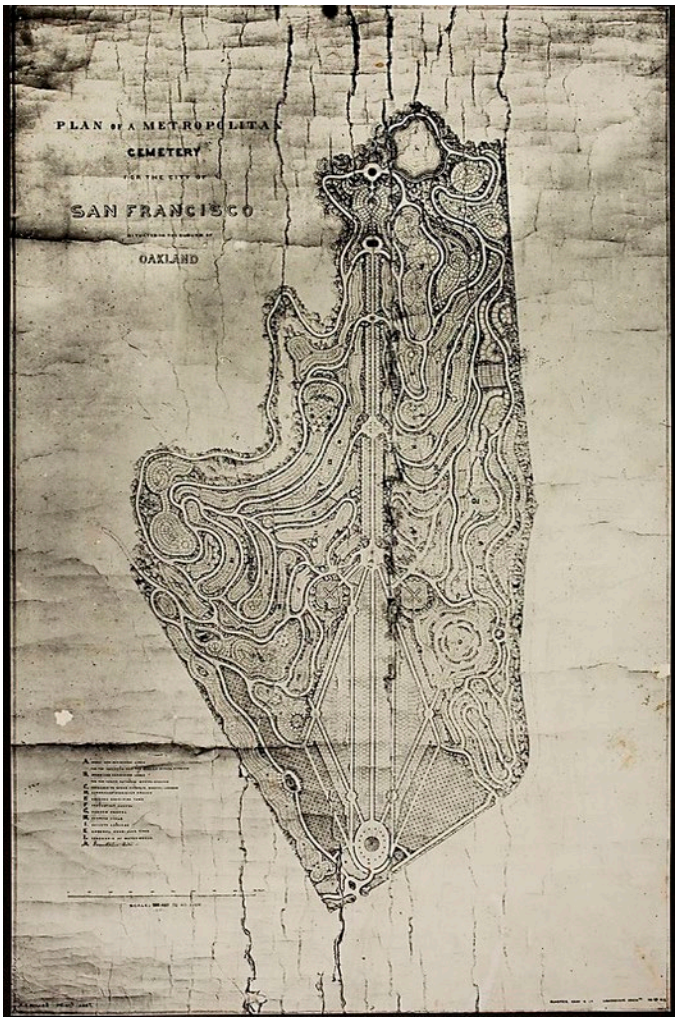


Figure 3.1: Mountain View Cemetery Plan, 1864. *Drawing by Fredericak Law Olmsted and Calvert Vaux.*

This commission was Olmsted's first cemetery design (Figure 3.1). In the East, he had refused to design such landscapes, claiming that the landscape was disconnected by large monuments blocking views; the overall effect of the site was lost (Beveridge, Rocheleau, & Larkin, 1995). However, Olmsted made an exception for Mountain View. Here, he set the goal of creating a community of equals that celebrated the diverse individualism he saw in the city of San Francisco (Beveridge, Rocheleau, & Larkin, 1995). Olmsted stressed the importance of equality among monuments

with the Mountain View Association and the need to group graves appropriately, writing “a lonely grave suggests a dreary life and the absence of cordial affection” (Beveridge, Rocheleau, & Larkin, 1995, p.185). A year later, in 1865, six weeks after the Civil War ended, Mountain View Cemetery was dedicated.

Today, visitors walk or drive through iron and stone gates to a fork in the roadway. Here, Olmsted maintained access to the existing Catholic cemetery despite the fact that the Mountain View Association maintains no governance over the section. Mountain View Cemetery holds no hierarchical presence over the Catholic cemetery; therefore, the entry is divided equally between the two spaces. The right side of the fork continues to the entry court of Mountain View Cemetery. Here, two Gothic revival chapels stand to the left and the administration building to the right. A roundabout lined with Italian Cypress sits between the two buildings, the center of which is marked by a large circular fountain. This roundabout is the first of four, spaced down the length of a long axis along the center of the site, a common low point found by Olmsted after the site had been surveyed. The long alluring avenue draws visitors further into the space and creates a balanced path through the site, allowing guests to branch off to explore the space at any time. Olmsted’s original design filled each roundabout with plantings; however, it was later decided to incorporate fountains into these spaces to create the ambient sound of water as well as to integrate water symbolism into the space (water symbolizes both change and life). The sound of trickling water often mixes with the leaves rustling on the trees, creating a calming atmosphere as one journeys through the site.

Figure 3.2: Hilltop Plots of Mountain View Cemetery, Oakland, California. *Photo by Author.*

Small roads and walkways branch off from this central axis, following the natural contours of the site. Walkways wind up grassy hills, segmented into small plots lined by cement or stone curbs. Views from above reveal a layout similar to modern-day subdivisions in the original sections of the cemetery. Clusters of large mature trees punctuate the landscape, shading several sections of monuments while leaving others in uninterrupted sunlight (Figure 3.2). The progression of time and styles can be seen as one explores the cemetery. Although the majority of Olmsted's plans have been maintained, the lawn and memorial park movements had a major influence on more modern sections of the cemetery. The long grassy slopes of flat memorial plaques with sporadic trees can be seen in the eastern portions of the cemetery, a result of the memorial

park style that began in the early twentieth century. While these inconsistencies are inevitable in a cemetery 150 years old, their patchwork style somewhat diminishes the overall effect of the landscape on the viewer.

Since the original plan, twenty-six acres have been added to the site along with a mausoleum, columbarium and three reservoirs. These reservoirs were added to Olmsted's original plan by the original founders of Mountain View; groundskeepers were asked to dam Glen Echo Creek in order to provide irrigation water for the grounds. While the use of nonpotable water for irrigation both lowers maintenance costs and reduces stress on potable water supplies, some local residents condemn the practice today. Several sources note the cemetery's use of the basins for irrigation during the summer months, often draining the reservoirs completely after the first few months of warm weather. Local residents claim this endangers local wildlife, including birds and amphibians, who use the reservoirs and the remaining water that trickles downstream (Cohen, 2012). The large expanses of turf that carpet over 200 acres of the site are the cause for exorbitant amounts of water use each year. The cemetery association has acknowledged the problem and has begun projects in an effort to conserve and protect Mountain View Cemetery's historic natural resources. The Oak Tree Rescue Project is one endeavor to save the historic trees found throughout the property by reducing the amount of water applied to the property's turf. Signs labeling trees under the purview of this project can be seen throughout the cemetery (Figure 3.3). Additionally, over the past several years the cemetery grounds have been undergoing an immense tree

removal project to eradicate eucalyptus from the property. Large groves of the Australian native were planted throughout California beginning in the 1850's for screens, windbreaks and timber, including several areas throughout Mountain View Cemetery and the greater Oakland area. Since 2010, Mountain View Cemetery has removed nearly half of the 400 invasive eucalyptus trees and plans to continue over the next decade until all have been eliminated. Although there has been some opposition from the community, the cemetery continues to remove the trees in an effort to reduce wildfire risk and replace groves with native species to reduce stress on local water supplies (Artz, 2012).

Figure 3.3: Oak Tree Rescue Project, Mountain View Cemetery, Oakland, California. *Photo by Author.*

The cemetery continues to receive a variety of visitors throughout the year. Guests range from families visiting graves to joggers, dog walkers, bird watchers, picnickers and sunbathers. The site serves as a community greenspace for the small town of Piedmont, located just outside the cemetery entrance and the

Figure 3.4: Neighborhoods Surrounding Mountain View Cemetery, Oakland, California. *Photo by Author.*

neighborhoods surrounding the site (Figure 3.4). The Mountain View Cemetery Association, the nonprofit organization operating the property, continues to promote public use. Throughout the year, a variety of events and festivals invite the community onto the grounds to explore. In late March, the Ching Ming Festival (Remembrance of Ancestors Day) invites Chinese families to participate in cleaning ancestors' graves and enjoying refreshments. Early April brings visitors in from all around the Bay Area to enjoy the flowers in full bloom, floral arrangement demonstrations and a floral arrangement exhibition. Memorial Day at the cemetery provides visitors with a commemoration ceremony, refreshments and tours of the veterans buried in the cemetery. In October, the cemetery coordinates with the local Piedmont Avenue Merchant Association's Halloween

parade and trick-or-treating, to host the Pumpkin Festival. Here children are encouraged to dress up and enjoy a free pumpkin patch, hay-bale tunnel, refreshments, treat bags, crafts, face painting and a balloon artist. A December event features holiday lights, Holiday Remembrance Tree lighting and pictures with Santa Claus for the children. In between these celebrations, small events and free tours are provided throughout the months. Twice each month, the cemetery offers visitors free docent-led tours educating guests on Mountain View Cemetery history and its more prominent residents (Figure 3.5). Other annual tours include Black History Month, Women's, Trees of Mountain View Cemetery, "Wine, Women, and Song," Memorial Day Civil War Plot, UC Berkeley's Blue and Gold, Symbolism in the Cemetery and the California Gold Rush and Railroad History tour.

Figure 3.5: January Tour of Mountain View Cemetery, Oakland, California.
Photo by Author.

For guests who use the space primarily for visiting the deceased, the site offers a quiet retreat from the city. The long axis through the center of the site along with long winding walkways provide those in mourning with a natural setting to journey through during contemplation. Fountains in the four roundabouts deliver the soothing sounds of trickling water. When the three reservoirs are full, the areas around the water are cool and inviting with local birds swooping down over the surface and singing in the branches overhead. The higher elevations of the property provide open views of the bay, and are excellent places for extended contemplative resting. Each of these spaces, however, lacks seating, an important consideration in a contemplative space. Visitors are mostly confined to the few benches scattered around the main axis and entry areas or forced to sit on curbs and lawn.

Findings

Table 3.1: Mountain View Cemetery Findings

Cemetery	Sustainability	Community Open Space	Healing Process
Mountain View Cemetery	+planted space non-potable water use +reduction of invasive species +Oak Tree Rescue Project	+used as public park +community events and festivals +cemetery tours +direct access to surrounding neighborhood	+provides journeys +vistas +headstone individuality +architectural symbolism +paramount presence of nature +water +wildlife sanctuary
	-dammed creek -exotic species plantings -large expanses of turf	-closed between sunset and sunrise	-lack of seating

Forest Lawn Memorial Park (Glendale, California)

During its heyday in the 1940's and 1950's, Forest Lawn hosted millions of funerals, weddings and tourists, all passing through the wrought iron gates in Glendale (the cemetery claimed to own the largest set of wrought iron gates in the world in a 1944 *Life Magazine* article) (Davenport, 1944). Dr. Hubert Eaton, founder of Forest Lawn, strove to create an environment of bliss for visitors, claiming the depressing days of massive monuments with weeping angels and skulls were over: "a beautiful passage to eternal life," he stated, "where lovers new and old shall love to stroll and watch the sunset glow" (Time, 1959). Eaton roamed through Europe seeking out classical style sculptures and artists willing to reproduce famous Renaissance pieces like Michelangelo's *La Pieta, David* and *Moses* (Figure 3.6). Many of these statues once piped narratives about the pieces and music to educate visitors. Eaton continued his quest for artworks, eventually creating what became known as

Figure 3.6: Classical Statuary of Forest Lawn Memorial Park, Glendale, California. *Photo by Author.*

Forest Lawn's "Sacred Trilogy", a collection of three two-dimensional artworks depicting the last three episodes of Christ's life. The first was a custom made stained glass reproduction of Leonardo da Vinci's *The Last Supper*, installed in the Great Mausoleum in 1931. The second was a massive 195-foot-long by 45-foot-tall painting by Polish artist Jan Styka depicting the moment before Christ's crucifixion. The artwork was so massive that Eaton built what was later called the Hall of the Crucifixion to display the painting. The last piece was a commissioned painting, completed in 1965. This painting depicted the resurrection of Christ and was displayed with The Crucifixion in what is now called the Hall of the Crucifixion-Resurrection.

Over the years, the atmosphere of the cemetery has changed. Disneyland opened in 1955 and by 1957 superseded Forest Lawn as the top tourist destination in the area (Pool, 2006). While funerals and weddings alike are still held on the grounds, tourism has dropped dramatically. Many tourists seem more attracted to who is buried in the cemetery rather than the cemetery itself. Famous residents include Michael Jackson, Elizabeth Taylor and Walt Disney. Although the cemetery refuses to give unrelated visitors celebrity plot locations, privately published guide books and the Internet allow grave hunters to share their finds. Beyond grave hunters, the occasional jogger can be seen on early mornings and local resident reading on the few and far between benches. Picnics, commercial and professional photography, pets, solicitation, loitering and lying down are strictly forbidden on the grounds, although a meditation garden, exclusively for the use of mourning visitors, is provided for long visits.

Although the site is surrounded almost entirely by residences, a large concrete wall blocks neighborhood inhabitants from accessing the site easily, thus limiting use (Figure 3.7). The display of *The Last Supper Window* can be seen every half hour and with a ten-minute early arrival, guests can access the mausoleum early to view the Michelangelo reproductions of *La Pieta*, the *Medici Madonna, Madonna of Bruges, Day and Night* and *Twilight and Dawn*. However, on my personal visit to the site the audience, set up to fit approximately 100 people, only hosted five including myself. The Hall of the Crucifixion-Resurrection was even more dramatic. The auditorium, which seats over 1,000, was occupied by only myself. Each show performed, nonetheless, with dramatic theatrics including narrators, thunder, spotlights, plasma televisions, specially timed shutters, red velvet curtains and choruses (like “Hallelujah”) rumbled on surround sound speakers. The experience was surreal and extremely odd for a cemetery.

Figure 3.7: Surrounding Wall of Forest Lawn Memorial Park, Glendale, California.
Photo by Author.

While the overt Christian themes of the artworks might have lent their exhibition some credibility in the 1940s and 1950s, the sentiment and display now border on the inappropriate. Guests exiting the Hall of the Crucifixion-Resurrection are afterwards invited to tour the visitors' center, complete with another large display of smaller sculptures, paintings and stained glass from which an exit conveniently leads to the Forest Lawn gift shop.

While the neatly manicured grounds of sloping lawn and evergreens overlooking the Los Angeles skyline provide guests with a beautiful park-like setting, clearly Forest Lawn's priority is not the community and visitors; it is the potential plot buyers and the recently interred. Benches are nearly impossible to find, public bathrooms (excluding those near the chapels, which are unlocked only during services) are only found in the visitor's center and the mortuary. Water fountains are nowhere to be seen; however, there is one soda machine outside the visitors' center. Nearly everything in the park has a price tag, including the classical statuary intended to create an atmosphere of love and happiness. For a hefty dollar amount, the rich can afford special exclusive accommodations in areas locked away from the public and air conditioned to prevent decay. The Great Mausoleum which houses *The Last Supper Window* also holds the remains of Elizabeth Taylor and Michael Jackson. While Taylor's resting place dominates the entry corridor with a giant marble angel, Jackson's crypt is behind locked iron gates and many floors below. Other exclusive spaces include the locked outdoor "Garden of Everlasting Peace" and the "Gardens of Memory". A bronze sign on the doors reads: "Admittance to these private

Figure 3.8: Restricted Entrance Sign in Forest Lawn Memorial Park, Glendale, California. *Photo by Author.*

memorial gardens is restricted to those possessing a golden key of memory, given to each owner at the time of purchase" (Figure 3.8). Exclusivity can be purchased and maintained even in death.

Despite the groomed lawns, certain sections look dated and have begun to decay. While new areas are full of flowers and visitors, older ones, which have been full for years, show signs of neglect. Sections like "Baby Land" and "Rest Haven," some of the first areas created in the late 1910s by Eaton, are now desolate. No flowers or visitors walk amongst the graves, many of which are now overgrown with grass. Other headstones have shifted with settling soils and frequent earthquakes and now gather water and mud from the irrigation systems. These sections of the cemetery were silent, only disturbed by the occasional bird or squirrel. In a corner near this section, visitors find the Freemason section, marked by a large white marble platform but left in a grassless, muddy ruin. The

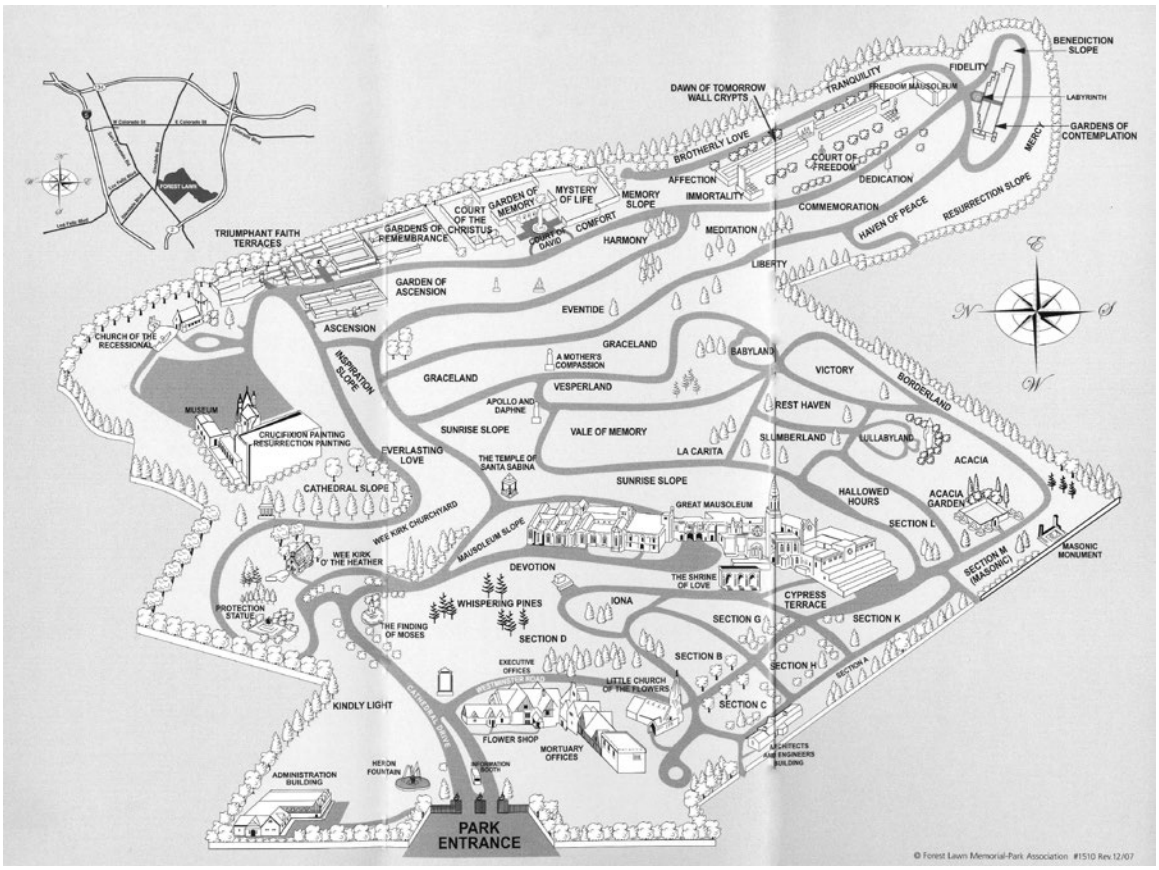


Figure 3.9: Forest Lawn Memorial Park Map, Glendale, California. *Map provided by Forest Lawn Memorial Park.*

cemetery is forced to rotate its maintenance crews in an effort to restore these sections. During my visit, a sign posted in “Lullaby Land” read: “To Keep The Grounds Beautiful This Area Is Being Renovated.”

Throughout Forest Lawn’s existence, others have criticized the cemetery’s business plan and design as well. Eaton is credited with revolutionizing the modern funeral business by creating the pre-need market and offering extravagant services with embalmment, concrete vaults and steel caskets with innerspring mattresses. By 1932, Eaton brought all funeral services under one roof with the infamous slogan displayed for years on all of Forest Lawn’s

advertising: “Everything at time of sorrow, in one sacred place, under one friendly management, with one convenient credit arrangement and a year to pay...ONE TELEPHONE CALL DOES EVERYTHING” (Time, 1959). In 1978, writer Jessica Mitford published the tell-all book *The American Way of Death*, which exposed the twisted inner workings of the funeral industry. Mitford wasted no time in singling out Eaton to blame. Many of the funeral industry problems she exposed in 1978 still exist today, where “the funeral industry men have constructed their own grotesque cloud-cuckoo-land where the trappings of Gracious Living are transformed, as in a nightmare, into the trappings of Gracious Dying” (Mitford, 1978, p.16). Others attack the cemetery’s overt displays of artwork. A 1959 *Time Magazine* article described this Glendale cemetery as the “Disneyland of Death” and writer Marc Treib refers to the statues as kitschy (Time, 1959, Treib, 2001). In 1948, a satirical novel, and later a movie, titled *The Loved One: An Anglo-American Tragedy* was published about the burial of a man in a fictional cemetery called “Whispering Glades” (representing Forest Lawn), in which Eaton’s over-the-top services and grounds (even the titles to the cemetery sections) are openly mocked for their excessive nature (Lynch, 1983). Many of these critics attack Forest Lawn’s wedding services, accusing Forest Lawn of producing absurd and inappropriate schemes purely for profit. The *Los Angeles Times* reported that several large cemeteries in the Los Angeles area have discontinued allowing weddings on the premises, stating the celebrations of marriage were inappropriate in a space where families were in mourning (Steinberg, 1989).

While the very nature and atmosphere of the site is condemned by some, others praise Eaton. McNamara reasons that Eaton's transition of the cemetery to a happy place with a "Smiling Christ" is synchronic with "the power of technology to annul suffering, to deny the effects of history and the ravages of death and to realize for the first time the 'original intent' of an artist" (Figure 3.10) (McNamara, 2002, p.315). Others suggest that the addition of various artworks on the property aid in the healing process of visitors through themes and messages of immortality. *The Sacred Trilogy*, for instance, alludes to a life beyond and death as not an end but a beginning (Oring, 2000). The statuary, surprisingly following mostly non-Christian themes, depict mostly happy motifs of mother and child and lovers (Oring, 2000). No depictions of Christ on the cross can be found, as this does not display the "Happy Christ" Eaton wanted to encourage (Oring, 2000). Eternal themes of love also promote ideas of immortality and may help mourning visitors cope with their loss (Oring,

Figure 3.10: Joyful Christ of Forest Lawn Memorial Park, Glendale, California. *Photo by Author.*

2000). In one of the newer sections of the property, the Gardens of Contemplation, the addition of a labyrinth in the cement walkway entering the section offers mourners a more primitive form of contemplation. Eaton also claimed that by eliminating annuals from the property and strictly using evergreen trees and shrubs, the eternal rather than seasonal beauty of the grounds would also promote the essence of immortality.

Figure 3.11: Vivalda Slope of Forest Lawn Memorial Park, Glendale, California. *Photo by Author.*

This might be true; however, Forest Lawn's excessive use of grass in-between these evergreens is unsustainable (Figure 3.11). Located in a region whose annual rainfall is just over thirteen inches per year, the Forest Lawn turf will continue to place considerable strain on the local water supply for the foreseeable future. Phenomenal amounts of water are required for such lush green lawns and non-native plantings. While the water feature in the Court of the Christus utilizes recycled water (as proudly displayed on a sign next to the fountain), the staff

have taken few efforts to improve sustainability. The excessive air-conditioning of the mausoleums (enough to make guests with jackets shiver) exacerbates the problem. In order to adapt to a more environmentally protective society, Forest Lawn most likely will have to alter their designs and maintenance to more sustainable practices.

Findings

Table 3.2: Forest Lawn Memorial Park Findings

Cemetery	Sustainability	Community Open Space	Healing Process
Forest Lawn Memorial Park	+recycled water fountain +restriction of annual plants	+used for weddings +park-like landscape +used by joggers (limited)	+reduction of stimuli
	-large expanses of turf -private ownership and perpetual care -shifting headstones -neglected sections	-strict rules for behavior/use -lack of facilities -restricted access	-limits headstone individuality -lack of seating

Skogskyrkogården (The Woodland Cemetery) (Stockholm, Sweden)

In 1915, while World War I tore through Europe, architects Gunnar Asplund and Sigurd Lewerentz won an international competition for the design of Stockholm's new cemetery, Skogskyrkogården. Their challenge was to design a public cemetery, secular in nature and decor, while maintaining as many existing natural elements on the site as possible. The new cemetery's location was on the edge of the expanding city of Stockholm, Sweden. Intended as a stop along a new metro line, this overgrown gravel quarry was given new life as a space for Stockholm's dead. Using nature as the central, predominant

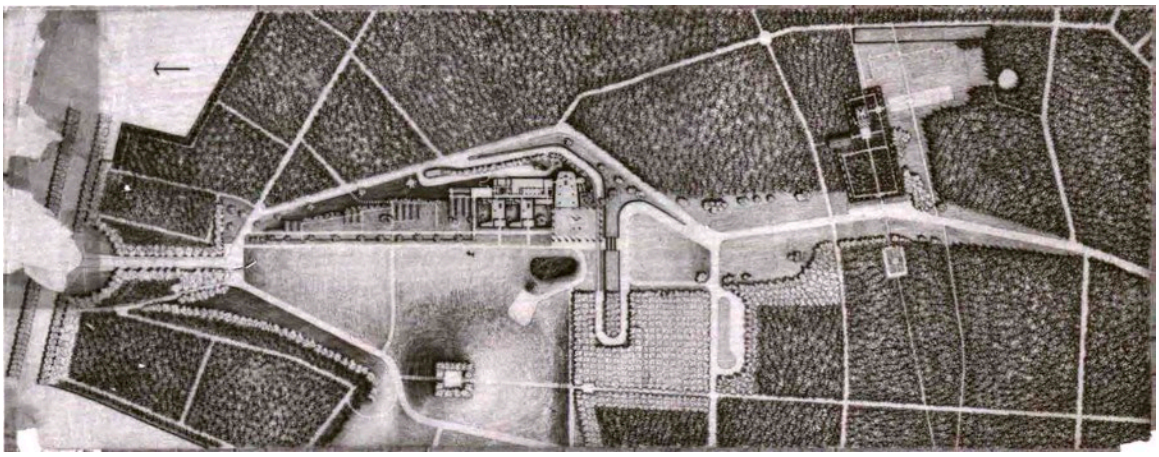


Figure 3.12: Asplund, Woodland Cemetery Site Plan, 1940
(Constant, 1994, p.158).

element of the cemetery, the designers maintained the existing overgrown pine forest, using materials from the site to build the design. Even the built structures become secondary elements to the landscape, as their nondominating, low-level height is tucked away into the forest, often hidden from view. Themes of cycles, ascension to the heavens and descension into the earth recur throughout the site. Outside the primary headstone areas, alleys of deciduous trees and shrubs shed their leaves in the fall and winter only to bloom and regain them in the spring and summer. The main entryway provides a view of a large grass opening (Figure 3.12). A sod-covered hill crowned by weeping elms rises to the right before dipping down, and a smaller hill to the left supports a large stone cross that punctuates the sky. A small lily pond at the crest of the Way of the Cross (main entrance walkway) mirrors the sky: the meeting of heaven and earth.

Asplund and Lewerentz created a series of framed views that carry the visitor through the site via allées, natural rooms, gateways and repetitions of form. Long straight views, such as the walkway connecting the Elm Hill to

Resurrection Chapel and the Way of the Seven Wells, a walkway with seven wells spaced out along the path, give visitors direction through the site and provide time for quiet contemplation in nature (Figure 3.13) (Treib, 2005). Natural rooms created by tall hedges and lines of columnar evergreens along with repetitions of form give the essence of comfort and security of being inside a house with the tall pine canopy serving as the roof. Indeed, there is an almost seamless transfer between the Woodland Chapel and the surrounding landscape, seemingly moving from one room to another. This essence of order is reflected even in the headstones found throughout the site. While the designers understood and encouraged a sense of personalization and uniqueness in each grave, Asplund and Lewerentz also saw the need for maintaining an overall effect with the site.

Figure 3.13: Resurrection Chapel Path, Skogskyrkogården, Stockholm, Sweden. *Photo by Author.*

The distinct and varied headstones of earlier eras often visually competed with each other and ruined the overall essence of the cemeteries — distracting

visitors and hindering the healing process. However, each grave is leased to the deceased for twenty-five years, and therefore survivors are permitted to decorate the space, within guidelines, during this time. For this reason, there are restrictions on the size and symbols used on headstones within the garden. There are certain rows for which only flat headstones can be used and isles where only upright headstones can be used. Headstone size is limited to approximately three feet in height, two feet in width and one foot in depth. Symbols or script with negative associations, such as swastikas, are not permitted. Plantings, trinkets, letters or other memorabilia may be placed at the headstones but may not exceed approximately one and a half feet in depth by two feet in width. Every headstone is permitted a small planted bed within these size restrictions, furnished by the surviving friends and relatives or by the state (for a small fee). If the space is planted but not maintained by the survivors for a period of one year, the grave is reacquired by the state.

It is within this reacquisition by the state that Stockholm is promoting a sustainable future in burial practices. Once the deceased has occupied a space for twenty-five years and the surviving family no longer wishes to prolong lease of the space (or the space is reacquired by the state for other reasons), the grave space is leased to a new “tenant” (Figure 3.14). The first grave dug in a space is buried four graves deep, meaning up to four bodies can occupy one grave width (Söderling, 2012). Often, families lease a single grave and create a family plot. The same can be done with graves containing urns as well. In fact, ninety percent of Stockholm citizens are cremated, a trend that has skyrocketed

over the past few decades (Söderling, 20 Nov. 2012). As more and more citizens have gravitated towards atheistic and agnostic beliefs, this ancient form of burial has become exceedingly popular for both its sustainability and its lower price tag. As a result of a socialist-structured government, Stockholm citizens pay a burial tax throughout their life, which not only pays for a twenty five-year lease on a grave (free of charge), but also for cremation costs and the use of any chapel on the grounds. The only additional cost citizens shoulder is a casket and, if desired, an officiant. Many citizens choose to be buried anonymously atop the Memorial Hill (Minneslund) in the northwestern area of the site. Here, trees, shrubs and wildflowers grow wild amongst the nearly 70,000 scattered ashes. The walkway is lined with stone slabs and benches for mourners to place offerings of candles, letters, potted plants, origami and cut flowers. Asplund and Lewerentz successfully created a space where all are equal in death.

Figure 3.14: “Burial rights for this grave has returned to the Cemetery Administration”, Skogskyrkogården, Stockholm, Sweden. *Photo by Author.*

Figure 3.15: Enskede Neighborhood, Stockholm, Sweden. *Photo by Author.*

Skogskyrkogården has become an asset for the surrounding community of Enskede – a residential neighborhood of Stockholm (Figure 3.15). Not only is the site used as a cemetery, but also as an open greenspace for residents of Stockholm and visitors alike. Daily, bikers, joggers, walkers and even preschool classes come out to enjoy the open space (Figure 3.16). Joggers and walkers bring their infants, friends and dogs; teachers bring their students. In the spring and summer, families often spread out on the grassy lawn for picnics and games. Even during the cold nights of winter, bikers use the paths through the forests as a safe alternative for riding at night on the city streets. On weekends, a scheduled city bus drops and picks up citizens at eleven stops within the

Figure 3.16: Walker in Skogskyrkogården, Stockholm, Sweden. *Photo by Author.*

cemetery before carrying others back into the city. Mobile seating, restrooms, fountains and trashcans also are found throughout the site for both mourners and visitors. The summer months bring tourists into the site to explore one of Stockholm's UNESCO World Heritage Sites. The visitors' center welcomes tourists from May through September, providing two-hour tours in English and Swedish, exhibitions and maps for guests. Each year on All Saints' Day, November 1st, visitors from the community, city and around the world gather to walk the grounds and view the candles lit at each headstone, totaling in the thousands. This space both supports and creates communities and traditions that has few parallels in the world today.

Findings

Table 3.3: Skogskyrkogården (The Woodland Cemetery) Findings

Cemetery	Sustainability	Community Open Space	Healing Process
Skogskyrkogården (The Woodland Cemetery)	+maintained existing forest +public funding and ownership provide perpetual care +site reuse +use of local materials +cremation options	+used as public park +direct public transportation access +separation of open space from burial + international community use +All Saints' Day celebration +direct access to surrounding neighborhood	+provides journeys +vistas +headstone individuality +architectural symbolism +paramount presence of nature +cycles (seasons) +ascension +descension +water +wayfinding +outdoor rooms and roofs +memorial gardens +seating (mobile)
	-illegal to disinter bodies		

CHAPTER 4

INTERPRETATION OF FINDINGS

Solutions to sustainability, community and aiding the healing process in modern cemeteries are found throughout cemetery history. Many modern problems are in fact the direct result of society distancing itself from historic designs and traditions of the burial process. Looking at historic and contemporary designs today through the lens of modern knowledge and issues of sustainability, community open space and aiding the healing process, we see both beneficial patterns that society should apply to future cemetery projects and adverse patterns with valuable lessons on what was unsuccessful in the past. These lessons can educate today's designers in order to create more successful places. Utilizing the knowledge gathered of past cemetery design as well as personal observations and experiences, a comprehensive list of sustainable features, community open space elements and healing characteristics is displayed in Table 4.1 and discussed in this chapter.

Table 4.1: Summary of Findings

Cemetery/Movement	Sustainability	Community Open Space	Healing Process
Pre-19th Century Burial	+direct ground burial +cremation +biodegradable coffins +grave reuse +biodegradable headstones	+community grave clean up	+placing of goods +headstone/burial individuality
	-ground scraping		
Rural/Park Cemetery Movement	+planted space +minimal turf +direct public transportation access +nonpotable water use +reduction of invasive species +Oak Tree Rescue Project	+used as public park +direct public transportation access +drew international community use +community events and festivals +cemetery tours +direct access to surrounding neighborhood	+provides journeys + vistas +headstone individuality +architectural symbolism +atmosphere (culture) promoted contemplation and grieving +paramount presence of nature +water +wildlife sanctuary
	-large suburban footprint -dammed creek -exotic species plantings -large expanses of turf	-community misuse led to more stringent security -closed between sunset and sunrise	-lack of seating
Lawn Park Cemetery Movement		+used as public park	+provides journeys + vistas +family headstone individuality +architectural symbolism +reduction of stimuli
	-large expanses of turf -private ownership and perpetual care		

Memorial Park Cemetery Movement	+recycled water fountain +restriction of annual plants	+used for weddings +park-like landscape +used by joggers	+reduction of stimuli
	-large expanses of turf -private ownership and perpetual care -shifting headstones -neglected sections	-strict rules for behavior/use -lack of facilities -restricted access	-limits headstone individuality -lack of seating
Woodland Cemetery Movement	+maintained existing forest +public funding and ownership provide perpetual care +site reuse +use of local materials +pedestrian emphasis +cremation options	+used as public park +direct public transportation access +separation of open space from burial + international community use +All Saints Day celebration +direct access to surrounding neighborhood	+provides journeys + vistas +headstone individuality +architectural symbolism +paramount presence of nature +cycles (seasons) +ascension +descension +water +wayfinding elements +outdoor rooms and roofs +memorial gardens +seating (mobile)
	-illegal to disinter bodies		
Cremation	+small footprint	+provides more space for community use	+personalized options for display/location
Contemporary Cemetery Design	+xeriscaping +no turf +native planting	+used as public park +used as a greenway +future allowance for site reuse by community	+headstone individuality +inner focus +emphasizes time and natural decay +water +vistas +reduction of stimuli
		-undeveloped area	

Natural Burial	+biodegradable headstones +native plantings +biodegradable coffins +site reparation +trust protected natural site +no embalmed bodies	+trust protected community space +allows hiking and walking	+headstone individuality +grave gardens +journeys +inner focus +paramount presence of nature
		-restricted to plot owners/family	-non-biodegradable decorations restricted -headstones restricted to those provided

Community Open Space

As discussed previously, the use of cemeteries as community open spaces has existed for more than 200 years. The rural cemetery movement merged parks, arboretums and cemeteries into one dynamic space used by all classes and ages, paving the way for urban parks. The potential for cemeteries to be used as parks still exists, as they remain publicly accessible outdoor green spaces necessary in most communities. However, while today many city zoning and existing land use maps classify cemeteries as parks, few are used as such in the United States. For a variety of reasons, visitors to most active cemeteries today are restricted to those in mourning. Many feel that it is ethically wrong to use a cemetery for any occasion not associated with mourning or memorializing the dead. Activities such as dog walking, jogging, bike riding and strolling are often perceived as disrespectful to a place held sacred by survivors of the deceased. Furthermore, superstitions surrounding the cemetery and the pervasive idea of death as a mystery feed the West's unease about the public

use of cemeteries. Horror films and novels have cast the cemetery as a place of mystery and even dread, making it no longer a recreational asset to the community.

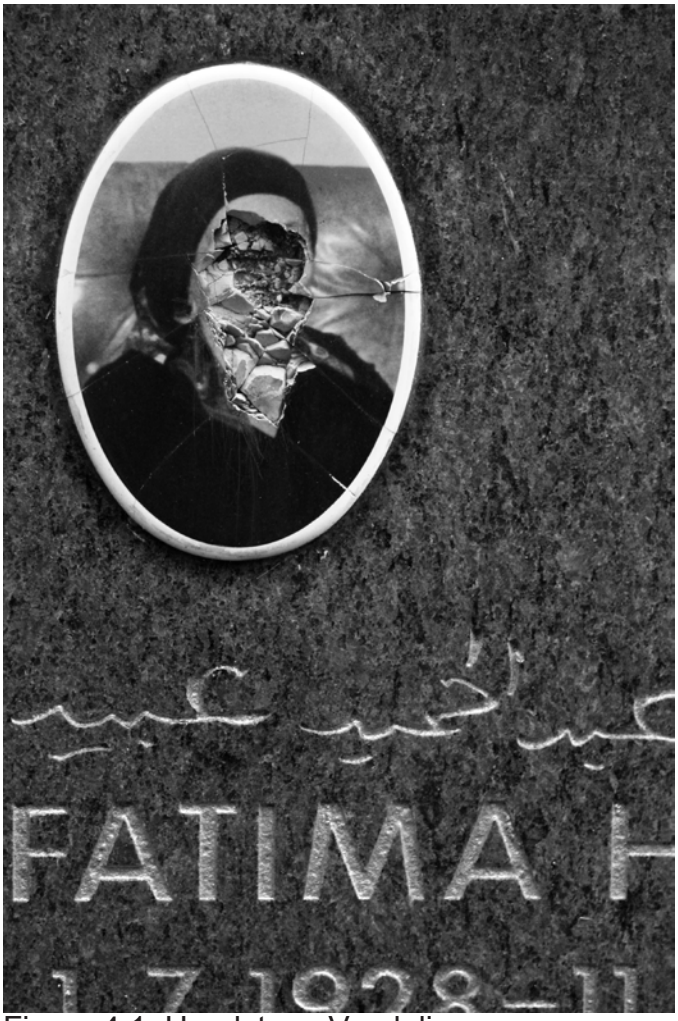


Figure 4.1: Headstone Vandalism, Skogskyrkogården, Stockholm, Sweden. *Photo by Author.*

Additionally, the centuries old peril of grave robbers still remains today in the modern cemetery. What began as quests for riches from kings and pharaohs, evolved into body snatchers for medical training and finally to a mixture of hate crimes, games and vandalism today. Standing headstones face the ever present possibility of being pushed over or cracked, frequently through night games by local adolescents. Often, religious hate crimes target headstones of the Jewish and Muslim faiths, such as reports of spray-painted swastikas on Jewish graves in Germany and chipped off faces of Muslim women's headstone portraits in Sweden (Figure 4.1). Other more radical incidents, such as a student breaking into a crypt to steal a skull for an art project or drug addicts stealing cemetery decorations to fund their addiction,

are reported as well. The result has been cemeteries closing between the hours of dusk and dawn to reduce theft and vandalism. Surveys have revealed that survivors of those buried in the cemetery wish to have full-time security to protect the cemetery grounds and the trinkets left there (Francis, Kellaher, & Neophytou, 2005). This becomes yet another barrier preventing and deterring the public from using the cemeteries.

Others, however, feel that it is a question of the rights of the living versus the rights of the dead. While cemeteries are spaces occupied by the dead, their physical presence is greatly diminished compared to a living visitor, giving the living more of a right to make use of the space. "'Cemeteries are for the living,'" one sexton, Mark Smith, said in a 2010 Landscape Architecture Magazine article (Harnik, 2010, p.44). Therein lies the challenge of finding a balance between what is respectful to both the living and the deceased. Personal observations have shown that the American public has different levels of comfort in cemeteries based on the age of the cemetery, style and amount of active burials. Older cemeteries, specifically rural/park cemeteries, tend to have greater numbers of nonmourning visitors with activities often promoted and organized by the cemetery staff. Activities such as festivals, history or ghost tours, grave rubbing, jogging, biking, walking, picnicking and dog walking are common in many rural/park and lawn park cemeteries, which appear to be a more comfortable setting for the public. These passive activities also appear to be more accepting and deemed appropriate as opposed to active activities with higher noise levels such as ballgames and use of playground equipment. Daily interments are

Figure 4.2: Children Playing on Elm Hill, Skogskyrkogården, Stockholm, Sweden. *Photo by Author.*

few, thus removing the elements of fresh grief and mortality from the space. However, today most of America lives in closer proximity to a memorial park style cemetery rather than a rural/park cemetery. Memorial parks are typically more recently created, actively interring new bodies each day and often lack in park-like amenities such as benches, trees and community activities. Thus, these spaces are less likely to be used as community open spaces and more as places to avoid unless in mourning.

Also, comfort levels may increase when elements within the boundaries of the cemetery are separated. By separating burial areas from spaces used for passive activities, users appear more comfortable using the cemetery for reasons

other than bereavement. Cemeteries like Skogskyrkogården contain a central area free of interments near the entrance (Elm Hill), where visitors often lounge in the grass to read or picnic while children play along grassy slopes (Figure 4.2). This space allows visitors, whether in mourning or not, to enter the site without the immediate reminders of death. This zone then becomes a transitional space, preparing those venturing further into the cemetery for the upcoming closeness with death while also serving as an area of meditation with long walks, benches and vistas. This buffer design is often applied to the edges of other woodland cemeteries as well. These borders are spaces of nature, intended to be a physical and spiritual intermediary between the outside world and the cemetery without blocking movement into and from the site.

This buffer from the acres dedicated to burial allows the community open space to take on more park-like characteristics. Like other urban parks, the locations of community open spaces should respond to sites' existing surroundings – functioning as visual buffers between neighborhoods and burial grounds as well as transition zones for users (Rutledge, 1971). As an important part of modern cemetery properties, overall designs of these park areas should incorporate symbolism and deeper meanings as well as provide spaces for passive recreation. A clear communication of pedestrian priority will draw users out of their vehicles and homes and into park spaces (Rutledge, 1971). Basic amenities like trash cans, water fountains, benches (both shaded and sunny), tables, bathrooms and lighting are vital. Successful parks also include small enclosed spaces (typically with seating) that provide privacy and comfort at the

human scale for users who feel less comfortable in open spaces (Rutledge, 1971). In the absence of play equipment, a variety of natural forms and spaces can ignite creativity and social interaction, like providing a steep sloped hill where children can sled in the winter and ride cardboard boxes down in the summer or design a sculpture garden or shrub maze that can be used for hide-and-go-seek. An open grass field can be used by adults for community tai-chi, yoga, Pilates, croquet, bean bag toss, horseshoes and lawn darts. As local residents become more comfortable with these spaces, open fields could also be used for community festivals, events, performances and even family movies.

Sustainability

While “going green” and “sustainable design” are popular contemporary buzzwords, they are less commonly used when discussing cemetery design. However, as a vital public green space located in both dense urban centers and open rural communities, cemeteries have been “going green” for centuries. With the exception of vegetation-free Renaissance cemeteries, their successors house plant life, offset the urban heat island effect, remove many airborne toxins and provide wildlife habitat. Urban cemeteries also alleviate stress on sewer systems as infiltration sites for stormwater runoff.

Space

Limited space and the American/English practice of single grave use will inevitably lead to a lack of room for the continually growing “departed” population. While other cultures (and old Medieval customs) practice plot and crypt reuse to

Figure 4.3: Cremains Memorial, Skogskyrkogården, Stockholm, Sweden. *Photo by Author.*

offset the demands for grave space, Americans and the English refuse to bend to environmental pressures. Increasing numbers of the English and Scandinavians have responded by choosing cremation and natural burial (Figure 4.3). Sweden has passed laws preventing disinterment, but the Swedes compensate by increasing cremation and choosing stacked burials (placing as many as four bodies in a single grave width), leasing graves for a period of 25 years after each body is buried. Americans have slowly begun to accept these more practical alternatives; however, the seemingly endless expanses of available land (especially in rural areas) and the desire to leave an everlasting mark of existence inhibit an expeditious transition to more sustainable burial methods.

On the other hand, cemeteries find a new role as they confront the issues of limited space in a modern society concerned with limiting urban sprawl. As necessary amenities in society, these deathscapes serve both as utilitarian spaces of body disposal/memorialization and public green spaces. This integration of use supports the new urbanist goals of sustainable community planning and multipurpose designed spaces. It would be foolish to ignore the drastic reduction in physical land used to inter cremains as well. Many survivors choose to scatter ashes, display them in the house, place them in a columbarium niche (typically 0.44 to 1.33 square feet) or bury them in a small grave (typically four to six square feet). In contrast, a traditional burial plot occupies 40 to 48 square feet.

Site Remediation

Cemeteries also hold the potential to remediate abandoned industrial sites and brownfields. Depending on the state of pollution, application of biological resources to recover a site often dovetails with the aesthetic plans of contemporary cemeteries. One example is Skogskyrkogården, which occupies a site once used as a gravel mine. The cemetery design harnessed the elevation changes of the existing pits and used stone quarried from the site to build the cemetery's surrounding walls. Hundreds of abandoned quarries, railroads, rail stations, manufacturing complexes and other industrial sites often exist within urban areas and are in dire need of remediation.

Figure 4.4: East Lawn Cemetery, Athens, Georgia. *Photo by Author.*

Water Use

Even with the numerous design and technological advances introduced to the cemetery environment within the past century, water issues continue to plague American burial spaces. Although the memorial park movement began nearly 100 years ago, the design style still saturates the cemetery market. Eaton's once grand plans of sweeping lawns with classical statues have now been stripped bare of statuary, trees and topography and then reproduced throughout suburban America. Nearly every site demonstrates a lack of local character and adaption to the local environment. Hot, treeless expanses of grassy memorial parks baking in the Texas panhandle appear identical to those in southern California, Georgia and Illinois (Figure 4.4). The unchecked use of

Figure 4.5: National Memorial Cemetery, Phoenix, Arizona.
Photo by Marcus W. Reinkensmeyer.

turf and subsequent use of fertilizers and pesticides throughout drought-plagued regions also reveals a failure to respond to local environmental issues.

However, despite the popularity of the memorial park style, some cemeteries in drought threatened areas, such as the National Memorial Cemetery of Arizona in Phoenix, have drastically reduced the amount of turf on the property, often choosing alternative methods for groundcover or design (Figure 4.5). Others have selected grass with low water demands or choose a strictly native plant palate. These design changes are not always met with open arms by a public accustomed to expansive tracts of lawn in the cemetery. In 2007, Fort Bliss National Cemetery in El Paso, Texas, removed 76,000 square feet of turf, replacing it with gravel, nearly 500 low-water trees and 3,800 plants

in an effort to reduce the 54 million gallons of water the cemetery uses each year . The community quickly responded through several news outlets and even YouTube videos condemning the new xeriscape, claiming it disrespected the veterans buried in the cemetery. Over time, however, the community uproar has quieted and moved on to accept the new water-conscious design changes.

Governance

While the transition from public to private governance initially allowed designers greater control of cemetery appearance and offered patrons the convenience of perpetual care, the monetary support system has begun to fail over the past decades. Plots in perpetual care purchased before 1900 for a mere $100, over time cost thousands of dollars to maintain due to inflation. Once private cemetery ventures providing perpetual care began to feel the pinch of limited funding, prices for new burial plots and services skyrocketed (often at over 100% markups). Once all existing plots were sold, cemeteries had no choice but to continue purchasing adjacent land and expanding. The vicious cycle continues as more land is acquired, a larger staff and more supplies are needed and often sections with older interments are neglected or abandoned and reverted to the state (Woodthorpe, 2010). The victim then becomes the unsuspecting plot buyers who now face an average cost of $2,600 for burial and perpetual care alone.

Outside of the United States, other countries have responded by shifting cemeteries into the public domain, placing them under the governance of

the state. Countries such as Sweden have created cemetery taxes, declaring that every citizen possesses the right to a burial of his or her choice in a state-funded cemetery. Cremation, burial plot, burial services, hearse, use of public chapels and perpetual care are free for all citizens to use and paid for by tax revenue. This practice, in theory, insures the continual funding for the upkeep of the cemetery as long as the death tax and city governance of cemeteries remains.

Figure 4.6: Biodegradable Natural Burial Marker, Honey Creek Woodlands, Conyers, Georgia. *Photo by Author.*

Natural Burial

Currently, however, the most ecological and economical method of body disposal is natural burial. Often natural burial sites are used to restore natural woodland or meadow in areas where logging had occured. By removing the vault, elaborate casket and embalmment from the burial process, natural burial also eliminates nearly all toxic fumes, fluids and excessive energy from the burial process that other forms of interment cause. No fuel or fumes from cremation

(although minimal) and no rare metals, hardwoods, cement, steel or chemicals of caskets, vaults and embalmment of traditional burial are used. The simple and natural process of decomposition of both the body and the simple wooden casket can take place. Additional restrictions placed by natural burial cemeteries, such as native-only plantings and biodegradable headstones, make the practice even more ecologically sound (Figure 4.6).

The Healing Process

Cemeteries are dynamic spaces defined by the emotions they embrace. Eight primary emotions have been identified that are commonly felt within a cemetery including grief, sadness and pensiveness, sorrow and solace, guilt, respect, loss, loneliness, fear and anger (Bachelor, 2007). Cemeteries permitting weddings, such as Forest Lawn Memorial Park, or offering tours and festivals such as Oakland Cemetery in Atlanta, encompass an even greater variety of emotions on the grounds. Although the funeral is considered by many to be an extremely private affair, the space within a cemetery is intended to be a public space for personal grief and expression. With the exception of church, it is one of the only spaces in the public realm where someone lamenting, weeping or in deep conversation with the dead is acceptable. With this, the design and laws governing the appearance of a cemetery are capable of either aiding or impeding the emotional healing process undergone by grieving visitors.

The Kübler-Ross model, or what is commonly referred to as “the five stages of grief,” is the most widely accepted explanation for the grieving process. First introduced in 1969 as emotional stages taken by those with terminal

conditions, the model has spread to explain a variety of grief processes by both victims and survivors. Today, there are many critiques of the Kübler-Ross model as well as developments of other theories describing the emotional process of grief beyond denial, anger, bargaining, depression and acceptance (Renee, 2007). In 1944, Lindemann proposed a model classifying grief as either “normal” or “pathological”, promoting the belief that the grieving process required those in mourning to detach themselves emotionally from the dead and adapt to a world without the deceased (Burglass, 2010). Later studies, however, have revealed many of these “pathological” grief characteristics to actually be common and in fact “normal” (Burglass, 2010). Bowlby introduced a more flexible theory of stages in 1973, believing that childhood experiences effect adult bereavement, which cycles through overlapping stages of shock, yearning/protest, despair and recovery (Burglass, 2010). A more contemporary theory is the Dual process model, which proposes mourning is a “two-way process” that osculates between “grieving” and “trying to come to terms with the loss” (Burglass, 2010, p.44). This theory is more widely accepted by professionals today, who argue this model is not restricted to bereavement in the West like the others previously discussed. Whatever model is used, one common element can be drawn from most of these concepts: contemplation. In 1961, Freud introduced the theory that “grief [was] a solitary process...[and] the psychological function of grief was... to release the individual from his or her bond with the deceased...[which] was achieved by looking back at the past and reliving memories of the deceased person” (Burglass, 2010, p.44). A cemetery landscape aiding in the healing process

implements spaces of contemplation, where feelings of loss may develop into memories and acceptance. According to Marc Treib, a space's "significance ultimately derives from the interaction of people and place," and therefore "to be contemplative we must direct attention toward or within a setting" (Treib, 2005, p.15).

Spaces with inward focus and limited "stimuli", such as Japanese Zen gardens, allow visitors to further concentrate on the "residual elements" of the space of which they occupy, promoting deep thought on the subject at hand (Beardsley, 2005; Treib, 2005). Simple amendments to a site such as mobile benches and seating are effortless additions that allow mourners to grieve graveside. Spaces such as Skogskyrkogården, which uses a thick buffer of forest between cemetery plots and the outside environment and small mobile chairs throughout the property, as well as Igualada Cemetery, which uses the location of a sunken river valley to block outside views, employ this technique today. For larger cemeteries, this technique can be applied by creating a series of open and closed spaces separated by thresholds (Beardsley, 2005). Smaller rooms, where long sightlines are blocked, provide intimate spaces to lament by a grave in a more private setting that promotes contemplation, as seen in General Cemetery.

The walk among these rooms of contemplation becomes a meditative journey as well. For mourners not wishing to sit graveside, a promenade through the site also encourages meditation and reflection within the cemetery. Long allées framing an object, like a chapel, statue, fountain, well, or view,

allow visitors to focus on one object or scene as they pass through the site and concentrate on their thoughts and emotions (Beardsley, 2005; Krinke, 2005). These objects also anchor the site, providing easy wayfinding points so those meditating may concentrate on their thoughts and not their orientation within their location (Krinke, 2005). Implementing symbolism into these wayfinding objects and other elements of the design provides a deeper sense of meaning to the site (Krinke, 2005). As visitors move through the space, the deeper meanings of water, wind, trees, birds, stone, light and dark all promote more profound thoughts about the preciousness of finite life and the natural character of death. Buildings on the site such as chapels, mausoleums, columbariums and crematories also should incorporate this symbolism as well as blend into the landscape, allowing nature to become the prominent theme of the site (Krinke, 2005). Natural colors, modest forms and placement within the site's natural elements, like woodlands, permit visitors to concentrate on their meditations. Skogskyrkogården is an excellent example of this technique, with the Woodland Chapel and the new crematorium currently under construction.

Applying archetypal themes and forms to the site also allows visitors of all denominations to connect their pain and grief with that of the past. Like their ancestors, most visitors will eventually conquer grief and heal the wounds of loss. These archetypes become a common human bond, a connection and ritual between all people for a final journey that will be taken by every human, regardless of religion, race or creed. "Ritual is an essential component of the memorial landscape..like pilgrimages up ancestral mountains, ritual

Figure 4.7: La Cambe German War Cemetery Hill, Normandy, France.
Photo by Author.

baths in sacred springs, or storytelling, place-as-a-holder-of-ritual assists in community restoration" (Wasserman, 2002, p.193). Large hills like those in Skogskyrkogården and La Cambe German war cemetery conjure thoughts of the burial mounds of the Vikings and Native Americans, as well as the Pyramids of Giza (Figure 4.7). The movement of the earth towards the sky in these ancient cultures mirrors the human desire to reach the heavens and today reflects most religious beliefs of ascension to heaven in the afterlife, a comforting belief for countless mourners. Valleys, depressions and tunnels, like the catacombs of Paris and the Etruscan necropolis of Cerveteri, suggest the final journey of the physical body into the soil which also harkens back to the Greek mythological journey after death to Hades.

Basins also imply the presence of water. Throughout history water has symbolized numerous qualities, such as purity, cleanliness, change, forgetfulness

and life. The sounds of water within a space are also relaxing and therapeutic with falling water often drowning out the sounds of traffic and the city. Trickling water evokes thoughts of rain and the tears and sadness that often accompany it. Skogskyrkogården uses water in various ways throughout the site. Falling water at the entrance signifies the tears of those mourning in the cemetery, and the still pond near the crematorium provides a perfect reflection of the heavens above. A series of seven wells also guides visitors throughout the site, connecting each section of the cemetery by water (Figure 4.8). Erosion, a result of water moving stone and soil over time, suggests never-ceasing change over years and centuries (Robinson, 2010). Igualada Cemetery features an absence of water but nonetheless implies its presence through the site's location in a dry river valley.

Figure 4.8: Walk of the Seven Wells, Skogskyrkogården, Stockholm, Sweden. *Photo by Author.*

Figure 4.9: Couple Visiting Grave, Skogskyrkogården, Stockholm, Sweden. *Photo by Author.*

Perhaps one of the greatest therapeutic elements of a cemetery is the grave itself. Studies have shown that decorating the grave of a loved one aids in the process of healing and acceptance. For mourners who elect to plant and garden around a headstone, the act of digging and aerating the soil may allow “greater understanding, acceptance and healing through these parallel cognitive and material ‘excavations’” (Francis, Kellaher, & Neophytou, 2005, p.121). These grave gardens often become an extension of the interred’s personality with special objects like candy, toys, notes and rosaries; a space where family members and friends can display their love for the one they lost and show others who the departed was. In many ways, the cemetery becomes a domestic space similar to that of a neighborhood: graves with the greatest care and upkeep reveal an attentive and loving family (Figure 4.9.) (Francis,

Kellaher, & Neophytou, 2005). Many believe that these grave gardens are more for creating a display for visitors of other graves, “showing other people that they still cared” (Woodthorpe, 2010). Still, others argue that the tidiness of a grave planting signifies the battle against nature and the decay of time taking place below the surface (Francis, Kellaher, & Neophytou, 2005).

Figure 4.10: Forest Lawn Memorial Park Decoration Restrictions, Glendale, California. *Photo by Author.*

For many, the memorial itself is the deceased, and the compulsion for “physical involvement” with the grave is in essence caring for the departed (Francis, Kellaher, & Neophytou, 2005). The same practice carries over to gardens of remembrance where cremains of loved ones are often scattered. Relatives of the deceased often express the desire to maintain the section of the garden where the cremains were scattered. Often plants such as rose bushes are planted and cared for on a regular basis by surviving family members.

However, many cemeteries today, especially in the memorial park style, prohibit such decorations, arguing they inhibit lawn care and distract from the landscape (Figure 4.10). Modern cemetery design also focuses on the overall

effects of a design as opposed to the individual grave. While the overall effect remains a crucial factor in the effectiveness of a healing and contemplative landscape, studies like Woodthorpe's articles "Buried Bodies in East London Cemetery: Revising Taboo" and "Private Grief in Public Spaces: Interpreting Memorialization in the Contemporary Cemetery", have shown

Figure 4.11: Grave Decorations in Lone Tree Cemetery, Hayward, California.
Photo by Author.

that adorning the grave of a loved one is a vital step in the healing process. Modern cemeteries and privately owned memorial parks place stringent rules on decorations which hinder or even prevent survivors from personalizing a gravesite. When such stringent rules were applied, many mourners revealed feeling "processed" by the cemetery (Francis, Kellaher, & Neophytou, 2005). In the mourner's view, demarcating the space occupied by a body, personalized epitaphs, toys, candy, letters, plantings and photographs display individuality and maintain the essence of a living sprit (Figure 4:11) (Woodthorpe, 2010).

Such decorations often become a part of the landscape, defining it as a place of memories. Francis et al. note that the cemetery "is built up through the commemorative activities of individual mourners who draw on traditional cultural aesthetics to reaffirm the personal identity and group membership of the deceased" (Francis, Kellaher, & Neophytou, 2005, p.56). As time passes, the upkeep of these items and the headstone may come to symbolize the mourner's battle with nature and its decaying affects (Francis, Kellaher, & Neophytou, 2005).

The past century has brought cemetery design closer again to nature. Following in the Victorian tradition of submersion in nature, the woodland cemetery design style and natural burial have enabled humans to become part of natural forces once again. After a long period of society distancing itself from death – handing the dead over to professionals and away from families – we have changed the way we as a society perceive death and, more importantly, how we grieve. Modern cemetery design now reemploys healing and acceptance through exposure to nature. Sites promoting contemplation in order to heal the soul have built the foundation for future cemeteries which may also recognize the cemetery as a social space for the community and sustainable design as well. Modern cemeteries are by no means perfect; however, acknowledging their issues and finding solutions to these problems will enable greater success in future designs.

CHAPTER 5

DESIGN

This chapter explores the application of design principles promoting sustainability, community open space and the healing process as discussed in the previous chapter. Figure 5.1 organizes the elements of Figure 4.1 (in Chapter 4), revealing common relationships among all three elements. A modern cemetery design that encompasses these themes, as discussed in Chapters 2 and 3, should be structured first around the elements spanning multiple categories (diagram center). According to the Venn diagram, a modern cemetery should first develop around planted space, pedestrian emphasis and the paramount presence of nature before expanding to the elements in subcategories (with two overlapping categories) and finally the three main categories. While modern cemeteries should ideally encompass all of these elements, the diagram prioritizes these features.

The proposed design site was selected based on the following criteria: (1.) located with Athens-Clarke County, (2.) brownfield/greyfield or formerly developed site, (3.) over 100 acres, (4.) located within 1/2 mile of a public transportation or recreational route, and (5.) located with 1/2 mile of a residential community. The restriction to Athens-Clarke County allowed acquisition of accurate and current site data as well as an existing familiarity with the existing

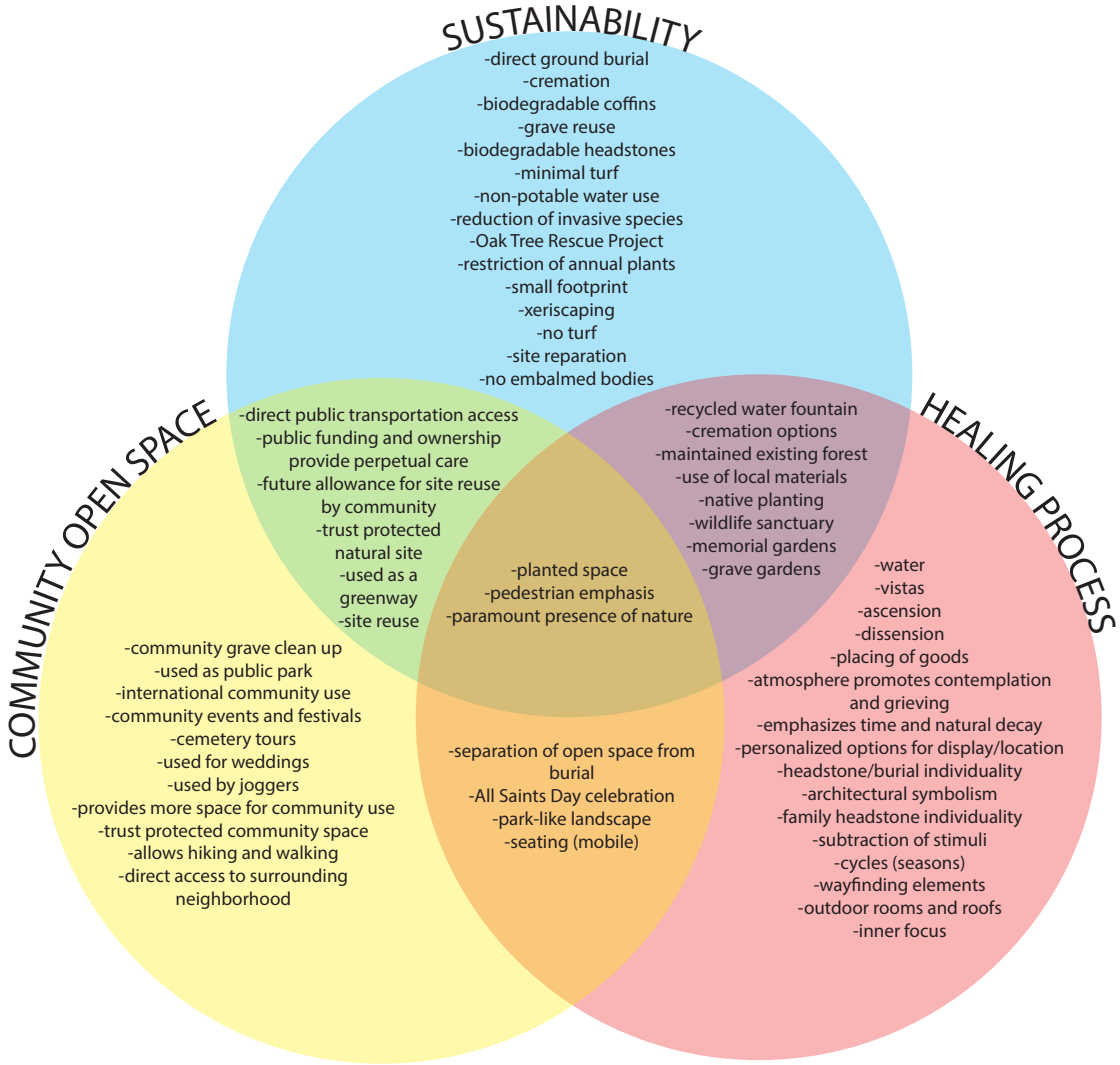


Figure 5.1: Cemetery Design Elements Venn Diagram

social structure of the surrounding communities. Using a site greater than 100 acres allowed an ample amount of space for all components of the design, including community open space. The restriction to site reuse, and locations with 1/2 mile of residential communities, transportation and trails promotes sustainable development even before a design has been implemented.

Figure 5.2: South perspective of existing site. *Photo courtesy of Bing maps.*

Figure 5.3: North perspective of existing site. *Photo courtesy of Bing maps.*

Site

The site chosen for study is a 189-acre tract of land located along Winterville Road north of Athens-Ben Epps Airport in southeast Athens, Georgia. First established in 1953 as a quarry, the site still produces aggregates such as gravel, sand and crushed rock, as well as ready-mixed concrete, asphalt and prefabricated building products. The site was approached for design as post use, planning for potential site reuse once the quarry is closed. Assuming that

Figure 5.4: East perspective of existing site. *Photo courtesy of Bing maps.*

Figure 5.5: West perspective of existing site. *Photo courtesy of Bing maps.*

all quarried materials and machinery will be sold and removed from the property once operations cease, the remaining site will be composed of a large 300-foot-deep pit surrounded by moderately level land (Figures 5.2-5.5).

Quarries such as this provide excellent spaces for cemeteries and parks. The existing excavations provide ascension, descension and vistas, as well as a low point for accumulating water — all symbolic contemplative elements aiding

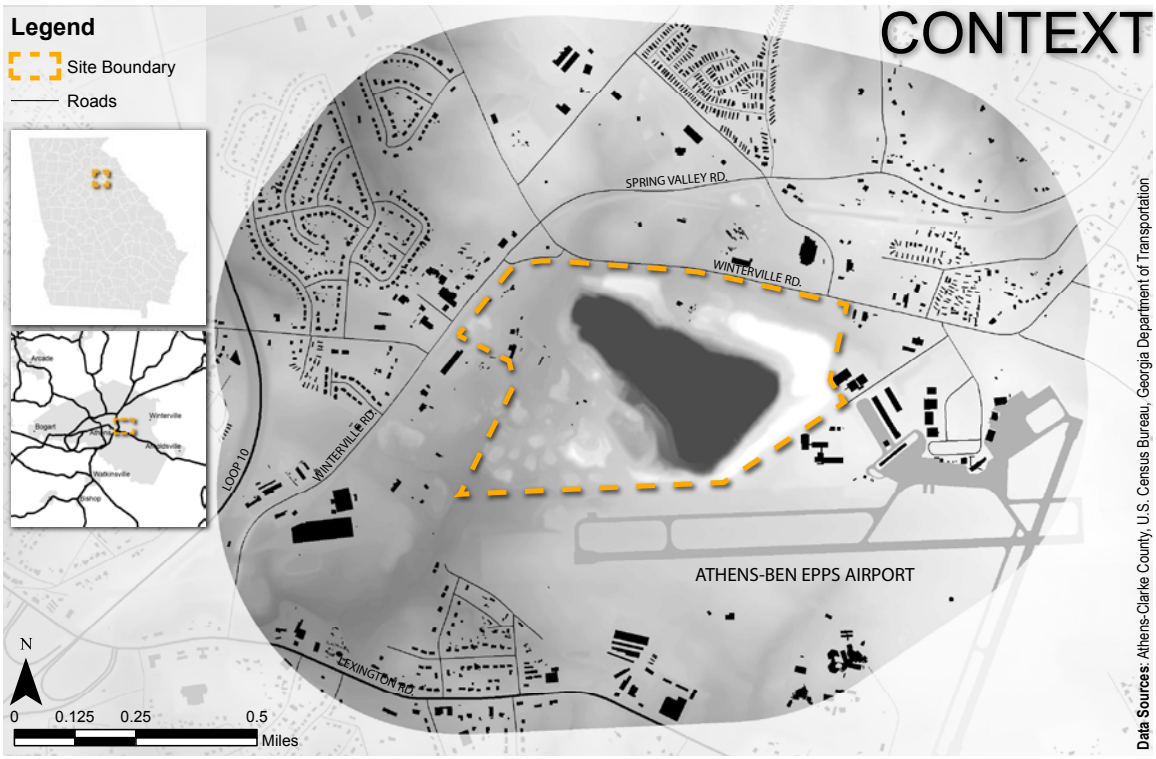


Figure 5.6: Site context map.

the healing process. The “manmade-organic” shapes dug deep into the earth evoke meditations on the historic and universal journey after death of the body into the earth and the soul into the heavens. For the community not in mourning, the quarry offers both visual and historical interest. Properties with large pits are very limiting to future development and are typically left abandoned after use. Reusing an industrial site such as this promotes sustainability and smart growth for what Sloane calls “the last great necessity.”

Inventory and Analysis

Because of the park-like nature of the design, a half-mile study radius will be examined around the site (as well as the existing conditions on the site) in order to analyze the surrounding community. While the site and surrounding

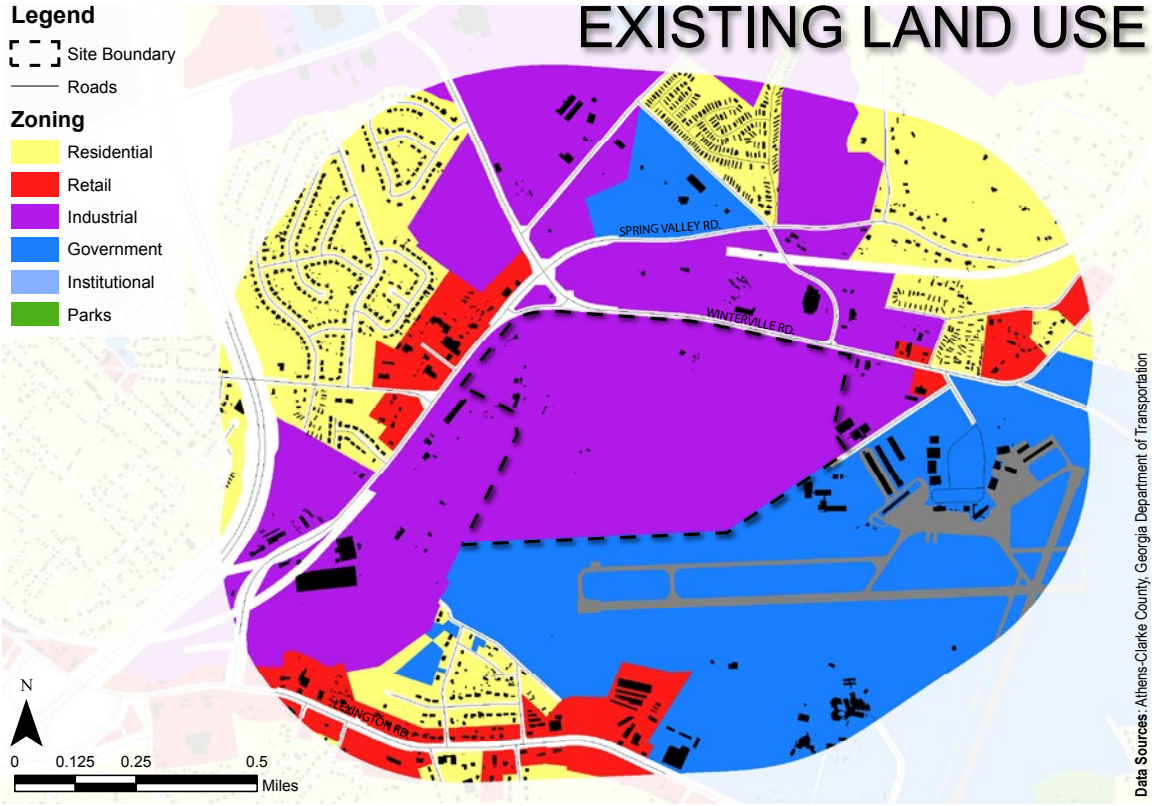


Figure 5.7: Existing land use.

properties are primarily zoned as industrial and government (transportation), large areas of residential communities lie within a half mile of the proposed site boundary (Figure 5.7). The area population is low; however, new developments along Lexington Road and Loop 10 indicate future residential growth around the site (Figure 5.8). A small private memorial park style cemetery along with three historic family plots lie within the half-mile radius (Figure 5.9). The historic family plots are private and appear to no longer be in use while East Lawn Cemetery (memorial park) is nearly filled, with no evidence of planned expansion. Three public bus routes with a total of twelve designated stops are located within a half mile of the site (Figure 5.10). Two of these lines, Routes 2 and 3 located within a five-minute walk of the property, could easily be rerouted to stop at or inside the cemetery. The Firefly Trail (Figure 5.11) also runs along the northwest edge of

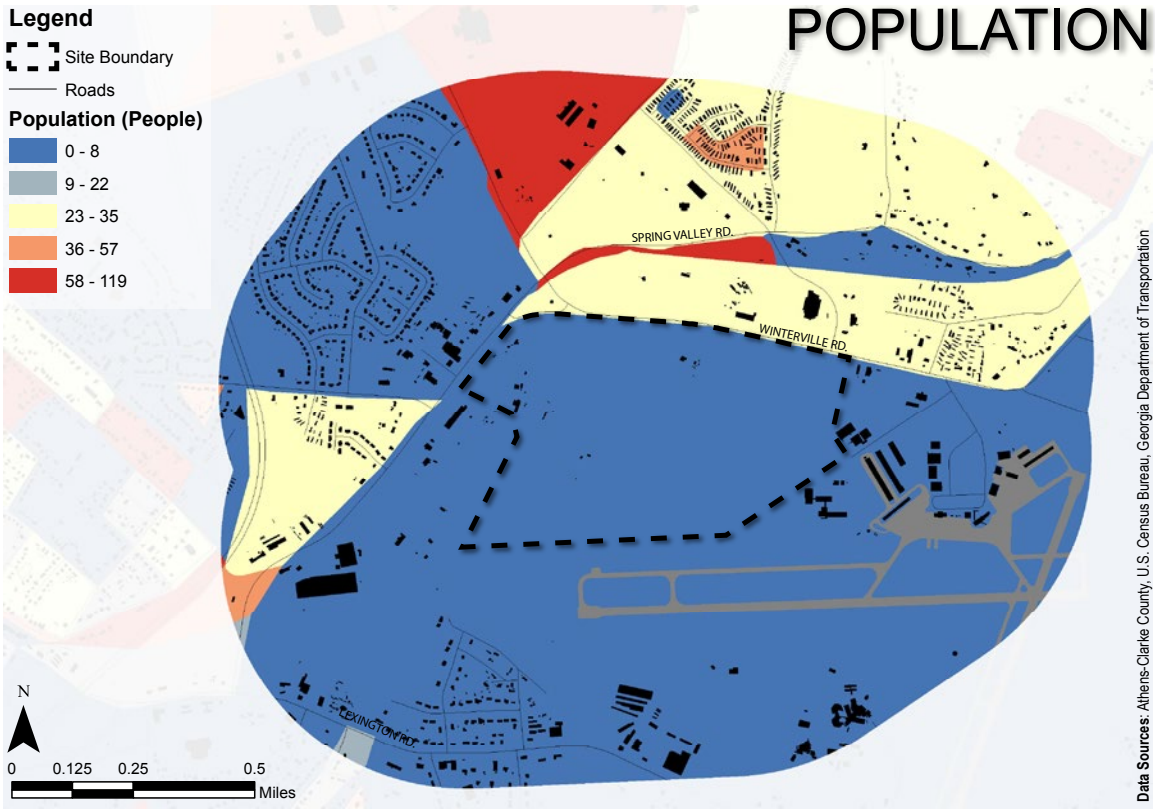


Figure 5.8: Population.

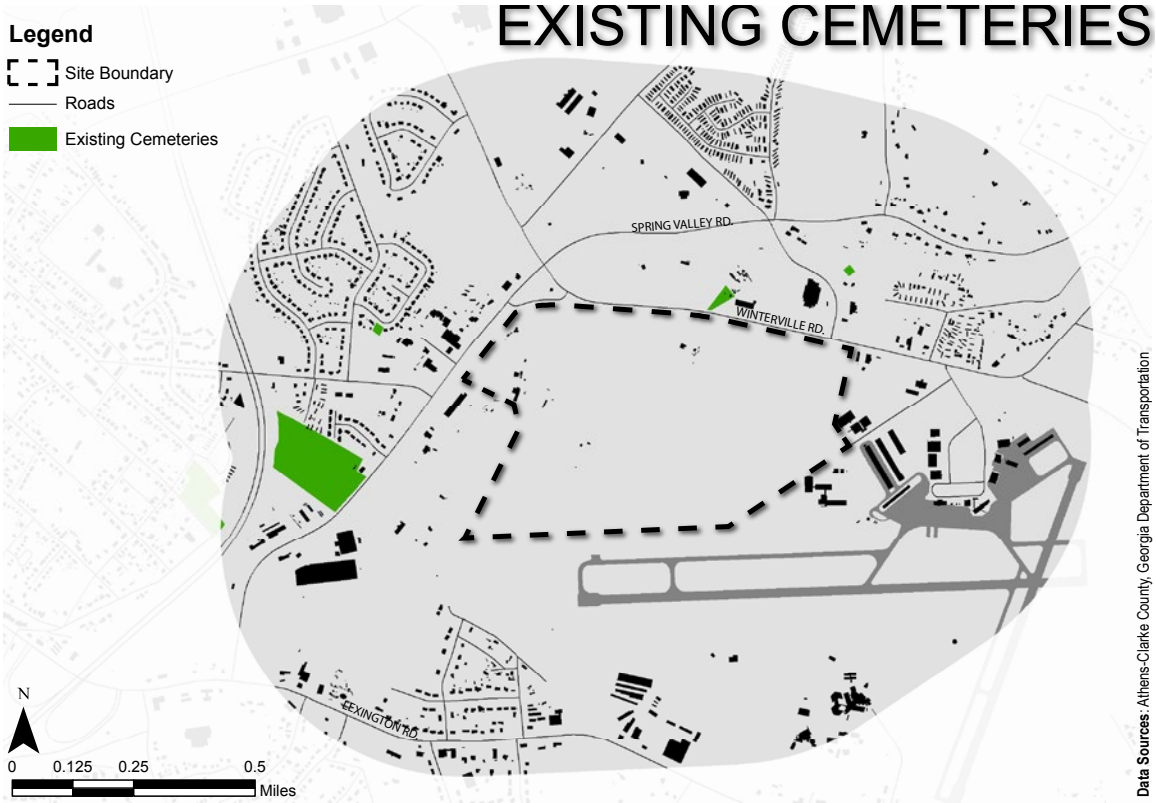


Figure 5.9: Existing cemeteries.

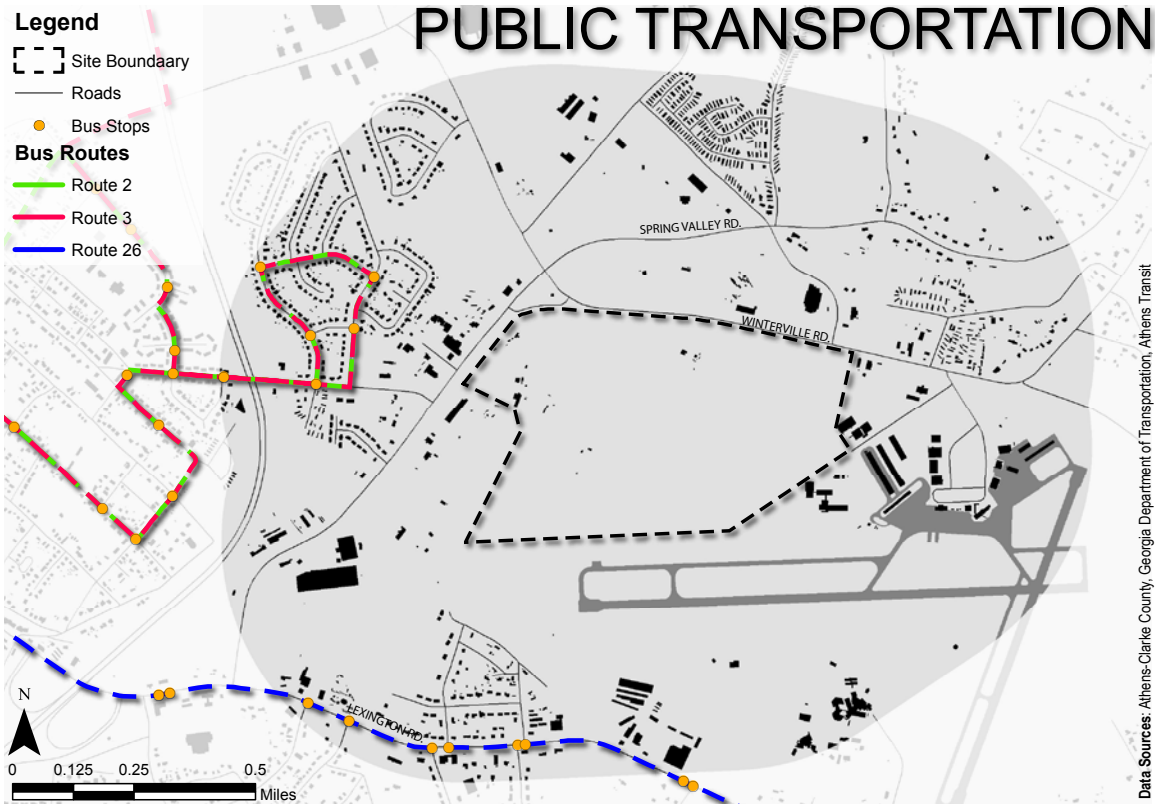


Figure 5.10: Public transportation.

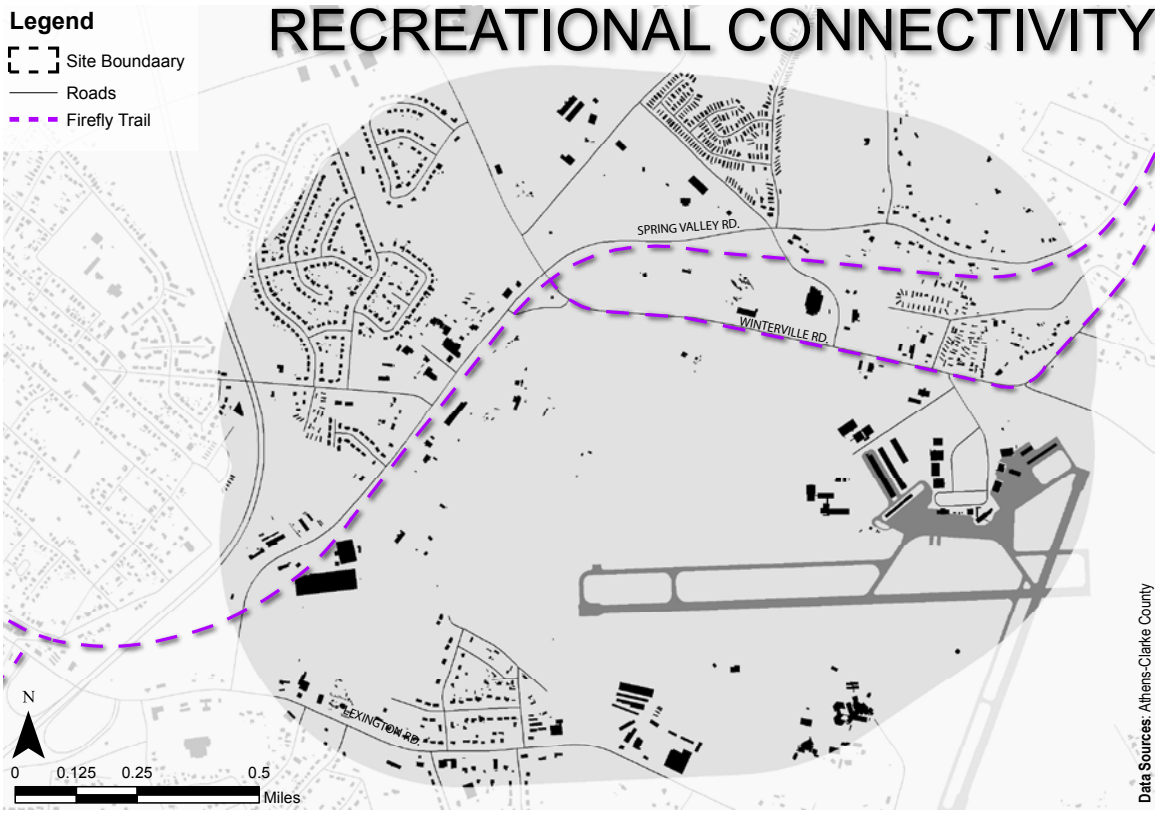


Figure 5.11: Recreational connectivity.

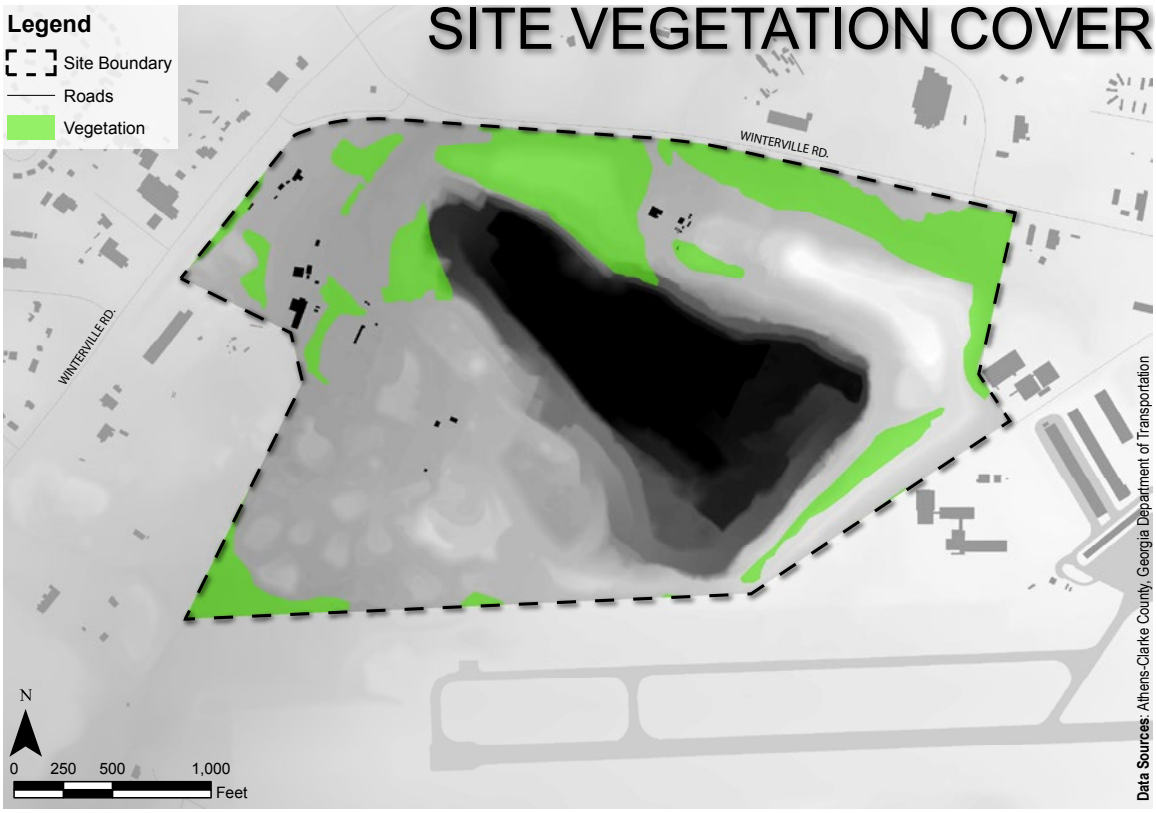


Figure 5.12: Site vegetation cover.

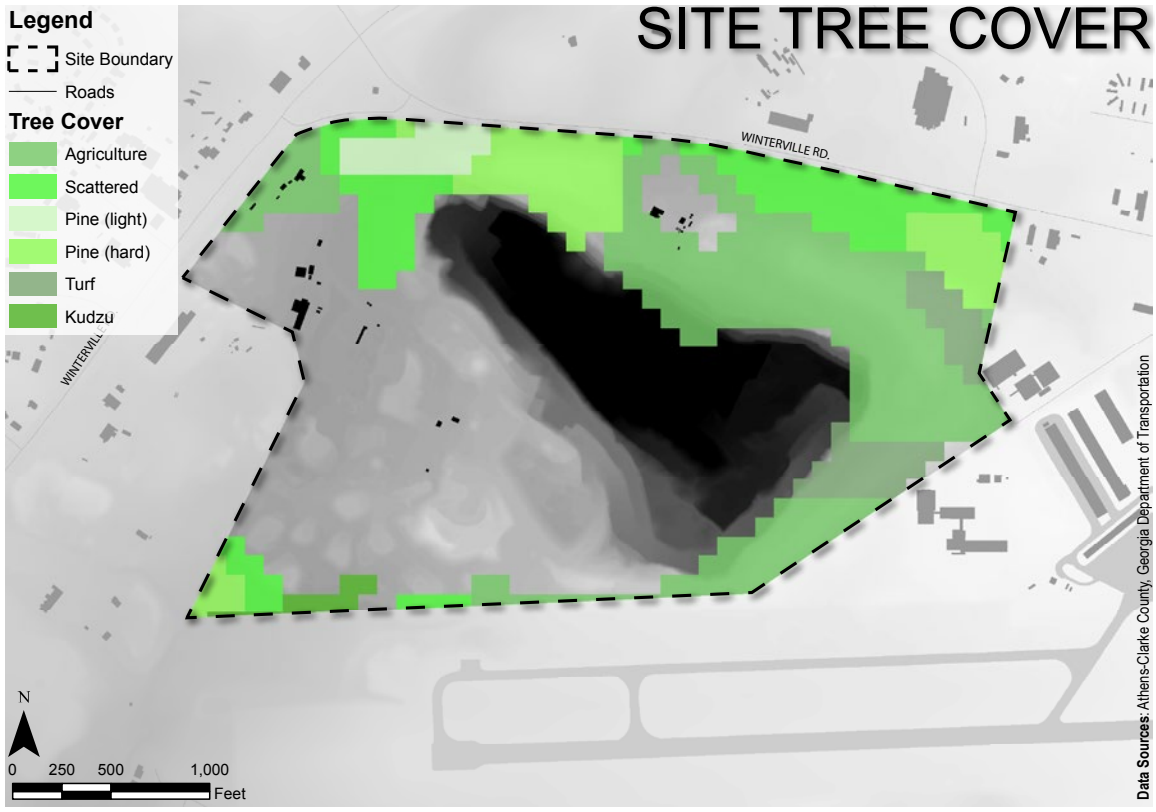


Figure 5.13: Site tree cover.

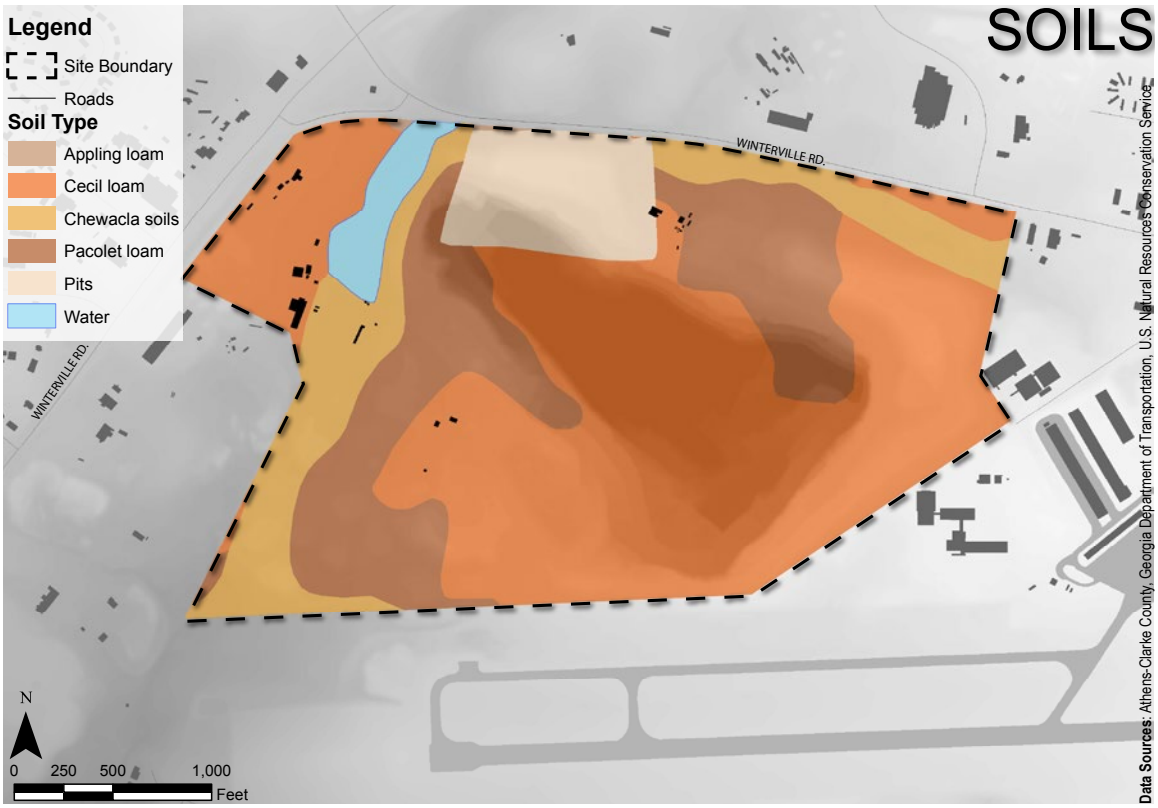


Figure 5.14: Soils.

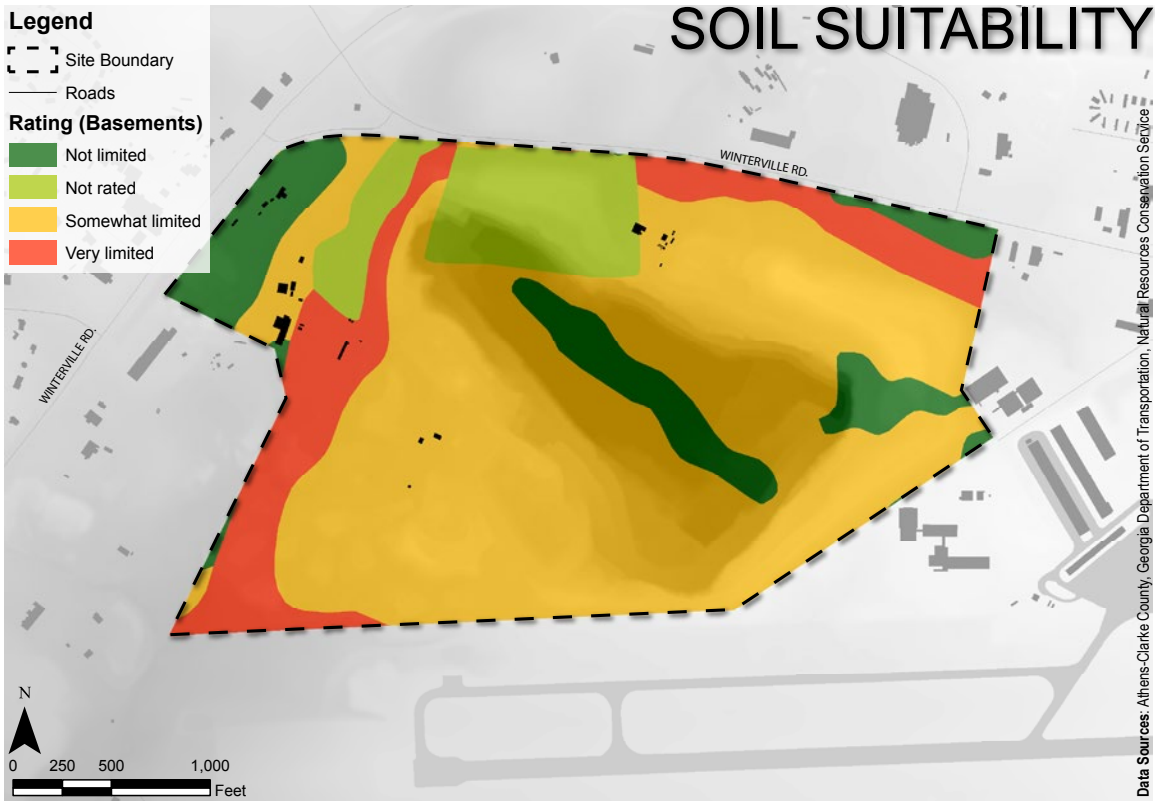


Figure 5.15: Soil suitability (Basements).

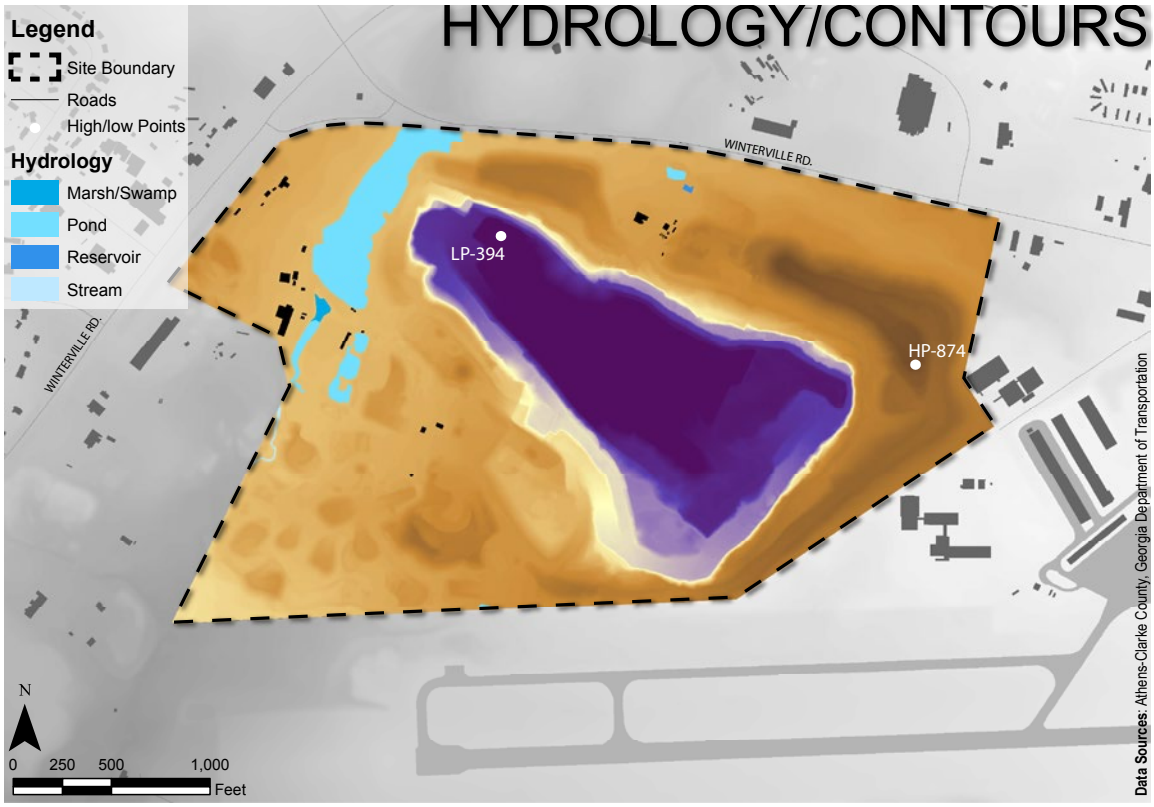


Figure 5.16: Hydrology/Contours.

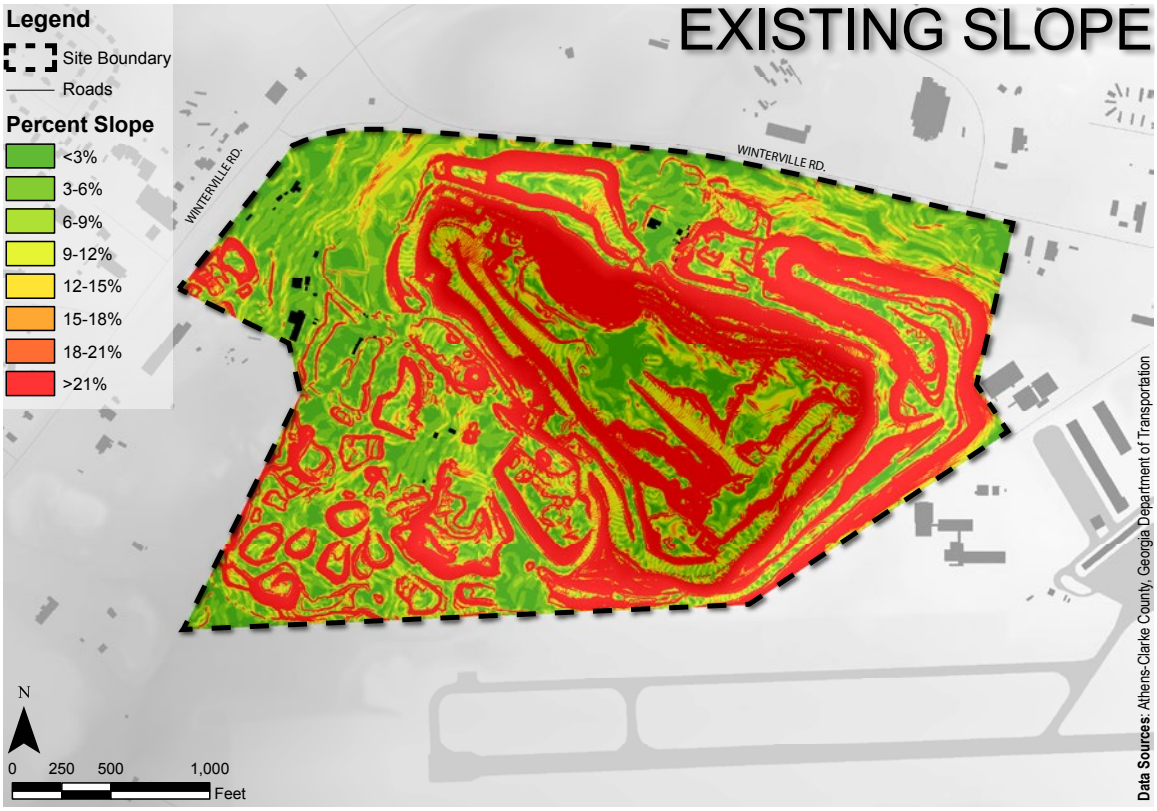


Figure 5.17: Slope.

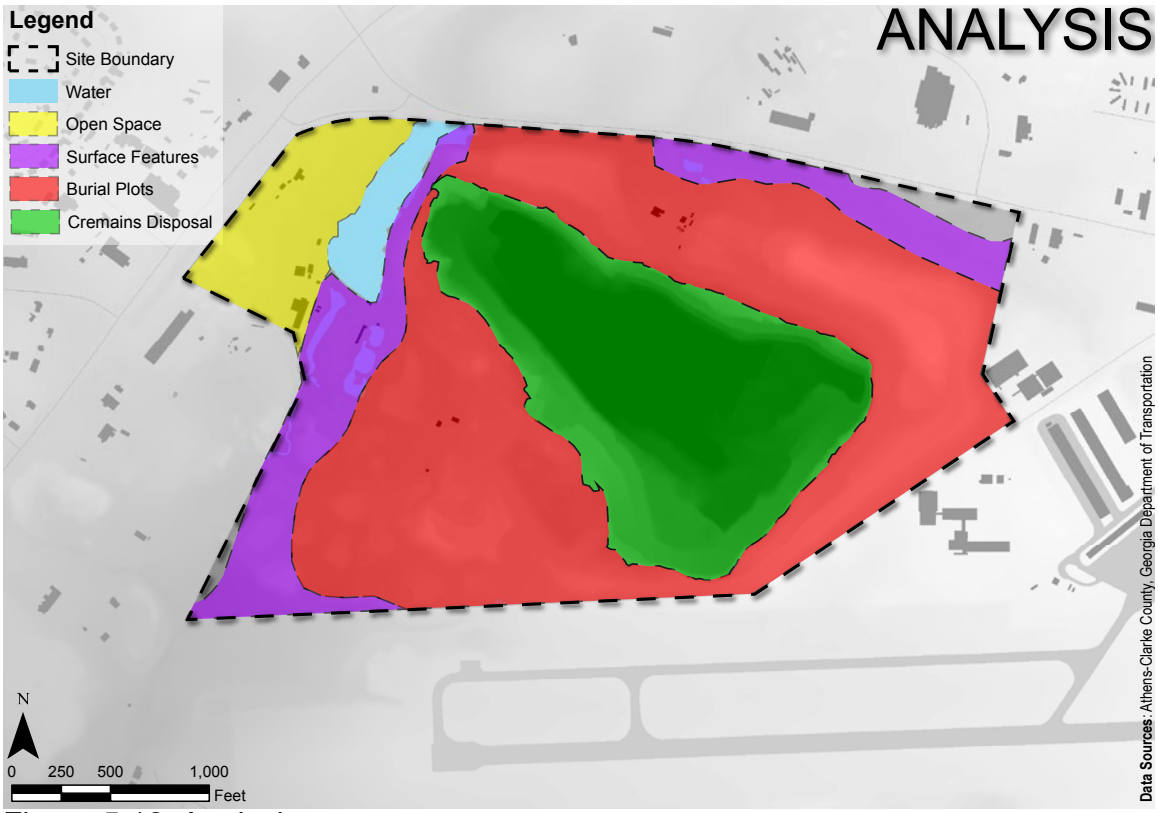


Figure 5.18: Analysis.

the site boundary, allowing the site to potentially become a destination along this tri-county recreational route.

Existing vegetation on the site is sparse. Larger groupings of hardwood pine woodland are found on the north side of the site atop old soil mounds (Figures 5.12-5.13). Small clusters of hardwood pine and scattered vegetation have begun to fill in areas close to the pond on the northwest section of the site as well as in small sections of steep terrain inside the pit. There are four primary soil types on the site (Figure 5.14). All of these soils are suitable for burial plots except for a linear strip of Chewacla soil which has very limiting factors that inhibit subsurface excavations (Figure 5.15). While most of the original soil profiles have been disturbed or removed, the design will reflect soil

types and locations currently provided by the United States Geological Suvey. The site contains three primary ponds in the northwest corner of the property along with a small intermittent stream/ditch. The low point of the site (contour 394') periodically holds runoff water from the quarry as well as the surface 300 feet above (Figure 5.16). The high point on the site is located atop a temporary gravel heap, giving the existing site a grade change of 480 feet. While the site is extensively composed of slopes exceeding 12%, a large number of these slopes are temporary and will be removed when the quarry business ends (Figure 5.17).

Taking these factors into account, the site naturally divides into areas suitable for a variety of purposes (Figure 5.18). The northwest corner of the site, where the existing entrance is located, is uniquely isolated from the remaining areas of the property by the series of ponds running north to south. This section of land also is located closest to a large residential development and two existing bus routes, making it distinctively suitable for a proposed community open space (park). The strip of Chewacla soil running through the site also isolates this open space while providing areas for aboveground burial options such as a columbarium, mausoleum and cremains memorial garden. While the remainder of the site is composed of not limited or somewhat limited soils, which are suitable for full body and urn burial, the large quarry itself becomes an obstacle. This large pit transforms into an inviting space for contemplation and cremains disposal. A ramp — residual infrastructure from the active quarry — becomes a natural access route to the depths of the pit, allowing the space to be actively used.

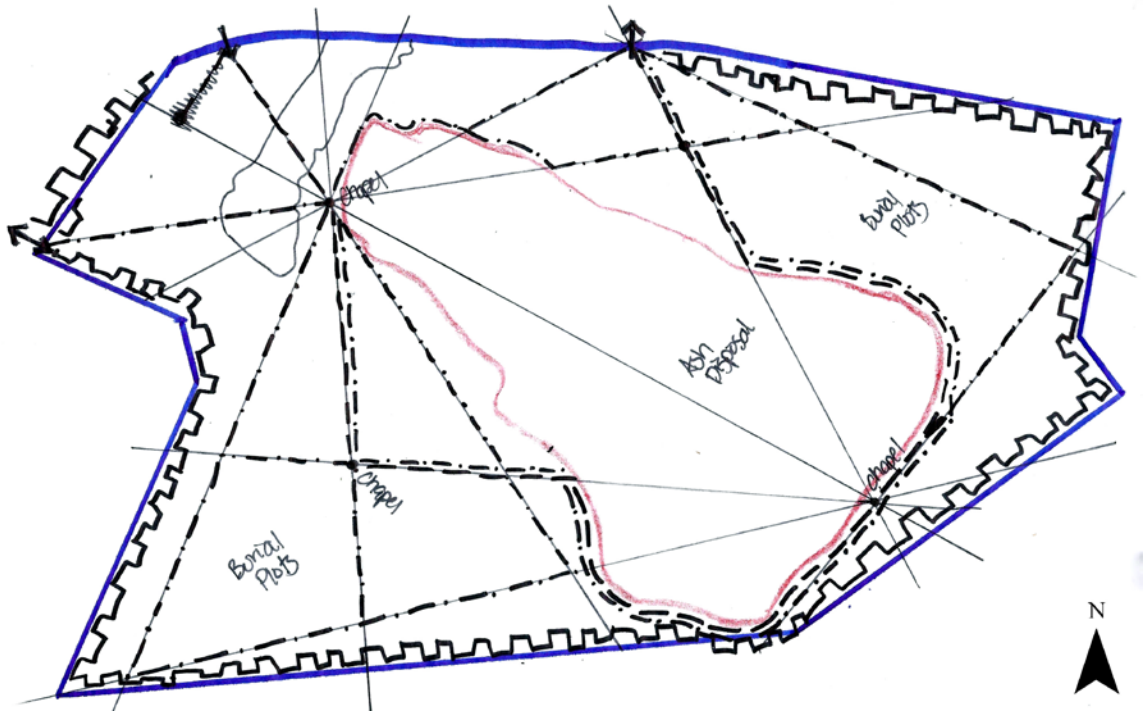


Figure 5.19: Preliminary diagram.

Process

The design began with simple “bubble” diagrams in order to determine overall placement of cemetery elements. The existing site entrances along the north edge of the property were maintained, as they allowed a circular vehicular flow through the space. An additional entrance was added on the west side of the site for pedestrian and bike access to and from the neighborhoods and current bus routes to the west. This western section of the site, separated from the remaining site by several ponds, became the primary location for the community open space. These ponds were used for a variety of purposes, both as natural dips in terrain for stormwater collection and for processing materials in the quarry. The processing ponds (specifically the pond divided into three

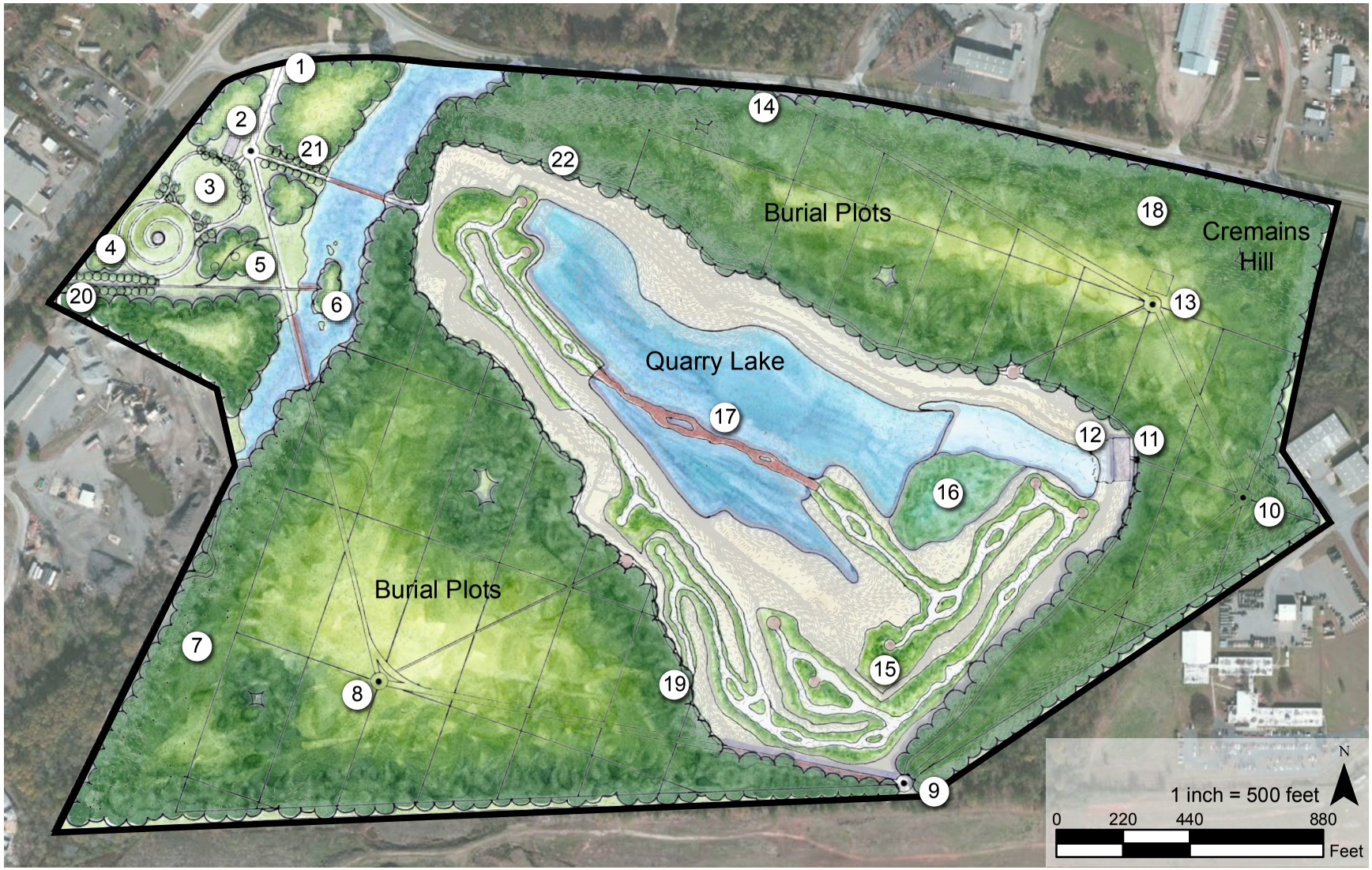
sections and the small pond near the northeast entrance) will be decontaminated of any harmful chemicals/elements and filled in. The remainder of the site will transform into the space for burial rituals and burial sites. The large pit in the center of the site became a space for cremains disposal and memorials due to the nature of the current surface materials and slope. The long strip of Chewacla soil restricted soil excavations for burial; however, it provided two separate spaces for cremains disposal. The flat topography of the southwest strip became an ideal location for an outdoor columbarium, whereas the currently wooded northeast section presents as a natural space for scattered cremains.

With a diagram in place, primary circulation through the site was developed. In order to provide vistas and wayfinding, a baroque style path cuts through the site through a series of axes with chapels and statues to anchor the angles (Figure 5.19). These axes were also used to determine placement of seating areas and structures. Next, a rectangular structure to section off plots was developed in order to organize burials and provide secondary access throughout the site, using the natural form of the pit to break up this geometric grid. Using the rough shapes and lines of the pit for inspiration, the quarry itself becomes a space for natural shaped pathways and plantings.

Design Solution

Figure 5.20 displays the proposed design solution.

Figure 5.20: Site Plan.



Community Open Space

The existing ponds along the western side of the site were combined and narrowed to connect the existing bodies into one continuous flow. This provides the opportunity to remediate the water and provide a variety of small ecosystems within the pond/stream as well as dividing the community open space from burial plots. The addition of a small island in the center of this water body (6), accessible by walkway, provides a space for relaxation, contemplation and quiet recreation, such as fishing or sunbathing. The section of land to the west of the pond/stream is occupied by large groupings of shade trees, picnic areas, a memorial hill, mortuary/offices and an open recreation area. Street-side parking throughout the site (Figure 5.21), along with two dogwood alleés along the pedestrian entrance (20) and the walkway connecting the community space to the quarry (21), bring users into and through

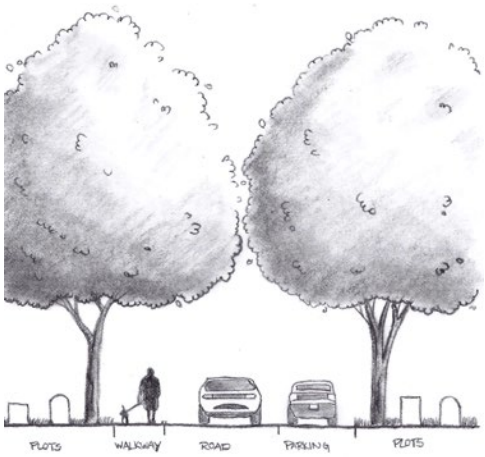


Figure 5.21: Road section.


Figure 5.22: Dogwood allée.


Figure 5.23: Grass recreation area.

the site via white canopies in the spring and prioritizes this space as primarily pedestrian use (Figure 5.22). The grass oval space (composed of a grass/clover mix to lower water demands) is designed for passive recreation such as book reading, picnics, children's games, yoga/ Pilates and jogging/running (3) (Figure 5.23). This open space also is ideal for community activities such as Memorial Day events, Fourth of July, Easter egg hunts, Halloween/All Saints' Day/Día de los Muertos, Christmas tree lighting and Saint Patrick's Day four-leaf clover hunts. The adjacent shaded picnic area (5) and numerous benches along the field provide spaces for families to relax and eat while maintaining visual supervision with playing children.

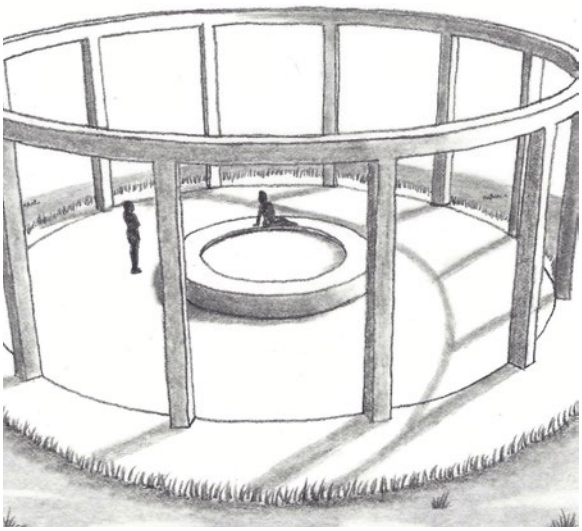


Figure 5.24: Memorial hill summit.

To the southwest of the field sits a fifty-foot-tall memorial hill with a small spiral path winding to the crest (4). The spiral traditionally symbolizes the journey of life and as a visitor reaches the summit of the hill, he/she finds a memorial resembling the ancient ruins of Stonehenge encompassing a perfectly still reflecting pool (Figure 5.24). The pool, like those found in other designs, reflects the heavens inside the earth while the circular structure signifies the historic journey of life and nature of death. A ledge surrounding the pool provides seating as well as a space for temporary memorials such as candles, flowers and wreaths.

Burial Plots

Vehicular circulation through the site is one way, flowing counter clockwise from the main entrance in the northwestern area of the site to the exit in the northeastern section. With this path, visitors (both pedestrian and vehicular) are forced to journey first into the community open space then over a bridge to the burial section of the property. The design contains a total of five bridges, again symbolizing the journey of crossing over. Once visitors have entered into the deathscape, the forest changes from wild vegetation to a simple tree canopy of native species. The forest floor is composed of a variety of native and low water, moderate to low light grasses and forbs with a mixture of pinestraw and mulch. Headstones are small, ranging from flat memorial plaques in long rows along pathways to upright headstones fitting within a three-foot-tall by two-foot-wide size restriction. Marker materials are flexible, allowing wood, stone or metal. Families may garden or place decorations within a two-foot-deep by three-foot-wide rectangular space either in front of or behind the headstone. Stations providing water, vase storage, trash/recycling/organic composting bins, clippers and mobile seating with storage are placed throughout the site (Figure 5.25).

The outdoor columbarium along the southwest area of the site is composed of simple columns placed at random intervals amongst the trees (7) (Figure 5.26). The random intervals of the columns allow the structures to blend into the forest and become a component of the natural setting. Each column is quartered into horizontal and vertical rows of niches for individual urns. The small footprint and the random interval placement of these columns allow this

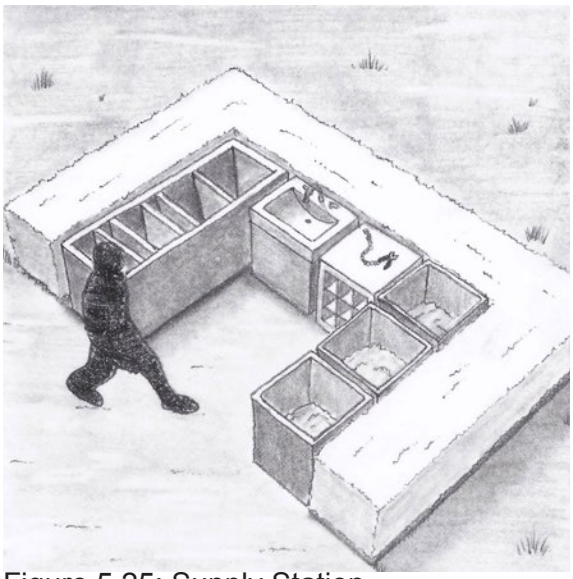


Figure 5.25: Supply Station.

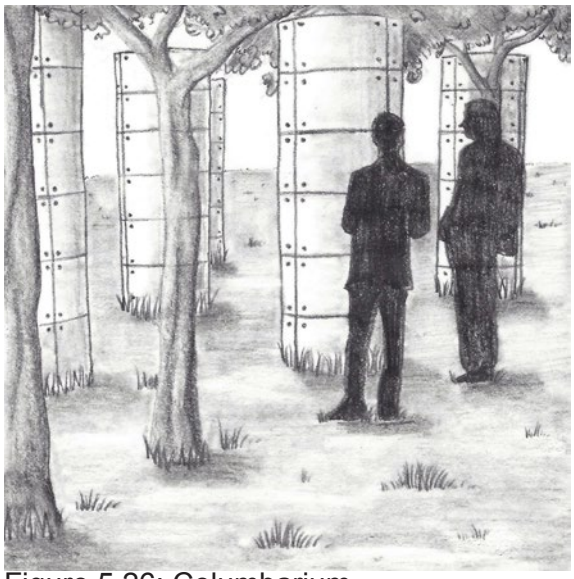


Figure 5.26: Columbarium.

space to slowly fill in and densify over time as demand for space increases. The northeast corner of the site was intentionally left natural and overgrown with vegetation (18). This section is intended for unmarked disposal of cremains, similar to Minneslund, the memorial hill in Skogskyrkogården. Those disposing of cremains are encouraged to find a natural path into the space to scatter the ashes while visitors must remain on the designated road/path, placing flowers and candles on stone pads along the path.

Chapels and Artwork

The chapels and artwork located throughout the site are visual anchors (wayfinding) for visitors walking/driving along the primary path. Five sculptural pieces, marked with large black dots on the plan, each display a archetypal elemental theme. Again, alluding to archetypal symbolism as a means to evoke thoughts of the tradition of death, each sculpture represents one of each element:

Figure 5.27: Earth Chapel.

Figure 5.28: Buried holding room in Skogskyrkogården. *Photo by Author.*

earth, water, wind, fire and spirit. The first sculpture, seen at the entrance of the site in front of the mortuary, is wind (2). This piece's location in the community open space naturally requires the artwork to be whimsical and less contemplative, with pieces that move in the wind and rotate. The second piece, earth, functions both as a chapel and an artwork. This chapel is buried by a large sloping mound of soil, covered in native plant species, similar to a holding room in Skogskyrkogården (8) (Figures 5.27-5.28). To enter, one must walk down a slight incline, which is crowned with a simple circular stained glass window to allow natural sunlight to fill the room.

Visitors then continue their journey to the next art piece, located on the far side of a bridge over the southeast edge of the quarry (9). Here, a glass sculpture of yellow and orange flame elegantly curls up into the sky. To visitors standing far below in the quarry, the sun lights up the glass as if on fire. Next,

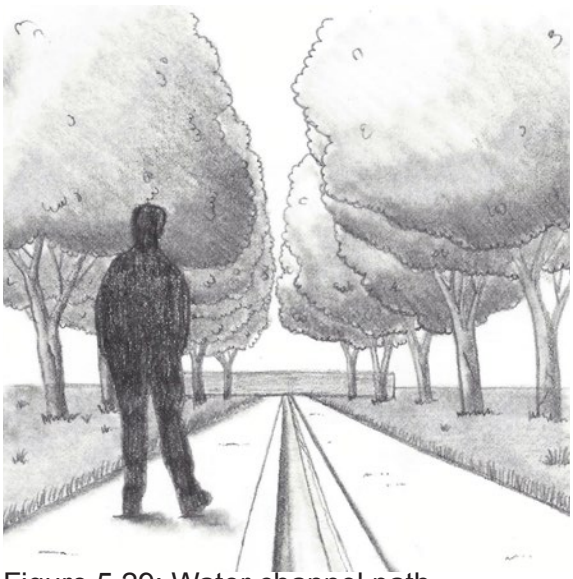


Figure 5.29: Water channel path.

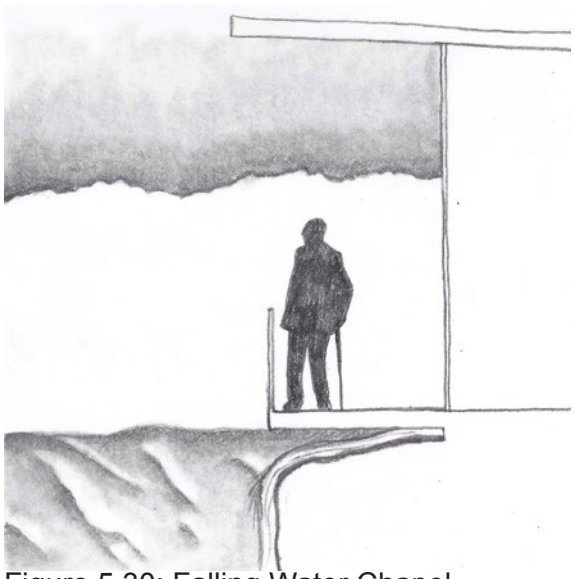


Figure 5.30: Falling Water Chapel.

the sculpture and chapel of water carries the visitor again to the edge of the pit. A small fountain, using collected stormwater, first begins in the center of a roundabout (10) before running through a thin stone channel (Figure 5.29) to the Falling Water chapel (11). The fountain then appears to run under the chapel, placed precariously on the edge of the quarry, where it then reappears on the other side, cascading down the edge of the stone pit in a roaring waterfall (12) (Figure 5.30). This chapel was designed with a glass front overlooking the quarry. A small deck hangs over the waterfall where loved ones may scatter ashes into the waterfall after a ceremony. The last artwork and chapel is spirit (13). Here, an outdoor chapel is created from the remaining materials left on the site once shut down. The spirit of the space lives on here, where rusty metal from quarry machinery and processing is reused and reshaped to shelter those in mourning.

Quarry


Figure 5.31: Quarry memorial plaque wall.

The quarry itself becomes a separate room for visitors to explore. The waterfall roaring down from the chapel above echoes throughout the entire space, drowning out the noise from traffic and the nearby airport. A small gravel trail runs along the rim of the pit for contemplative walkers and joggers alike (22). Access into and out of the pit is restricted to one entrance and exit at the southeast edge (19). A ramp descends into the space, splitting part-way down into two connected paths. This space is used as a memorial to all of those buried in the site. Large spaces for plantings are provided to loved ones wishing to plant a small memorial garden to those who have scattered cremains on the site. The quarry walls along these walkways are used for small optional memorial plaques to these cremains as well (Figure 5.31).

Several private resting spaces are provided throughout these pathways, offering small spaces to contemplate, garden, mourn or even relax amongst nature (15). Another bridge connects these two paths so visitors exit up a different path than the one used to enter (17). In steep areas, such as the edges

of the quarry walls and in between walkways, natural vegetation is encouraged to fill in and a small patch of shallow aquatic vegetation was placed along the edge of the waterfall path to vary the water's ecosystems (16). Memorial holidays may take advantage of this closed space to place candles or lanterns in the water to memorialize the dead without threat of causing wildfires during dry seasons.

CHAPTER 6

CONCLUSIONS

Design Critique

Using the Venn diagram introduced in Chapter 5, an analysis of the site design proposed can be critiqued. Figure 6.1 displays the features successfully implemented into the design (black) and those absent from the design (grey). All three high priority characteristics — planted space, pedestrian emphasis and paramount presence of nature — were successfully incorporated into the design through large expanses of forest and the reduction of vehicular access. The Sustainability-Healing Process category was effectively included as well. Although the design engages site stormwater collection and use for various elements throughout the site, it does not address water collected from HVAC building units on site. All elements in the Healing Process – Community Open Space category were successfully engaged in the design also. However, two elements — future allowance for site reuse by community and trust protected natural site — were not applied to the site design from the Community Open Space – Sustainability category. Though, ideally, this property would remain government property as a cemetery/park, perhaps plans for planting endangered and threatened species on the site may provide a future for the site as a regionally native species arboretum.

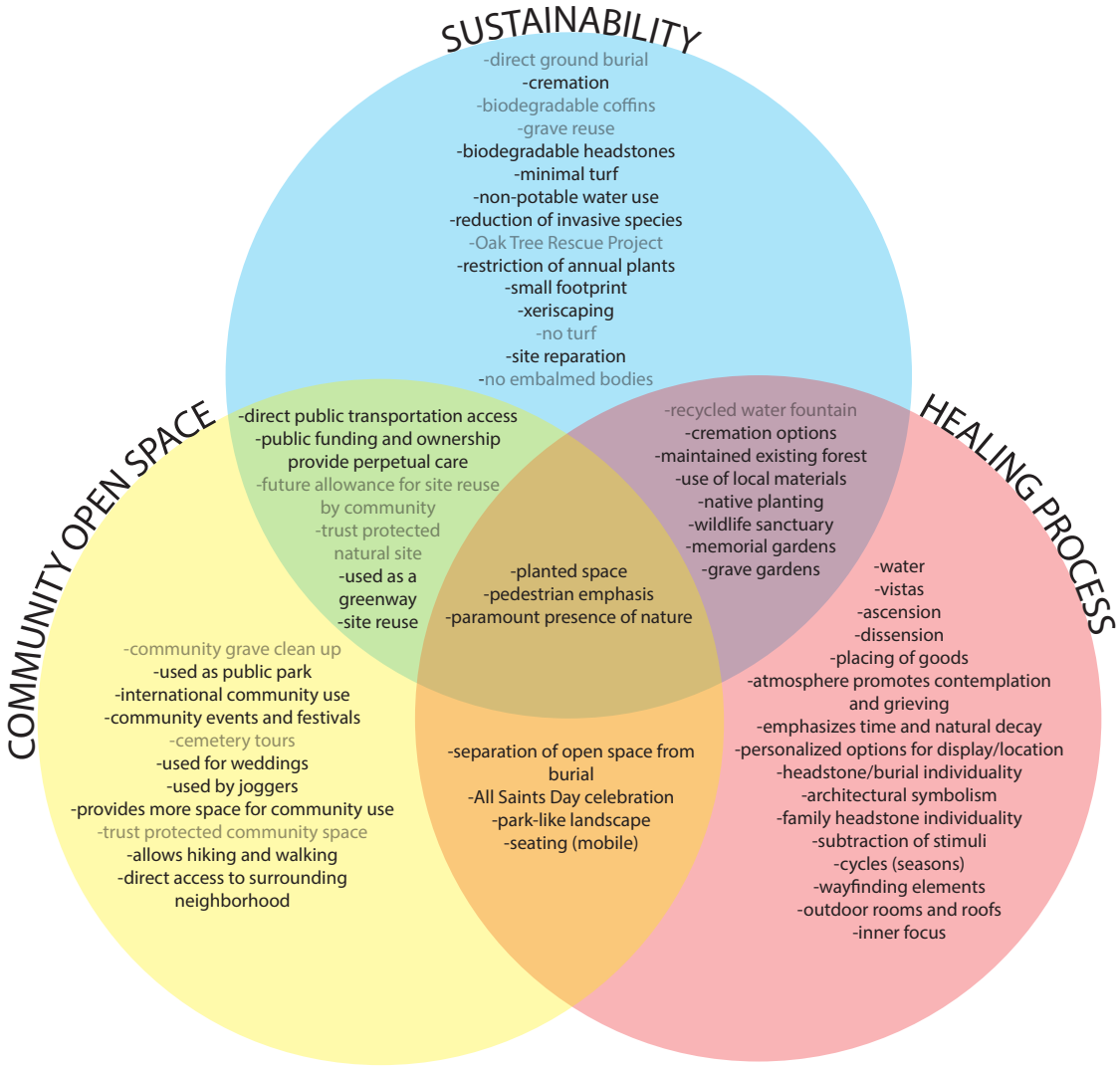


Figure 6.1: Site plan design elements Venn diagram

The sustainability appears to be only half addressed. A more detailed inventory of the site's existing vegetation might allow a program, such as the Oak Tree Rescue Project at Mountain View Cemetery, to protect existing large specimen trees currently on the site as well. Also, due to the public nature of the site, natural burial methods were not pursued. Although direct ground burial, biodegradable coffins and unembalmed bodies are not directly addressed in the design, these forms of burial and marking are allowed and encouraged on the

site. Grave reuse would be ideal; however, society as well as public policy in many areas must first change to allow it.

All elements listed in the Healing Process category were incorporated into the design, successfully creating a space for contemplation that aids and promotes the healing process. Most elements in the Community Open Space category — with the exception of community grave clean up, cemetery tours and trust-protected community space — were addressed in the design as well. The community grave clean-up day could easily be addressed by adding this activity to an existing community celebration like Halloween/All Saints' Day/Día de los Muertos. Cemetery tours, however, can be tricky for newer burial spaces. While older cemeteries may provide graves of historic figures, new cemeteries with tours may be viewed by users and the community as inappropriate.

Over eighty percent of the design elements listed were addressed in the proposed plan, making this design successful. Using local plants and materials, issues specific to this site in Athens such as site reuse, connections to local neighborhoods, noise pollution and public transportation access were addressed through this design. Further steps by the local government such as extending bus routes two and three to run along the site or run through the property on weekends and connecting cemeteries to networks of green spaces would make the site even more accessible by the local population. Perhaps, with additional resources and government support, future modern cemetery designs — or deathscapes — may be possible in the United States in the future.

Implications for Further Research

While the design successfully addressed most elements and issues discussed in this paper, one set of issues it did not review is the issue of governance. Arguably, a cemetery design is only as successful as its governance. Ideas such as grave reuse, tax-funded plots/burial and federally funded maintenance have been implemented in countries outside of the United States successfully. The deprivatization of burial is crucial to the future of cemetery design. The past has taught us that private cemetery models offering perpetual care are not sustainable in terms of the community, profit or the environment. Arguements against government-run models, such as that used at Skogskyrkogården, circle around increased taxation and lack of startup funding. A possible stepping stone may be using site cleanup funds from public and private sources to develop public lands into cemeteries in the future.

Conservative traditions in the United States also challenge many of these ideas. While with time, American citizens may embrace these ideas, research on current public opinion must be performed. Questions such as: “What is the economic and social sustainability of publicly owned cemeteries in the United States?”, “How can a conservative population be persuaded to embrace new, progressive burial techniques?” and “Who is the current clientele of progressive burial techniques in the South and why?” must be answered in order to gain a greater understanding of these issues. Perhaps, with this information, a slow transition to modern public cemeteries may begin in areas of the country where these concepts may take root.

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APPENDIX A:

MOUNTAIN VIEW CEMETERY: PERSONAL OBSERVATIONS

Morning

The morning sun danced playfully in the quaking leaves of the canopy overhead. A light morning breeze had glided up into the cemetery carrying soft, salt-tinged air from the bay. Water sparkled in the newly risen sunlight, and the city lay small and quiet in the distance. Here, atop the highest hill, the cemetery held no secrets. Visitors wound in and out of sight below the trees and a young sunbather basked in the warm weather of a clearing. It was a Saturday morning and I trailed along with an eager tour group of visitors, docents and local residents. The active group of visitors (most over the age of 30) cheerfully made the two-hour trek around the perimeter of nearly 226 acres, asking questions and taking photographs along with every step. Visitors within the cemetery never took a second glance at this odd group of visitors. Here, it seemed, tourists were welcome. This space belonged not only to the dead, but also to the living. Every headstone held a story, from the master chocolatier Ghirardelli to the earthquake shattered headstones of the nonendowed.

As we strolled though the grounds, hearing stories of the past, I noticed variety of joggers and walkers running past. Near one of the reservoirs a cheerful couple was picnicking, with their basket on the cement balustrade,

overlooking the waters. The cemetery felt more like a park and the mood was vibrant, not mournful. The space was a hotbed of morning activity from local residents.

Afternoon

A soft light pervaded the air. Although the skies were overcast, the cemetery still seemed inviting. Warm light emanated from the visitors center windows, and the sounds of dancing water in the roundabout fountain echoed off the buildings. I followed a southeastern walkway towards a small hill crowned with large monuments. Massive mature trees hung heavy in the background, a dark backdrop highlighting the large mausoleums and white stone statues of the tombs nestled atop the hill. The walkway slowly snaked up the hill, punctuated by a large grand staircase ascending straight to the summit. As I reached the top, I turned back to see the radial lines of cement curbs dividing grassy patches of family plots down the hill.

I descended the hill, continuing back into a canopied area. As I wove between extravagant mausoleums and obelisques, I passed by several joggers and dog walkers. Each smiled and wished me a good afternoon as they passed. As I worked my way farther back into the property, visitors became more prominent. Several groups of walkers and women with young children in strollers wove their way through the empty streets of the cemetery. Occasionally, a slow-moving car would pass by heading toward the newer areas of the cemetery. Dog owners stopped and rested on benches among the headstones. One woman

threw a tennis ball along a stretch of flat, in-ground headstones as the young puppy enthusiastically bounded after the bouncing yellow orb.

As I round the back of the property and begin to walk back to the entrance, I noticed the atmosphere held a mixture of active and relaxed residents. The dead bodies below ground held no power over the visitors who were enjoying the break from rainy weather above. Couples strolled through the hills and children ran ahead to play with the fountain waters. Grave visitors often joined the other users, strolling through the site after paying their respects and laying flowers. I felt welcome as I browsed the statues and etchings of the monuments. Maintenance crews smiled and ceased their work as pedestrians walked past, often stopping to talk to frequent visitors. Birds chased squirrels away from their nests and even a pearl-white Heron journeyed away from the coast to relax in the ponds around the Outside Mausoleums.

APPENDIX B

FOREST LAWN MEMORIAL PARK: PERSONAL OBSERVATIONS

Morning

I shielded my eyes from the glare of the morning sun as I waited for the crosswalk light to turn green. Cars sped past me on the busy street lined with car dealerships as far as the eye could see. A few blocks back, Glendale had lovingly constructed a concrete sign amongst the grass-carpeted palm tree plantings in the median: “BRAND BLVD OF CARS CITY OF GLENDALE.” I had to smile and wonder to myself how much the dealerships paid the city to place this series of signs down the street. The cars finally slowed to a stop and my light turned green. I was only a block away now, and I could already see the black and gold gilded gates of Forest Lawn. To my left, mechanics were already well underway with their morning appointments and to my right an elementary school began to flood with students and parents. I continued down the block toward the cemetery. I held my breath as I put my life in the hands of Los Angeles drivers and crossed another busy road with a crosswalk marked by small flashing lights along the perimeter. I shielded my eyes once more as the morning sun brilliantly lit the grand Heron Fountain at the entrance to the cemetery.

Following the concrete walkway, I was led through the lion-crested gates onto the property. To my left, the fountain drowned out sounds of distant passing

cars and to my right stood the Tudor-style flower shop and mortuary offices. A massive cement sign ahead towering above the parking lot listing the various attractions on the property next to large arrows pointing to their various locations. I continued straight uphill, following the sidewalk past endless rows of inset headstones occasionally punctuated by fresh flowers. Approximately half way up the hill, the sidewalk suddenly ended at a faux tree-bark finished trashcan and water spout. Across the road stood a small white marble pond with a white marble statue, The Finding of Moses, nestled amongst the reeds. Morning light danced in the rippling water as I continued onto the road, following the asphalt street past the fountain. Large trees cast heavy shadows across the hills and as I reached the top I turned to find a grand view of the Los Angeles basin. The massive towers of downtown stood small in the distance, and the sun glittered off the windshields of cars snaking through the freeways. A soft breeze met the crest of the hilltop and shook pinecones down from the evergreens overhead. Slightly down the hill stood the Great Mausoleum, laced with Gothic-style windows, spires and pediments.

The road forked and I continued up another hill to the left, finally leveling to a road running along the edge of a larger hill. Looking left, the ground rose steeply, patterned with rows of headstones. To the right, the trees opened once more to a view of the city. I continued down the road, following another road to the right. Countless maintenance trucks, security cars and cemetery flower shop vans quickly drove past, weaving through the cemetery's winding roads. Latin music echoed through the hills from various businesses surrounding the southern

edge of the grounds. Classical statuary dotted the rolling manicured lawn, often in theme with the section's name which was spray painted in black along the curbs.

Vesperland and Graceland led me down to Babyland; a small section at the bottom of the hill framed by roads into a heart-shaped plot. Here I stopped to catch my breath. I looked out over this bottomland and instantly recognized it to be one of the oldest areas of the cemetery. Numerous headstones were overgrown with grass, many covered completely. No visitors, no flowers, no trinkets and no parked cars were visible. Trees were widely spaced and I found myself crisscrossing through the landscape to enjoy the shade. Occasionally I would find a headstone sunk so far down into the soil that water several inches deep covered the stone. Eventually I found Lullaby Land along the north slope of a small hill. Again, heart-shaped walkways enclosed a space crowned by a foe-castle inscribed with a poem:

You strain your ears to catch a note
That drifts, in cadence soft and low,
From out the Heaven Land Remote,
Where all the little children go.

And often, in your dreams you hear
In echoes gently, sweetly flung,
Some simple song, in accents clear,
Your little one has often sung.

And so from our the Shadow-Shore,
God hands to you the golden key,
With which you may unlock the door,
Of sacred, hallowed memory.

And from within, a smiling face
Before your eager vision stands,
And you may feel the glad embrace
Of dimpled, loving baby hands.

-E.A. Brininstool

Forced to follow the heart shaped walkways, I continued down the same way I had entered the space. I wove through the streets towards the cemetery entrance, passing the bottom level of the Great Mausoleum. A large alcove along the mausoleum slope rose up to my right, the housing of three large statues atop white marble tombs dominated this lower landscape. Heavy metal chains barred pedestrians from walking up the stairs to view the display up close. Spanning out in front of this display was another older section to the cemetery. Various upright headstones dotted the landscape among large mature trees. Small private mausoleums and an obelisque ran amongst flat headstones. Here the style echoed more of a Rural/Park cemetery, and I felt the urge to sit on one of the memorial benches and enjoy the birds and squirrels scurrying about the grounds.

Afternoon

The sun blazed in the cloudless afternoon sky. Just through the entrance gates over a dozen cars sped by and scattered along the roads up into the hills. A man and woman held their young son's hands as he attempted to dip his bare toes into the Heron Fountain. Giggles of joy emanated from the child as ducks began to land in the water before him. I broke out in a sweat as I trudged up the hill ahead. A young male employee sat atop a bench playing with his phone. As I walked by he quickly tucked the phone away in his pocket, smiled

and walked back to the visitors center. This main corridor was alive with last-minute visitors attempting to quickly pay their dues and leave before the hour is up. As I rounded the top of the hill, a middle-aged man walked up to me as I took photographs.

> “Hi there” he said.
> “Hello” I replied.
> “Is this your first time here” he asked?
> “Yes it is” I said.
> “This is a beautiful area” he told me. “I grew up near here. I used to do drugs and did a lot of stuff I’m not proud of, but I have found the Lord and savior Jesus Christ. I come here sometimes to relax and meditate. Do you know there is a meditation area behind the chapel over this hill? It’s beautiful and so peaceful. Here is a water fountain and benches. I like to go there to read my bible.” He held up his bible and held it against his chest. “You should go if you haven’t been up there.”
> “Thank you, I will definitely have to go take a look.” I replied.
> “Well you have a blessed day” he said with a smile and waved as he continued down the hill.

I continued up the hill, following my observation route. I crossed by the fountain of The Finding of Moses and followed the street uphill once more. In the afternoon heat I was forced to stop at the top of the hill to rest, allowing me to once more enjoy a view of the city. Turing to my left I could see several cars parked in front of the Great Mausoleum and more cars weaving through the hills. As I continued on, I frequently found myself stopping and stepping off the road as numerous cars sped by, worried I was going to be hit by an unsuspecting driver. Several cars pulled up along the curb and unloaded. Couples and individuals gathered around headstones, often in silence. One woman sat by a stone in full conversation with the deceased.

The cemetery felt lively as I walked through the hills. Foot traffic was light; however, there seemed to be an endless stream of cars passing by. I worked my way down the hill towards Baby Land; once more I found the lowlands deserted of visitors. I again followed the long shadows cast by the few trees. The air here was still and quiet, the only sound was the sound of my footsteps and the occasional bird overhead. I followed the same path as before, walking around Lullaby Land and towards the lower Great Mausoleum. Three cars were parked on the far side of the Lullaby Land hill marking a small pocket of new burials. A group of seven Hispanic young adults cheerfully chatted and laughed by a headstone marked only by heavy flowers and balloons. Nearby an older man sat silently in a lawn chair by a grave, his gaze set on the headstone at his feet.

I continued down the road to find another group of cars parked alongside the walls of the Acacia Garden. Here, a group of young and old Hispanic women gathered around a freshly dug grave. No marker had yet been placed on the site, but a swell of fresh cut flowers, potted plants, unlit candles and a banner marked the space of a new resident. The women smiled and carefully arranged the flowers, watering the vases and pots. Gradually the group swelled to over ten visitors as cars continued to pull up despite the setting sun. Feeling intrusive, I continued on towards the entrance of the cemetery. Again, I passed through older interments with the large vertical markers. No one was present in this dated space, only the occasional car passing though to join the group near the Acacia Garden. I passed through, listening to the distant sounds of music playing at a nearby business, and onto the sidewalk leading by the mortuary

offices. The building buzzed with activity as occupants began to finish up their work. Maintenance staff workers carried ladders and buckets of paint into a small private courtyard hidden from view and office workers turned off their computers and closed their window blinds. I continued through the narrow walkway and out into the main entry area where I found traffic and pedestrian activity still humming. Cars quickly sped out as I exited the grounds out into the city once more.

APPENDIX C

THE WOODLAND CEMETERY: PERSONAL OBSERVATIONS

Night

The subway screeched past the dirt-smudged windows of the station as I descended the stairs to the roadside. The glow of the flower shop lights flooded the underpass. I wrapped my coat closer around my shoulders as I walked into the bitter cold and rounded the corner towards the blue Skogskyrkogården signs. Stars twinkled in cloud breaks through pollarded branches of the alley outside the cemetery walls. The sound of cars crunching along patches of ice and fall leaves echoed in the curves of the cemetery entrance. The orange glow from a streetlamp spilled across the entry road, glittered in the frozen crevices of rough stone walls. The walls turned back, leaving an open view of the sky meeting the earth. I stopped short to take in the silhouettes against the darkening night sky. To the right, a large, softly sloping hill rose up to the heavens, crowned with nude-branched weeping elms. To the left, a long path of roughly cut stones gently ascended to a large stone cross, black against the soft purple glow of twilight. I followed the pathway up the hill, watching the horizon as a large open porch revealed itself along the walk. Lights cast up the pillars and across the intricate wood ceiling, morphing the pattern with each elongated shadow. The sky peaked through the center of the roof, punctuated by a large copper statue

of souls ascending to the heavens, marked by the green decay of time. Looking back to the west, the summit of the elm-top hill reflected perfectly in a small lily pond across from the porch. The sunken pond rested still, untouched by the soft breezes still playing with my hair.

The rest of the cemetery lay before me, hidden by tall evergreens and a winding road. A soft twinkle of warm light flickered in the distance of the forest and I followed it, curious about what I would find. I walked down an asphalt road, only the occasional biker seen in the distance. After a sharp turn down a gravel path, I passed a wall of heavy evergreens blocking views of the road. The other side revealed a dazzling array of flames along the forest floor. Candles among headstones flickered and danced with the slightest breath of wind, painting a twinkling night sky across the landscape. The crunch of my shoes along the gravel path echoed off the headstones and quickly died out, mixing with the sleeping sounds of nature. A long alley appeared to the left, running southward through the trees, framing a large columnar structure. Soft lights lit the facade, allowing the columns to glow briefly before disappearing amongst the heavy evergreen trees. The path lead from the columns past me, up a large hill to the north in the distance. I turned and followed the gravel path past rows of headstones and candles. I gradually ascended the hill, recognizing the crown of weeping elms across the top. As I reached the top, the glow of twenty candles met my eyes as an offering of flowers, branches of evergreens and candles spread out atop the summit. Letters were tucked amongst spilled candle wax and ribbons. Looking up, I saw the twinkling city lights of Stockholm spread out

into the distance. A heavy wind carried the sounds of cars and the subway up and past the branches of the elms, yet the view and soft scent of evergreen still made the space peaceful. I ended my journey on the rough stone steps down the north side of the hill, following the road out to the subway once more. The walk left me with a sense of calm and was a welcome surprise from a nighttime stroll in a cemetery.

Day

As the subway began to slow, I could see headstones slide in and out of view through the naked branches of trees along the outer walls of the cemetery. I step onto the platform and am greeted with an open view of the Stockholm suburbs stretching into the distance. I weaved through the commuters waiting for their trains and descended the stairs to ground level. Once again the shriek of the subway passes over me as I exit the station and follow the signs towards Skogskyrkogården. The tops of simple two-bedroom houses line the distance and commuters, families and dogs alike weave through one another along the tree-covered sidewalk, some passing through, others finding their way into the cemetery. I rounded the corner to find a curved sod-covered stone wall embracing a plain, open grass entrance narrowing into a short corridor of stone. To the left, the remnants of a fountain shut down for winter was tucked into the wall of the entry corridor. Thoughts of falling water echoing through the corridor quickly sprang up, even though no water ran from the well. I followed the corridor, ending with the framed view of heaven and earth. Silver-grey clouds slid effortlessly across the sky, casting a soft light over a large grassy hill topped

with elms and a long path of stone leading to a plain granite cross to the left. Intermittent breaks in the clouds casted shifting shadows across the grassy hill like waves snaking across a sandy beach. As I made my way to the cross, the rippled surface of a lily pond slowly revealed itself along the stone path. An occasional ray of sunlight broke through the clouds, sparkling on the shifting surface. Behind me, the pastel sunlight cast soft shadows across a statue of ascending souls.

I move past the pond and follow an asphalt roadway down into the forest. A strong breeze softly thunders through the tall evergreen forest towering above my head. The pines sway gradually in the wind, filling the forest floor with the sounds of creaking wood and rustling needles. Candles at the headstones crackle and spark in the breeze, yet never go out. Sounds of squirrels, birds and woodpeckers battling the winter breezes echo through the forest and the occasional breeze from the west brings in sounds of the busy suburban outskirts of the city. I walk further down the crunch of the gravel pathway to find another long alley eventually ending at a pale white structure. The pale white columns washed gently into the cloudy sky. I turned around and followed the path northward towards a softly sloping hill in the distance. As I walked, each breath clung opaque to the morning air, carried deeper into the forest by the wind. The forest parted to reveal the same elm-lined crest of the grassy hill near the entrance. I followed the gravel path, ascending the hill to the summit of weeping elms in square form along the top. Freshly lain flowers intermixed with branches of spruce, candles, letters and potted plants stood at the center of the

planting. A small, stone, planted protective wall surrounded the offerings and two benches for visitors. The sound of the subway and cars drifted up strongly inside the crown of elms. The subway station and past that the endless rooftops of houses and businesses were laid out like a carpet past the cemetery. Below, the grounds of the cemetery slowly began to fill with bikers, walkers and the occasional worker. I slowly began my descent, watching the rooftops disappear once again behind the evergreens of the cemetery. Only my breath was present in the still air as I concentrated on each step downwards to the earth once more.

APPENDIX D
OBSERVATION: MOUNTAIN VIEW CEMETERY

Date: Saturday, January 26, 2012
Time: 10:00 AM-11:00 AM; Daytime-Morning
Weather: Sunny; High 62.1°F/ Low 50.2°F
Type: Walking

Label	Path	Time	Number/Gender	Activity
1	A	10:03	1F	Dog Walking
2	B	10:08	1F	Dog Walking
3	C	10:09	1F	Dog Walking
4	D	10:10	2F	Dog Walking
5	E	10:21	1F/1M	Visiting Grave
6	F	10:28	1F	Visiting Grave
7	G	10:28	1F/1M	Dog Walking
8	H	10:38	1F/1M	Walking
9	I	10:50	1F	Walking
10	J	10:50	1M	Walking
11	K	10:53	1F	Jogging
12	L	10:59	1F	Dog Walking
13	M	10:59	1M	Walking

Date: Thursday, January 24, 2012
Time: 2:05 PM-3:05 PM; Daytime-Afternoon
Weather: Overcast; High 53.8°F/ Low 50.2°F
Type: Walking

Label	Path	Time	Number/Gender	Activity
1	A	2:06	1M	Walking Dog
2	B	2:19	1F/1M	Picnicking
3	C	2:24	1F/1M	Walking
4	D	2:25	1F	Walking Dog
5	E	2:25	1F	Walking
6	F	2:26	1F	Walking/Visiting Grave
7	G	2:30	1F	Car
8	H	2:31	1F/1CH	Walking with Carriage
9	I	2:31	1F	Biking
10	J	2:36	1F	Walking Dog
11	K	2:36	1F/1M	Car
12	K	2:36	1	Car
13	L	2:42	1	Car
14	M	2:42	1	Car
15	N	2:42	1M	Jogging
16	2N/M	2:43	1	Car
17	O	2:44	1M	Walking Dog
18	P	2:45	1	Car
19	Q	2:47	1F/1CH	Walking with Carriage
20	R	2:48	1F	Sitting Under Tree
21	S	2:50	2F	Walking
22	T	2:51	1F	Walking Dog
23	U	3:00	2F	Visiting Grave
24	V	3:04	1M	Motorcyclist

Date: Saturday, January 26, 2012
Time: 12:00 PM-1:00 PM; Daytime-Noon
Weather: Sunny; High 62.1°F/ Low 50.2°F
Type: Walking

Label	Path	Time	Number/Gender	Activity
1	A	12:02	1F	Jogging
2	B	12:09	1	Car
3	B	12:10	1M	Dog Walking
4	C	12:10	1F	Dog Walking
5	D	12:12	1	Car
6	D	12:12	1	Car
7	E	12:15	3M	Dog Walking
8	F	12:15	1M	Visiting Grave
9	G	12:16	2M	Dog Walking
10	H	12:20	2F	Walking
11	I	12:20	1M	Dog Walking
12	J	12:24	2F	Walking
13	K	12:28	1M	Sunbathing
14	L	12:29	1F	Walking
15	M	12:30	1	Car
16	N	12:35	1	Car
17	O	12:36	1F/1M	Dog Walking
18	P	12:40	1F	Dog Walking
19	Q	12:41	1F	Jogging
20	R	12:41	1F/1M	Walking
21	S	12:45	1M	Walking
22	S	12:46	1M	Dog Walking
23	T	12:47	1	Car
24	U	12:50	1	Car
25	U	12:53	1F	Visiting Grave
26	V	12:54	1M	Jogging
27	W	12:55	1M	Dog Walking
28	X	12:58	1	Car
29	X	12:58	1F/1M/1CH	Walking
30	Y	12:59	1F/3CH	Walking
31	Z	1:00	1	Car
32	Z	1:00	1	Car

APPENDIX E

OBSERVATION: FOREST LAWN CEMETERY

Date: Friday, January 18, 2013
Time: 3:35 PM-4:35 PM; Daytime-Sunset
Weather: Sunny; High 79°F; Low 50°F
Type: Sitting

Label	Path	Time	Number/Gender	Activity
1	A	3:42	1F	Walking
2	B	3:48	1F/2M	Park/Walk/Visit
3	C	3:55	1	Car
4	C	4:09	1	Car
5	C	4:14	1	Car
6	C	4:19	1	Car
7	C	4:23	1	Car
8	D	4:23	1F	Car
9	B	4:26	1M/3F	Park/Walk/Visit

Date: Saturday, January 19, 2013
Time: 8:00 AM-9:00 AM; Daytime-Morning
Weather: Sunny; High 79°F; Low 50°F
Type: Walking

Label	Path	Time	Number/Gender	Activity
1	A	8:00	1	Car
2	B	8:00	1	Car
3	B	8:01	1	Car
4	B	8:01	1	Car
5	A	8:01	1	Car
6	B	8:03	1F	Jogger
7	A	8:03	1	Car
8	A	8:04	1	Car
9	A	8:05	1	Car
10	B	8:05	1	Car
11	A	8:05	1	Car
12	C/B	8:06	1M	Walk
13	A	8:06	1	Car
14	A	8:07	1	Car
15	A	8:07	1	Car
16	B	8:07	1	Car
17	A	8:00	1	Car
18	B	8:07	1	Car
19	A	8:09	1	Car
20	A	8:09	1	Car
21	D	8:11	1	Car
22	E	8:11	1	Car
23	E	8:11	1	Car
24	D	8:12	1	Car
25	E	8:12	1	Car
26	D	8:14	1	Car
27	E	8:14	1	Car
28	F	8:14	1M	Visit/Maintain grave
29	E	8:19	1	Car
30	D	8:20	1	Car
31	D	8:22	1	Car
32	G	8:23	1M	Walk
33	H	8:45	1F	Visit/Maintain grave
34	I	8:51	1M	Walk
35	J	8:52	1F	Car/Park/Visit Grave
36	A	9:00	10	Cars

Date: Saturday, January 19, 2013
Time: 11:55 AM-12:55 PM; Daytime-Noon
Weather: Sunny; High 79°F; Low 50°F
Type: Sitting

Label	Path	Time	Number/Gender	Activity
1	A	11:55	1	Car
2	B	11:56	2F	Visit Mausoleum
3	C	11:58	1	Car
4	C	12:03	1	Car
5	D/E	12:04	1F/1M	Walking/Visiting/Photographing
6	C	12:05	1	Car
7	C	12:08	1	Car
8	D/C	12:09	2F/1M	Car/Park/Visit Mausoleum
9	C/A	12:10	1	Car
10	A	12:10	1	Car
11	A	12:11	1	Car
12	A	12:11	1	Car
13	D	12:14	2F	Car/Park/Visit Mausoleum
14	E	12:16	1F/1M	Walking/Visit Mausoleum/Photographing
15	C	12:17	1	Car
16	C	12:19	1F/1M	Car/Park/Visit Mausoleum
17	D	12:20	1	Car
18	E	12:20	2F/2M	Car/Park/Visit Mausoleum
19	C	12:25	1	Car
20	A	12:25	1	Car
21	D	12:27	1F/1M	Car/Park/Visit Mausoleum
22	D	12:28	1F/1M/1CH	Car/Park/Visit Mausoleum
23	A	12:31	1	Car
24	D	12:35	1F	Car/Park/Visit Mausoleum
25	B	13:36	1F	Leave Mausoleum
26	C	12:39	1	Car
27	C	12:39	1	Car
28	D	12:39	2F/1M	Car/Park/Visit Mausoleum
29	C	12:39	1	Car
30	B	12:40	2F	Visit Mausoleum/Photographing
31	A	12:40	1	Car
32	D	12:43	2F	Car/Park/Visit Mausoleum
33	D	12:46	1M/1F	Car/Park/Visit Mausoleum
34	C	12:46	1	Car
35	C	12:52	1	Car
36	C/A	12:52	1	Car
37	C	12:53	1	Car

Date: Monday, January 21, 2013
Time: 11:45 AM-12:45 PM; Daytime-Noon
Weather: Sunny; High 81°F; Low 45°F
Type: Walking

Label	Path	Time	Number/Gender	Activity
1	A	11:45	1F/1M/1CH	Walking/Playing on Lawn
2	B	11:45	1M	Sitting/Playing on Phone
3	C	11:48	1	Car
4	D	11:48	3	Car
5	C	11:52	1	Car
6	C	11:53	4	Car
7	E	11:53	1M	Walking/Reading/Meditating
8	C	11:55	1	Car
9	E	11:55	1	Car
10	F	11:56	1	Car
11	G	11:56	1	Car
12	F	11:57	1	Car
13	G	11:57	1	Car
14	G	11:58	2F	Walking/Workout
15	3G/1H	11:58	4	Car
16	G	12:00	1	Car
17	I	12:00	1	Car
18	J	12:00	1	Car
19	J	12:00	3	Car
20	2G/2F	12:00	4	Car
21	J	12:03	3	Car
22	I	12:03	1	Car
23	F	12:03	1	Car
24	K	12:04	1M	Walking/Jogging
25	K/G	12:04	1	Car
26	F	12:05	1	Car
27	N	12:06	1F	Visiting Grave
28	M	12:06	1F/1M	Visiting Grave
29	L	12:06	1	Car
30	O/L	12:07	1	Car
31	O/L	12:08	1	Car
32	O/L	12:09	1	Car
33	O/L	12:09	2F	Walking
34	L	12:10	1	Car
35	L/P	12:12	1	Car
36	Q	12:13	1	Car

Date: Monday, January 21, 2013
Time: 3:45 AM-4:45 PM; Daytime-Sunset
Weather: Sunny; High 81°F; Low 45°F
Type: Walking

Label	Path	Time	Number/Gender	Activity
1	A	3:46	3	Car
2	B	3:46	1	Car
3	C	3:50	1F/2M	Car
4	D	3:51	1	Car
5	A	3:51	1	Car
6	C	3:52	1	Car
7	C	3:54	1	Car
8	E	3:54	2	Car
9	F	3:55	1	Car
10	H/G	3:58	2	Car
11	I/2H	3:59	3	Car
12	J	4:00	1	Car
13	2J/K	4:01	3	Car
14	L	4:02	1F/1M	Visiting Grave
15	J/K	4:02	2	Car
16	J	4:03	2	Car
17	K	4:04	1	Car
18	M	4:05	1F	Visiting Grave/Photographing
19	J	4:05	1	Car
20	N	4:10	1M	Cleaning Car
21	O	4:15	1F/1M	Walking
22	P	4:21	1F	Visiting Grave
23	Q	4:21	1F/6M	Visiting Grave
24	R/S	4:24	1F/1M	Car
25	S	4:25	3F/2M/1CH	Visting Grave
26	R/S	4:26	1F	Car
27	T	4:26	1	Car
28	T	4:29	1	Car
29	R	4:30	1	Car
30	U	4:32	1	Car
31	V	4:32	1	Car
32	U	4:34	1	Car
33	U	4:35	1	Car
34	W	4:37	1	Car
35	U	4:38	1	Car
36	B	4:41	1F/1M	Walking

Date: Tuesday, January 22, 2013
Time: 8:03 AM-9:03 AM; Daytime-Morning
Weather: Sunny; High 81°F; Low 51.1°F
Type: Sitting

Label	Path	Time	Number/Gender	Activity
1	A	8:06	1	Car
2	B/C	8:10	1	Car
3	D	8:26	1	Car
4	D	8:41	1	Car
5	D	8:42	1	Car
6	D	8:44	1	Car
7	D	8:49	1	Car
8	E	8:50	1	Car
9	D	8:51	1	Car
10	D	8:53	1	Car
11	D	9:02	2	Car
12	B/C	9:02	1	Car
13	D	9:02	1M	Walker

APPENDIX F
Observation: The Woodland Cemetery

Date: Monday, November 19, 2012
Time: 8:53 AM- 9:53 PM; Daytime- Morning
Weather: Partly Cloudy; High 6°C/43°F; Low 3°C/37°F
Type: Walking

Label	Time	Number/Gender	Activity
1	8:53	1 F	Biking
2	8:55	1 F	Walking
3	9:00	1 F	Walking
4	9:00	1 F/1 M	Walking
5	9:00	1 F	Walking
6	9:15	2 F	Grave Visit
7	9:25	1 F	Walking
8	9:25	2 F	Walking/Taking Pictures
9	9:30	1 F	Walking
10	9:30	4 F/2 M	Walking
11	9:35	1 F/1 M	Walking Dog
12	9:40	1 M	Walking
13	9:45	1 F	Walking
14	9:45	1 F	Walking
15	9:50	1 F	Walking/Reading Signage
16	9:50	1	Biking
17	9:50	1 F	Jogging
18	9:51	1 M	Walking/Talking on Phone
19	9:53	1 F	Walking
20	9:53	1 F	Walking/Taking Pictures

Date: Monday, November 19, 2012
Time: 3:45 PM- 4:45 PM; Nighttime- Twilight
Weather: Partly Cloudy; High 6°C/43°F; Low 3°C/37°F
Type: Walking

Label	Time	Number/Gender	Activity
1	3:45	3 M	Walking
2	3:45	1 F	Walking
3	3:45	1 M	Biking
4	3:45	2 M	Walking
5	3:45	1	Biking
6	3:45	1 F	Walking
7	3:50	1 M	Biking
8	3:51	1 M	Biking
9	3:53	1 F	Walking
10	3:53	1 M	Biking
11	3:55	1 F	Biking
12	3:55	1 F	Walking
13	3:57	1 F/1 M	Walking
14	4:10	1 F	Walking
15	4:12	1	Biking
16	4:15	1 F	Walking
17	4:15	1	Biking
18	4:15	1	Biking
19	4:15	1	Biking
20	4:15	1 F	Walking
21	4:15	1 F/1 M	Walking
22	4:16	1 M	Biking
23	4:17	1 M	Walking
24	4:19	1 M	Biking
25	4:20	1 M	Walking
26	4:30	1 F/1 M	Park/Walking
27	4:40	1	Biking
28	4:42	1 M	Biking
29	4:45	1 M	Walking

Date: Tuesday, November 20, 2012
Time: 1:15 PM- 2:15 PM; Daytime- Afternoon
Weather: Partly Cloudy; High 7°C/45°F; Low 3°C/37°F
Type: Sitting

Label	Time	Number/Gender	Activity
1	1:15	1 F/1 M	Driving/Walking/Grave Visit
2	1:16	1 F	Biking
3	1:19	1 F	Walking/Taking Pictures
4	1:19	2 M	Walking with Child
5	1:19	1 F	Walking
6	1:20	1 F	Walking
7	1:20	1 M	Walking with Child
8	1:23	1 F	Biking
9	1:27	1 F	Jogging
10	1:27	2 F/2 M	Walking
11	1:30	1 F	Walking with Child
12	1:30	1 M	Walking
13	1:31	2 F	Walking
14	1:31	1 M	Jogging
15	1:32	1 F	Jogging
16	1:32	1 M	Walking
17	1:32	4 F	Walking
18	1:35	1 F	Walking
19	1:35	1 F	Biking
20	1:40	1 M	Walking
21	1:45	1 F	Walking
22	1:45	1 F	Walking
23	1:45	1 M	Walking
24	1:45	1 F	Walking
25	1:45	1 M	Biking
26	1:50	1 F	Walking
27	1:55	2 F	Walking
28	1:55	1 M	Walking
29	1:59	1 F	Walking
30	2:00	1 F	Walking with Child
31	2:01	1 F	Walking
32	2:01	1 F	Walking
33	2:03	1 M	Walking
34	2:05	> 55	Funeral
35	2:08	1 M	Walking

Date: Wednesday, November 21, 2012
Time: 9:05 AM- 10:05 PM; Daytime- Morning
Weather: Partly Cloudy; High 6.5°C/44°F; Low 6°C/43°F
Type: Sitting

Label	Time	Number/Gender	Activity
1	9:15	1 M	Biking
2	9:15	1 F	Walking
3	9:30	1 M	Walking Dog
4	9:35	1 M	Biking
5	9:36	1 M	Biking
6	9:38	1 M	Park/Walking
7	9:40	1 M	Biking
8	9:40	1 F/1 M	Walking Dog
9	9:40	2 F/9 CHILDREN	Walking/Playing in Grass
10	9:44	1 F	Walking
11	9:45	1 M	Walking
12	9:50	2 F	Walking
13	9:52	2 F	Walking
14	10:01	1 F	Walking with Child

Date: Friday, November 23, 2012
Time: 2:20 AM- 3:20 PM; Daytime- Sunset
Weather: Partly Cloudy; High 8°C/46°F; Low 5.5°C/42°F
Type: Walking

Label	Time	Number/Gender	Activity
A	2:25	1 F/1 M	Park/Walking
B	2:25	1 M	Walking
C	2:26	1 F	Walking
D	2:28	1 F	Walking
E	2:29	1 M	Walking
F	2:30	1 F	Walking
G	2:31	1 M	Walking
H	2:31	1 F	Park/Walking
I	2:34	1 F	Walking
J	2:36	1 M	Walking
K	2:37	1 M	Walking
L	2:43	1 F/1 M	Walking
M	2:46	1 F	Walking
N	2:50	1 F	Walking
O	2:54	1 M	Walking
P	2:59	1	Biking
Q	3:05	1 M	Park/Walking
R	3:10	1 F/1 M	Walking
S	3:15	1 M	Walking
T	3:15	2 M	Walking
U	3:20	1 F	Grave Visit