

A Cemetery for the City of New York

by:

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Bachelor of Science in Architecture
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Submitted to the Department of Architecture in partial fulfillment of the requirements for the degree of
Master of Architecture at the Massachusetts Institute of Technology, February 2004.

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January 16, 2004

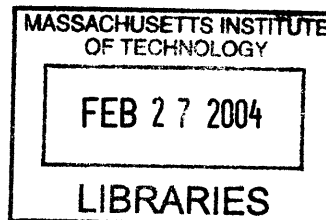
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ABSTRACT

Today, cemeteries are forgotten places. Once centers of cities and the societies they served, they have been pushed to the outskirts and turned into places of pure storage, devoid of memory. This thesis takes on the additional program of the Potter's Field: a burial place for the poor and unclaimed. Currently in New York the potter's field is located on Hart Island in the Bronx. This thesis proposes replacing that cemetery.

Located at Riverside Park, this thesis proposes that the cemetery can be re-inserted into the public realm. Issues such as privacy, scale, individuality, and memory are confronted. By siting the cemetery in a park, connections are made between the active world of the living, and the world of the dead and mourning. This is accomplished mainly within the architecture of the section. What results is a hybrid space that is both inside and outside the realm of the park and the city.

Thesis Supervisor: J. Meejin Yoon

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Thanks to my friends whose help at the end came in the nick of time. I am indebted to you both.

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introduction.

Let us take, for example, the curious heterotopia of the cemetery. This is certainly an “other” place with respect to ordinary cultural spaces, and yet it is connected with all the locations of the city, the society, the village and so on, since every family has some relative there. In Western culture, one might say that it has always existed. And yet it has undergone important changes.

-Michel Foucault – Other Spaces: The principles of heterotopia.

During the 18th Century, the cemetery was evicted from the city. Fear of disease contracted from the miasmatic effluvia of the dead led to the gradual elimination of the space of the dead from the space of the living in the city. Since then, the American view on death has gradually changed. Out of sight, out of mind: death has become a sterile and forgettable, yet it remains a universal condition that everyone must engage. Modern cemeteries are deserted, monotonous, and desolate spaces.

This thesis proposes to return the cemetery to the city. By juxtaposing life and death and re-thinking the cemetery, the thesis will amplify, display and reevaluate the space of the dead as a heterotopic space within the city. Bringing death into the ordinary public realm, the project will explore the notion of the uncanny in an urban environment.

Programmatically, the cemetery will replace an existing one: New York's City Cemetery on Hart Island. Any persons classified by the city as “indigent” is buried here, that includes the homeless, and any unclaimed bodies. The New City Cemetery hopes to improve conditions of burial, memorial, and commemoration.

This thesis also supposes a diverse urban setting filled with different cultures and beliefs. Within this setting, the cemetery will very quickly become a, “constantly evolving, dynamic feature of the cultural landscape,” (Meyer, p.11) - an archive that serves as a layered historical record for the city. The site stretches from W. 100th St. to W. 122nd St. in the middle of Riverside Park in New York City. Acting as an additional band of infrastructure within the linear park, this project intends to knit itself into the park's active fabric, and make connections to the immediate urban fabric.

a brief history of the american cemetery.

no people who turn their backs on death can be alive. the presence of the dead among the living will be a daily fact in any society which encourages people to live.

-christopher alexander, *a pattern language*



fig. 01: typical churchyard

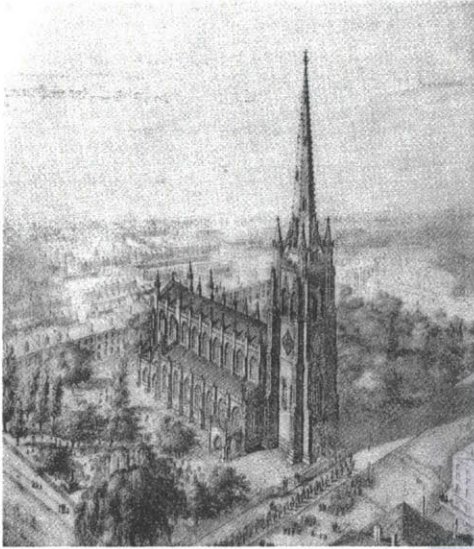


fig. 02: trinity church, nyc



fig. 03: granary burial ground, boston

Beginnings

As one of the first things established in a new settlement, cemeteries were typically associated with a place of worship. These places were important centers of culture and activity for the societies they served. As the settlements became denser, the town and finally the city grew around and enveloped the cemetery.

As cities grew more crowded and became more dirty, incidents of disease dramatically increased. Epidemics of smallpox, influenza, and cholera were common. This, in turn, filled the cemeteries - many far beyond capacity. The churchyards were cited as sources of the epidemics during the sanitary reform that followed. Scientists hypothesized that the gases and fluids (called miasma) produced by infected bodies during decomposition transmitted disease. The research that followed became the foundations of modern germ theory. To slow the perceived threat of disease, the cemetery was relocated at a distance from the city.

Mount Auburn and the Rural Cemetery Movement

In 1831, Mount Auburn cemetery was established in Cambridge, Massachusetts. It was the first cemetery of its kind, designed to integrate itself into the landscape of its site. Before this, burial grounds were arranged in orderly grids. At Mount Auburn, paths curved to follow the natural terrain, and burial plots were irregularly shaped. The concept of the family plot was refined here, consisting of a large monument surrounded by smaller individual markers. Design of the monuments themselves was left to the lot holders. This fostered a very eclectic mix of monument styles.

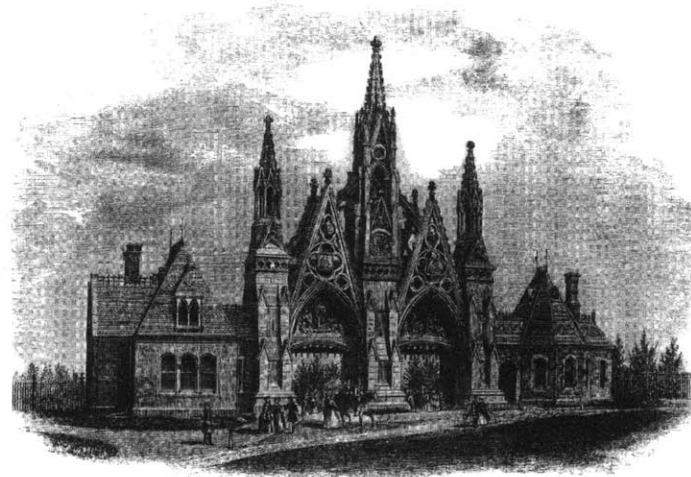


fig. 04: plan of mount auburn

The result was a new space that was yet another arena for the display of wealth. More importantly however, the rural cemetery became a destination for common people who wanted a respite from the city. People came to the cemetery to walk along its paths, observe the specimens of trees and birds that flourished there, and admire the diversity and beauty of the monuments that upper class families created for themselves. Soon rural cemeteries began appearing outside of every major city. As their popularity increased, they became more and more ostentatious.

Spring Grove and the Park

Spring Grove Cemetery in Cincinnati began as a rural cemetery modeled after Mount Auburn. Like the urban cemeteries that it replaced, it soon became crowded, and the monuments began to encroach on one another. In 1855 an expansion was built that sparked a new movement in



figs. 05 & 06: two entrances of green-wood cemetery, a rural cemetery in brooklyn - first in 1845, then in 1860.

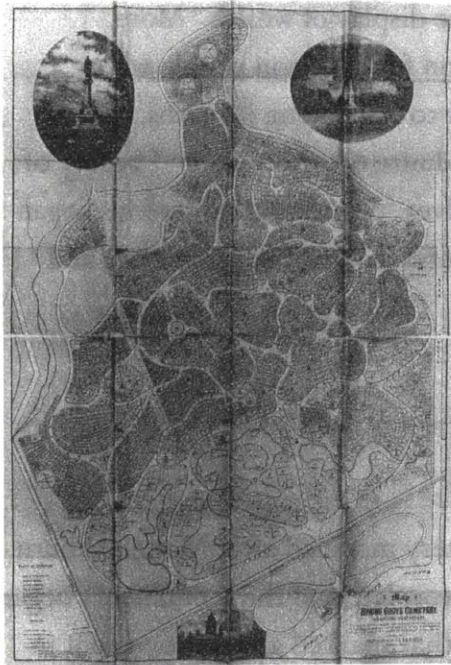


fig. 07: plan of spring grove. the extension is at the bottom of the image.

cemetery, and eventually, urban design. The addition was much more picturesque than the existing rural cemetery. Lots were greatly enlarged, and paths were widened to allow for the passage of horse-drawn carriages.

The landscape, designed by Adolph Strauch, followed the English landscape tradition: it was highly sculpted, but in a way to make it look natural. Long views across artificial lakes were highly orchestrated, and the family monuments, which were an important part of the constructed views, grew larger. Individual markers, on the other hand, became smaller, so that they would not clutter the view - a common criticism of the rural cemeteries. This was the beginning of the many rules and regulations that would govern the aesthetics of the cemetery.

Dubbed a “lawn park cemetery,” the new Spring Grove intensified the recreational aspect of cemeteries that the public desired. As the amount of people visiting for purely recreational purposes increased, it became obvious to city officials that a new urban amenity was needed. This led directly to the development of large urban parks, such as Central Park in Manhattan.



fig. 08: woodlawn cemetery, the bronx

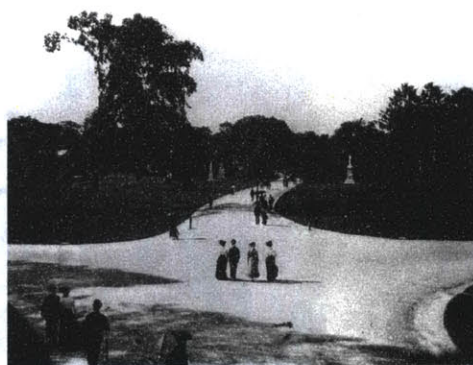


fig. 09: view of spring grove



fig. 10: central park, nyc

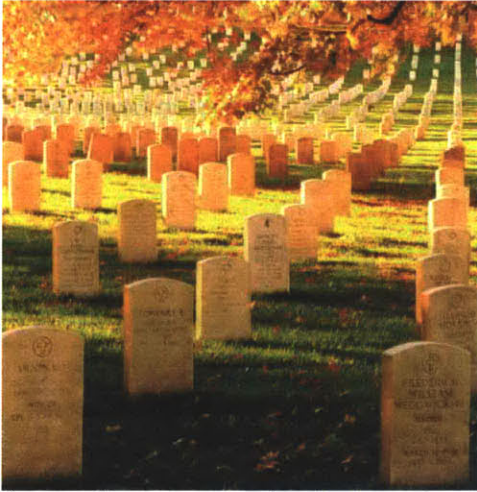


fig. 11: arlington national cemetery, va

The National Cemetery System

Shortly after the Civil War, the U.S. government established the National Cemetery System. Initially intended for the interment of veterans, it has been extended to include immediate family members. The system is composed of 120 cemeteries located in the U.S. and twenty four located overseas.

These burial grounds are pure memorials. The uniformity and highly organized layout of burial plots poetically convey the loss and sacrifice that these men and women gave for their country. It is the minimalist design and large number of headstones that reinforces this idea - we are moved by the overwhelming scale illustrated by their arrangement.

Recently, the Department of Veterans' Affairs (VA) has advocated the use of flush markers - simple plates that do not project above the level of the turf. This will allow for easier maintenance of the cemetery, and also give more "privacy" to the soldiers and their families. Unfortunately, however, the drama of the landscape will surely be lost. This culture of maintenance that is slowly permeating through the VA has also been strongly advocated in civilian cemeteries for quite some time.

Forest Lawn, Commercialism, and Decline

In 1917, Hubert Eaton founded Forest Lawn Memorial Park in Glendale, California. The first of its kind, Forest Lawn was a one stop shopping center for the interment of loved ones and the consoling of the bereaved. A place of pure business that "served the living," that is a place designed to make the living completely forget the dead. Eaton scattered reproductions of

famous works of art throughout the complex. Sections of the cemetery were given comforting names such as, “the Vale of Memory,” or “Eventide”. Mortuary services, caskets, even flowers, were all offered to consumers of Forest Lawn. Soon after opening, Forest Lawn even began to perform weddings on its grounds.

The model that Forest Lawn introduced became the foundation of the “death care” industry

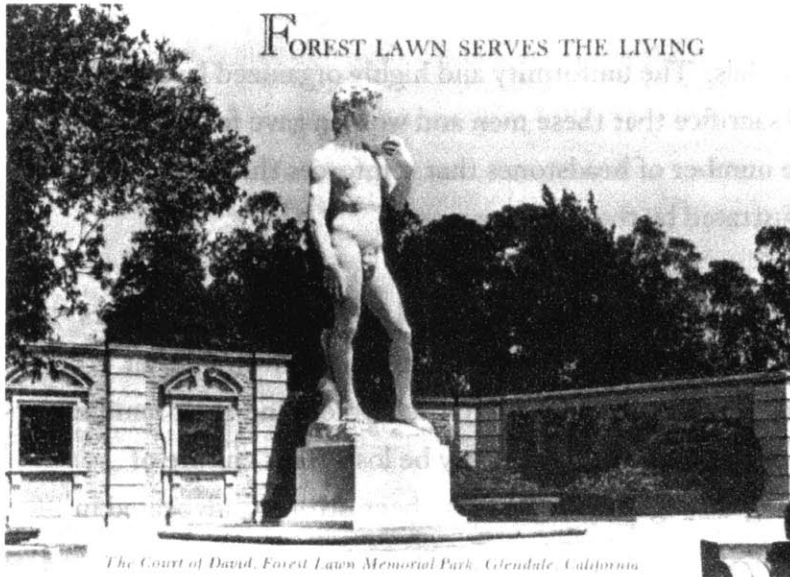


fig. 12: court of david, forest lawn

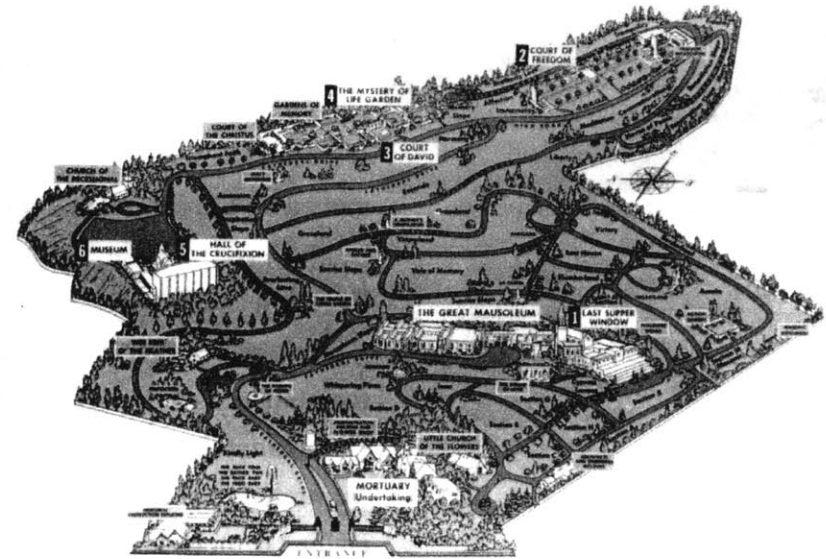


fig. 13: map of forest lawn, note the “theme park” aesthetic.

that exists today. The industry has undergone some changes, most notably a string of reforms triggered by works such as Jessica Mitford’s *The American Way of Death*, in which she harshly criticized the high pressure business tactics employed by the industry.

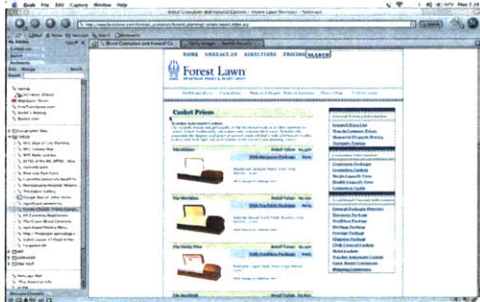
Today the original Forest Lawn in Glendale is part of a network of four other memorial parks, each with its own attractions. And like most industries, Forest Lawn has turned to the Internet



to attract more business. At their web site: www.forestlawn.com, you can pick a cemetery, buy property, and select funeral packages complete with a large selection of caskets.



It is in places like this that the culture of maintenance overrides all. Markers are all flush to the ground, to allow for lawn mowers to roll over the graves. To support the weight of the lawn mowers, each plot must be lined with a concrete vault that in turn supports a thin layer of turf that can be cut away during a burial. These are places of pure storage, devoid of memory and sentiment.



figs. 14, 15, 16: excerpts from the forest lawn web site.



fig. 17: landscape of maintenance.

city of the dead.

the city of the dead antedates the city of the living. in one sense indeed, the city of the dead is the forerunner, almost the core of every living city.

-lewis mumford, *the city in history*

The following are images of burial grounds that affected this thesis in one way or another. Common to each image is the idea of some kind of interplay between the world of the living and the dead - and the ability of one realm to influence the other.

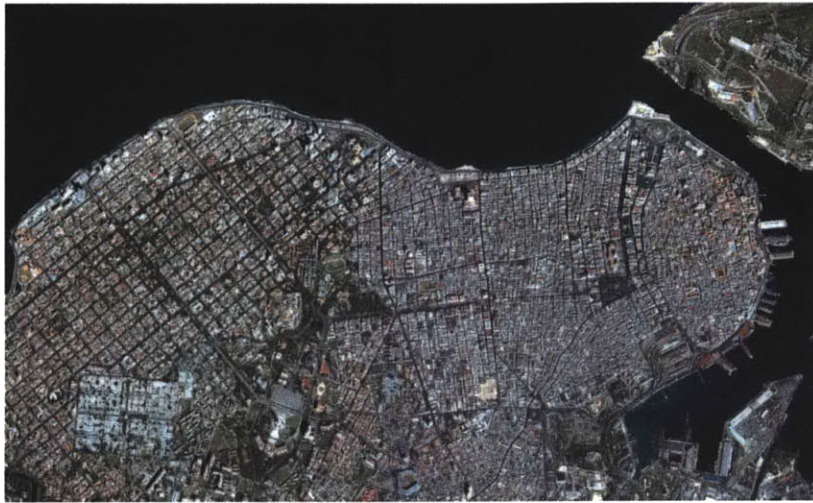


fig. 18: havana, cuba - the cemetery is at lower left.



fig. 19: père lachaise, paris

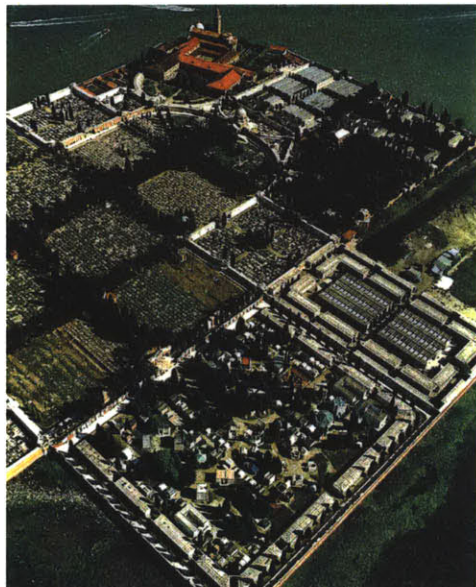


fig. 20: isola di san michele, venice - a true necropolis.

Cemeteries, whether located within cities, on their outskirts, or completely separated, have the ability to create connections with the urban fabric. As the cemeteries grow old and evolve these connections intensify. And as the population of the cemetery grows it becomes a record of the society that it serves. Soon, the cemetery begins to literally reflect the city of the living.



fig. 21: the old jewish cemetery, prague - a small city block that was used for 350 years, it contains the remains of thousands of people in an estimated 12 layers of burials. gravestones were simply raised with each successive layer.

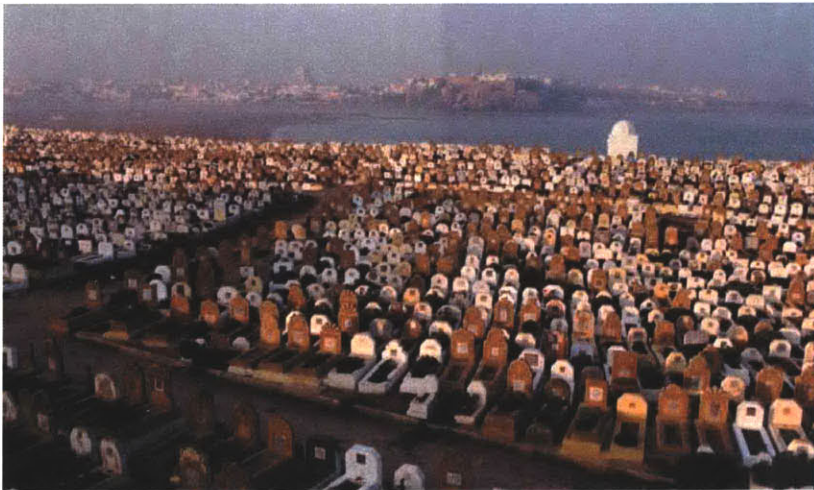


fig. 22: rbbat, morocco



fig. 23: traditional cemetery, korea - here people occupy more space than when they were alive. this has become a real crisis, as the city of the dead threatens to take over the city of the living.

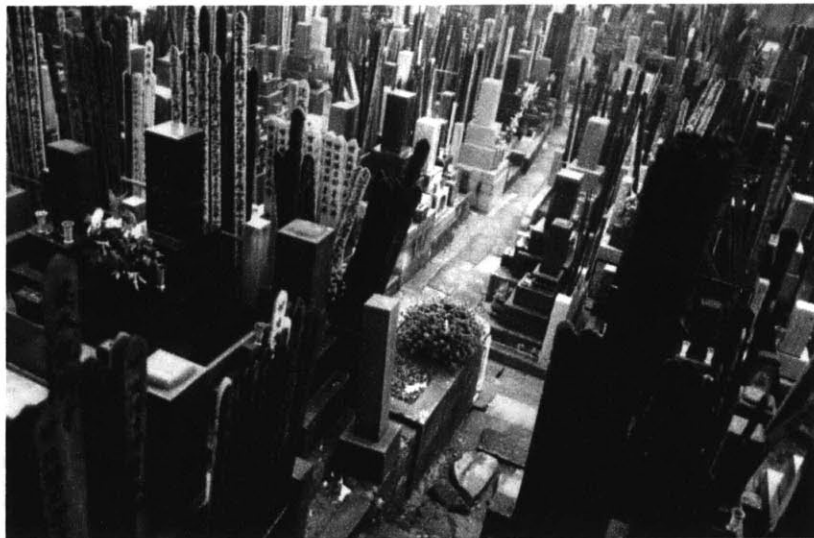


fig. 24: traditional cemetery, japan.

riverside park.

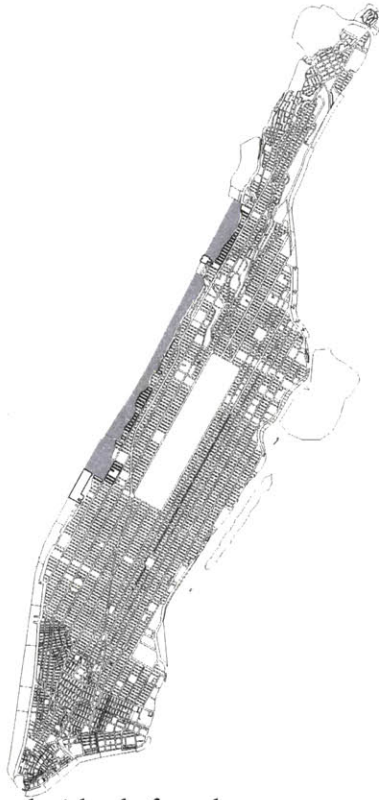


fig. 25: the island of manhattan

Riverside Park consists of 323 acres that stretches from 72nd to 155th on the west side of the island of Manhattan. Frederick Law Olmsted made the initial designs for Riverside Drive and the adjoining park in 1872. This included land from 72nd to 125th. From 1937 to 1941, the park grew to its current size under the administration of Robert Moses.

Along its very narrow footprint, the park terraces down from Riverside Drive to the Hudson River. The grade change in some places is over 110 feet. The edge condition created by the curves of Riverside Drive pushes and pulls on the grid of the city. The park, the Henry Hudson Parkway, and the railroad all weave together to create the site. The thesis, which is sited from 110th to 120th acts as a fourth strip of infrastructure.

Today the site is “undercooked” - sidewalks along Riverside Drive are poorly paved and the landscape throughout the park is overgrown and not maintained properly. Yet in good weather, pedestrians, cyclists, runners, and the like flock to the park.



fig. 26: riverside park aerial photo



fig. 27



fig. 28: riverside drive



fig 29: the retaining wall on the left runs from 98th to 120th.



fig. 30: dog trots weave through the undergrowth



fig. 31: the henry hudson parkway



fig. 32: the cherry walk - built in 2000, this narrow path begins to make connections to the water

the potter's field.



fig. 33: the city of new york - hart island, the current potter's field, is highlighted.

Hart Island

The term Potter's Field is first mentioned in the Bible (Matthew 27: 3-8) where it is described as the cemetery bought by the high priests with the "blood money" returned to them by Judas. Today, it describes a civic cemetery where the indigent and unclaimed are buried. New York has maintained ten Potter's Fields since the mid-18th Century. These burial grounds have moved northward along the island of Manhattan, just in front of the tide of development.

The current location of the City Cemetery (Potter's Field) is on the northern tip of Hart Island in the Bronx. The first burial took place in 1869. The burial area is only 45 acres but there are over 700,000 people buried there. Two-thirds of this number are infants. The New York City Department of Corrections (DOC) handles interments, using inmates from Riker's Island to perform burials.

Common burial plots measuring fifteen feet wide, forty feet long, and eight feet deep are used for interments. 150 adult pine coffins or 1000 infant coffins fit into each numbered burial plot. Adults are buried in two rows, three layers deep. About 8000 people a year are buried at Hart Island. Careful records are kept of each person's location within the common plots. Records are filed by death certificate number, which originate from the borough medical examiner in which death occurred. All unknown or unclaimed deaths are handled by the Chief Medical Examiner's office located at Bellevue Hospital in Manhattan. The first copy is kept by the DOC, the duplicate copy is placed inside the coffin, and the triplicate is affixed to the outside of the coffin.

Access to the site is limited only to those who can prove that a direct family member is interred

there. Disinterment is possible, for those who discover that a lost family member is there, or for those who can eventually find the means to do so, for up to ten years after burial. Once this time has past, disinterment is not possible. There are about 150 disinterments a year.

This thesis proposes to replace the cemetery on Hart Island with a new one located at Riverside Park. The “ritual” of interment, record keeping, and holding is kept intact, but is modified slightly to allow the cemetery to sustain itself. By moving the Potter’s Field back into the city, it is the intention of the thesis to allow greater access to the cemetery by the public as a whole, while still allowing the park to function as a place of active recreation.

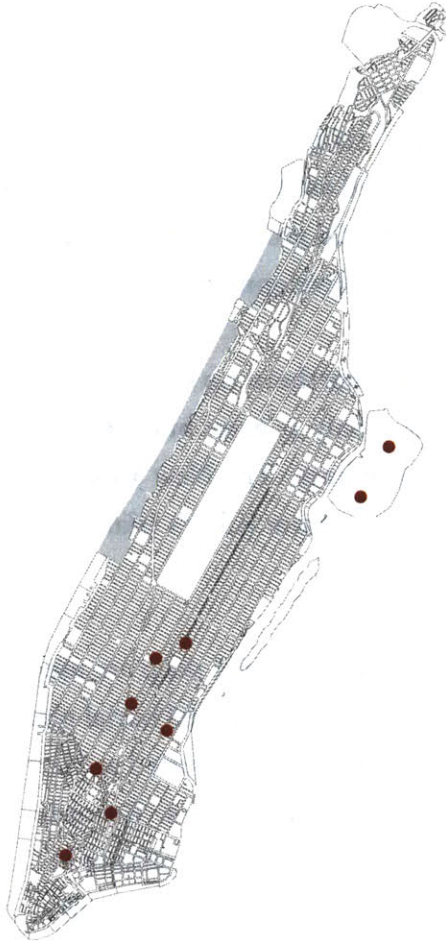


fig 34: the previous potter's fields of new york city



figs 35 & 36: for comparison, two cemeteries are shown at the same scale. hart island is indicated on the left. over 700,000 people are buried on its 45 acres. the green-wood cemetery, on the other hand holds over 600,000 on 478 acres of land in brooklyn.



fig. 37 each borough has its own medical examiner that sends people to hart island if they are classified as “indigent.”



fig. 38: a truck from the morgue arrives by ferry from the mainland to deliver bodies.



fig. 39: bodies are buried in common plots.



fig. 40: the plots are numbered with stone markers.



fig. 41: a memorial built in 1948 by the inmates who work the island. this is where family members who are able visit the island are brought for "grief closure." visiting the plots is not allowed.

new city cemetery.

only one innovation is lacking, and it will not be long delayed:
the use of this expanse of quiet greenery for some recreational,
healthy purpose.

-j.b. jackson, *from monument to place*

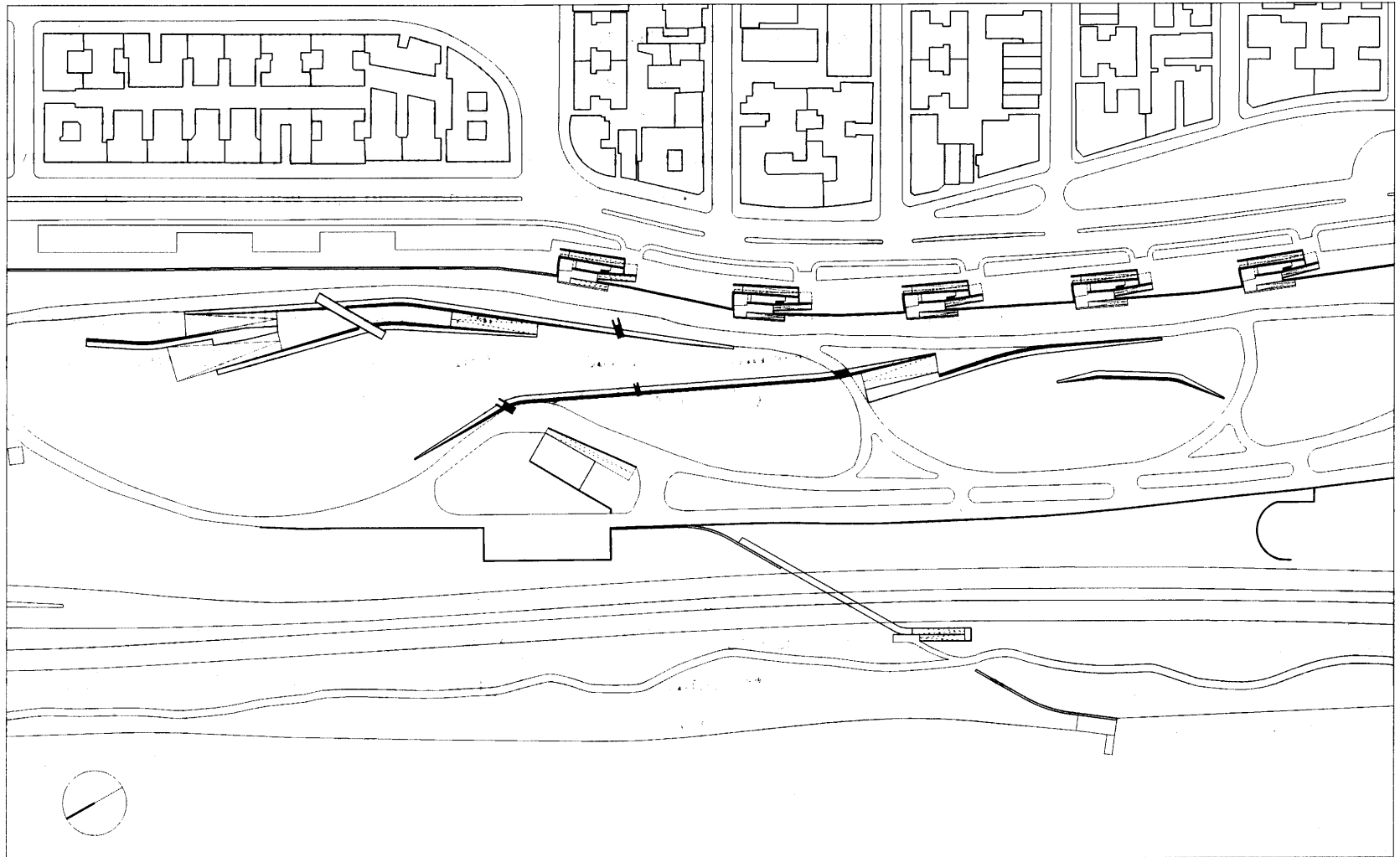


fig. 42: site plan

The Cemetery

The project is sited from West 110th to West 120th Streets and stretches from Riverside Drive to the water. Programmatically, there are three parts that form the spatial sequence of the cemetery: Archives, Burial Crypts, and the Columbarium. A bridge makes a connection to the Cherry Walk on the other side of the highway and leads to an area along the river where it is possible to scatter ashes. In order to allow the park to weave through the project, an emphasis was placed on the section. As a result, bodies, mourners, and park goers are juxtaposed throughout the site.

The New City Cemetery will follow the same general process followed by the City Cemetery on Hart Island, which this project will replace. The cemetery will receive bodies from the borough medical examiners, and will hold the bodies for a period of ten years.

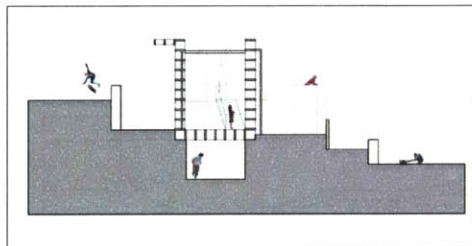


fig. 43: typical archive section.

The Archive

Bodies are first delivered to the Archives, which are located along Riverside Drive, and embedded in the stone retaining wall. There are five Archives, one for each borough, and these form the connection of the cemetery to the city grid. Park goers can pass behind and under the Archive to gain access to the park. Mourners take another route in front of the Archive, while bodies pass through it.

Burial records are kept at the Archives, and are made available to the public for research. The records are held within an armature that bends to create the space of the Archive. The armature

acts as a screen to allow for visual connection to Riverside Drive, and to allow light into the passage underneath the Archive, which is used by regular park goers.

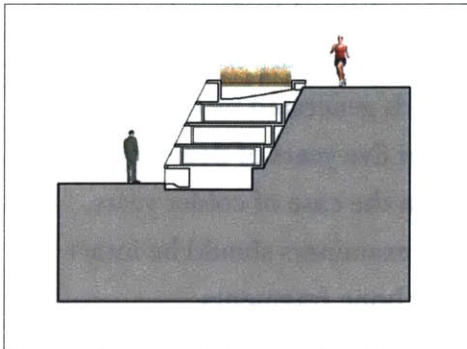


fig. 44: typical crypt section

Burial Crypts

After being processed at the Archive, bodies are placed within the Burial Crypt walls. Each person is placed in their own crypt, and his or her location is kept at the Archive. The walls cut into the terrain of the park, creating terraces or defining spaces when two walls face each other. This gives mourners some privacy, and allows the active users of the park to pass over and look into the crypt spaces.

Bodies are held in these walls for five years, and can be reclaimed by people who wish to transfer their family members to other cemeteries. At the end of the first five year period, bodies are removed from the walls and transferred to the Columbarium after being cremated. Individual crypts could then be reused after being cleaned.

Formally, the walls curve gently and narrow to shape the spaces between them. As they narrow, they create “sections” for adults (eight feet and over) and for infants (from just under eight feet to three feet). A third section is created when the walls become free standing (at the ends). Here the crypts become niches where mementos can be left by the public. As these niches fill, the mementos are eventually transferred to the Archive.

The tops of the crypt walls are planted with long grasses that mark their presence when viewed from the park, and from above the park, on Riverside Drive. Scattered within this line of grass

are gathering areas intended for the use of either visitors to the cemetery or the park.

Exhaustive research was conducted to ensure that the opening of crypts and the removal of bodies on such a large scale would not be a problem for the park. To deal with decomposition, crypt walls always retain earth, in to which fluid from the bodies is allowed to drain (a common detail of mausoleum design). The crypt walls, if constructed to contemporary standards and specifications, should be able to handle the drainage of bodily fluids generated by the first stages of decomposition with no noticeable odor or leakage. After five years of decomposition, bodies should be rid of all fluid. Remains would be skeletal, and in the case of colder years, mummification could occur. The pine boxes used by the medical examiners should be intact and would disintegrate during the cremation process, leaving only bone fragments.

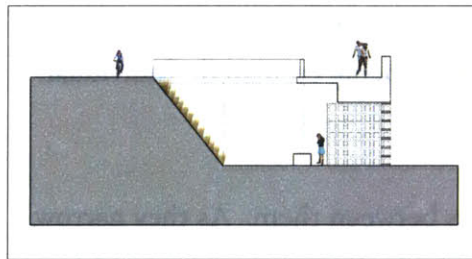


fig. 45: typical columbarium section.

Columbarium

After being cremated, ashes are placed in individual urns which are in turn placed in a Columbarium at the bottom of the main body of the park, just above the highway. The terrain of the park slopes steeply into the Columbarium creating one wall of the space, the other being the screen-like wall of urns. The terrain wall is again planted with grass that moves as the wind blows through the space. From within the space, mourners can see the water through the wall of urns. An existing park path is maintained above the space, again allowing the park to slide over and through the cemetery, while giving privacy to mourners visiting the columbarium. Remains are held in urns for an additional five years, during which they can be retrieved by families. After this period, ashes are taken to the river and scattered. Urns are then reused after being cleaned.

The rather convoluted path taken by the bodies is an intended one. Primarily, every effort is made to keep bodies separate and individual for as long as possible, in order to give a locus of commemoration and the opportunity to relate with the actual body and remains of the remembered. In a practical sense, these transitions are necessary to ensure the sustainability of the cemetery under the heavy traffic that the Potter's Field currently experiences. In a symbolic sense, the path illustrates the "absorption" of these strangers back into the city of which they were a part, and ultimately to make manifest the temporality of their memory. Though this notion may at first seem callous, it will ensure that the memory of the cemetery *as a whole* is kept current and vital to the people that the cemetery serves.

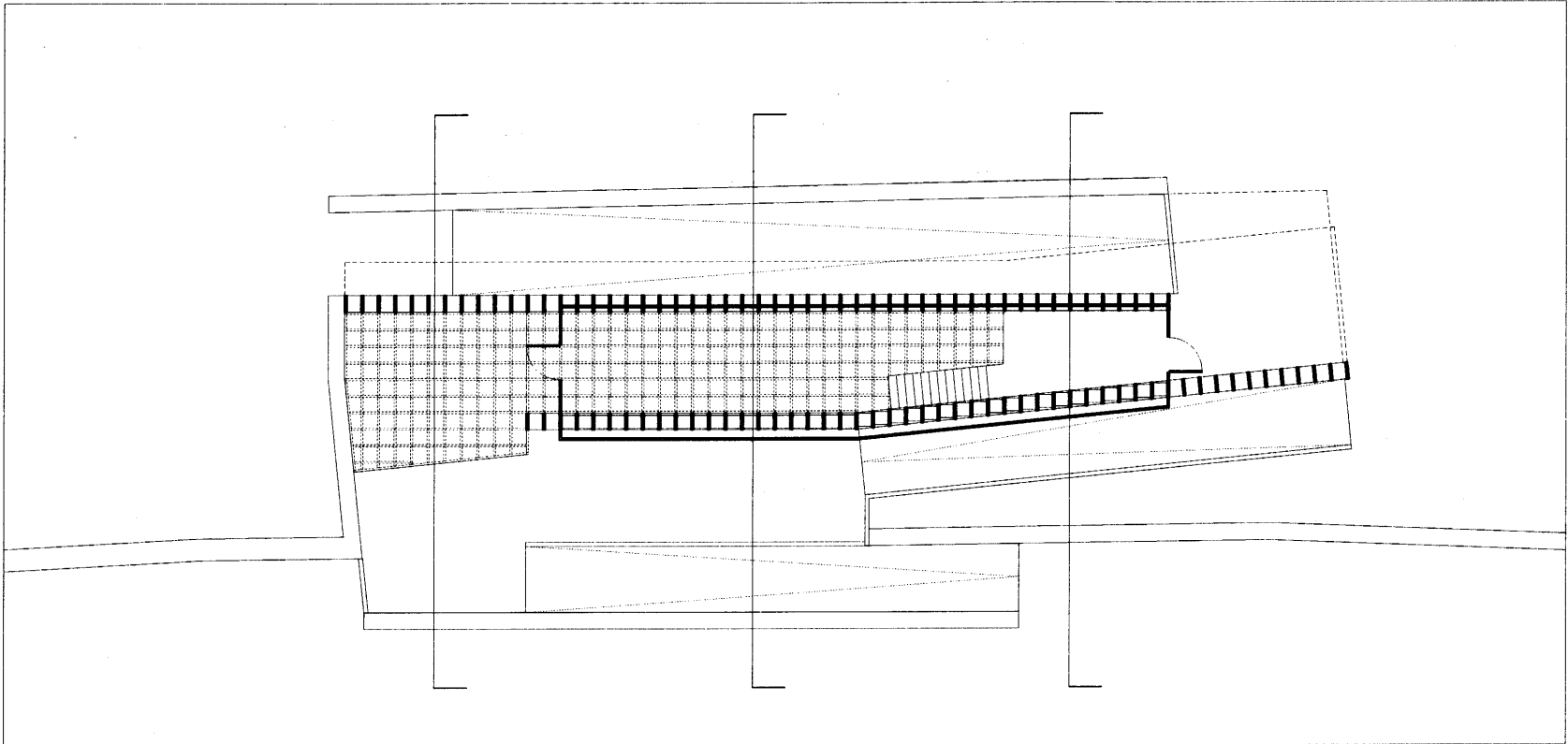


fig. 46: typical plan of archive.

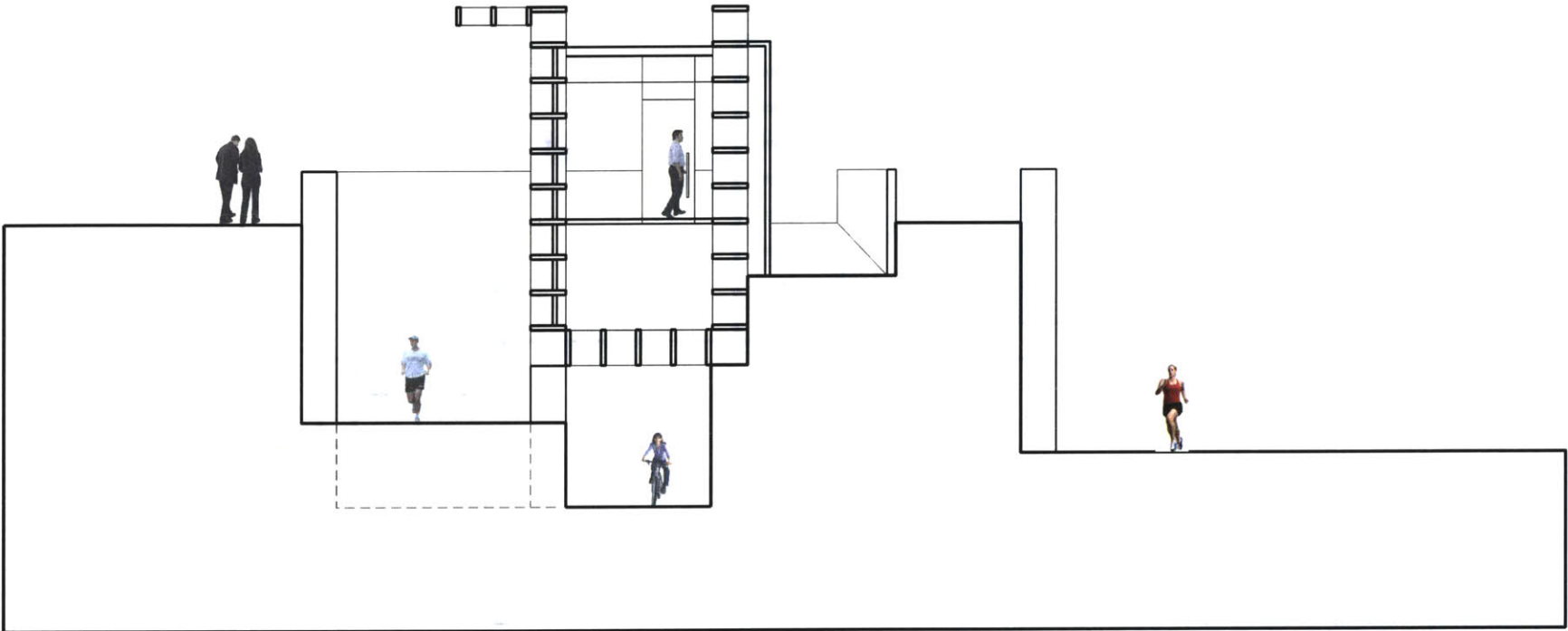


fig. 47: typical section through archive.

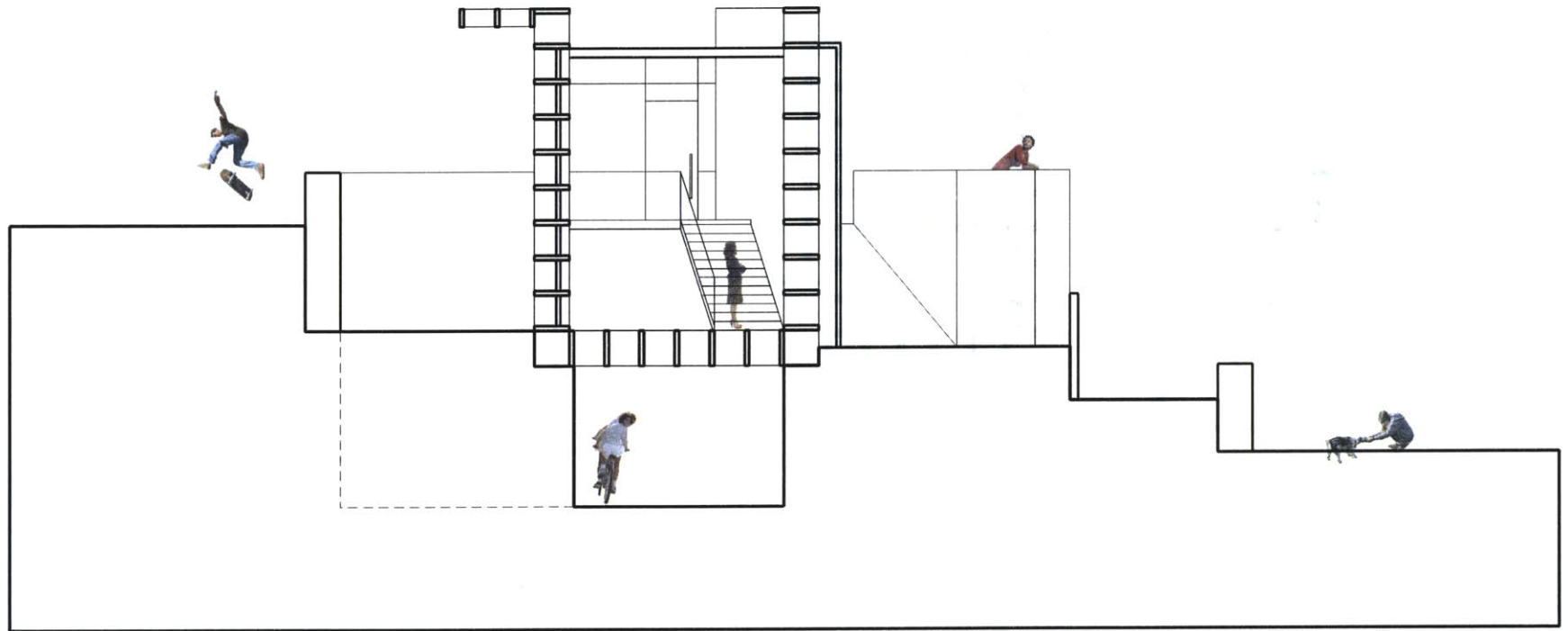


fig. 48: typical section through archive.

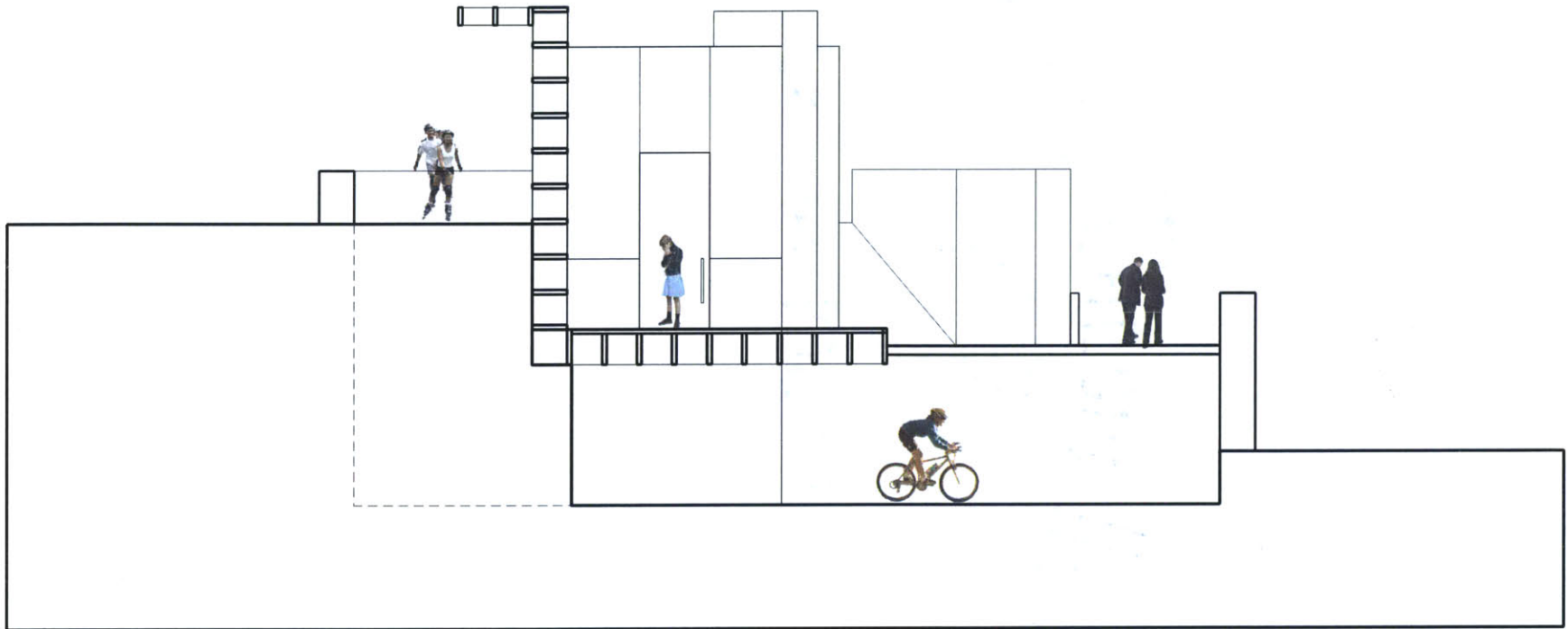


fig. 49: typical section through archive.



fig. 50: view of an archive along riverside drive.



fig. 51. view of an archive from the park.

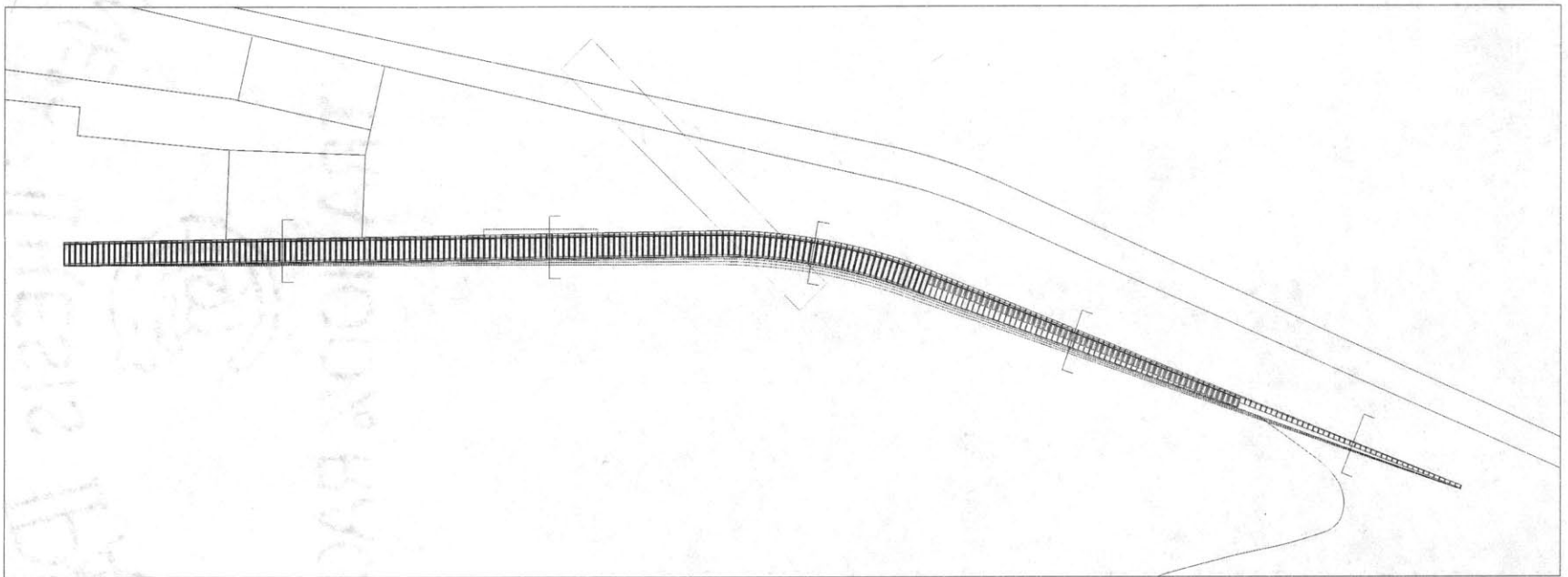


fig. 52: plan of a burial crypt wall.

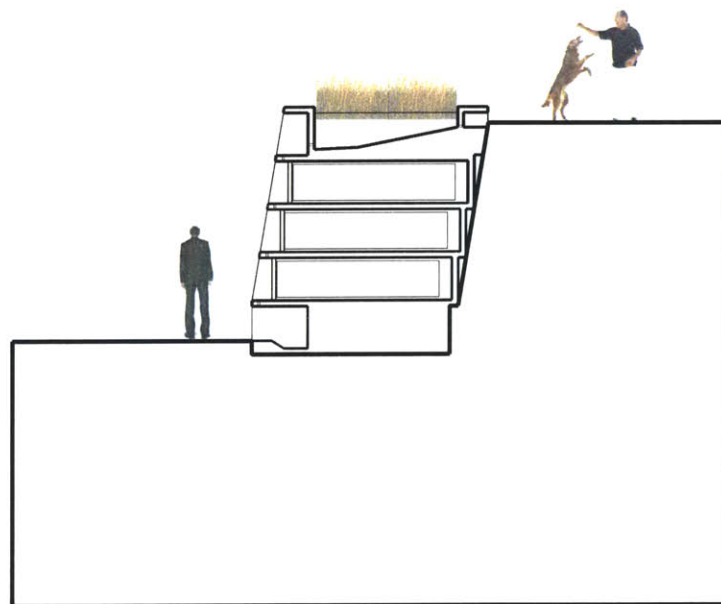


fig. 53: section through burial crypt wall

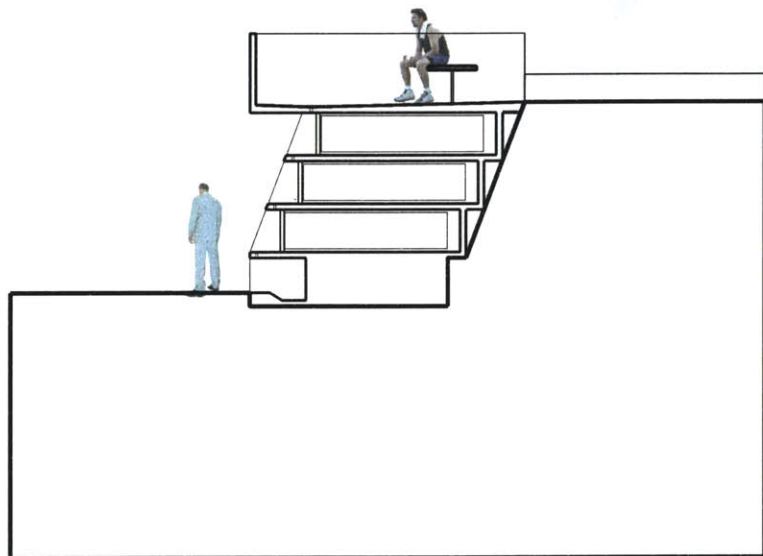


fig. 54: section through burial crypt wall

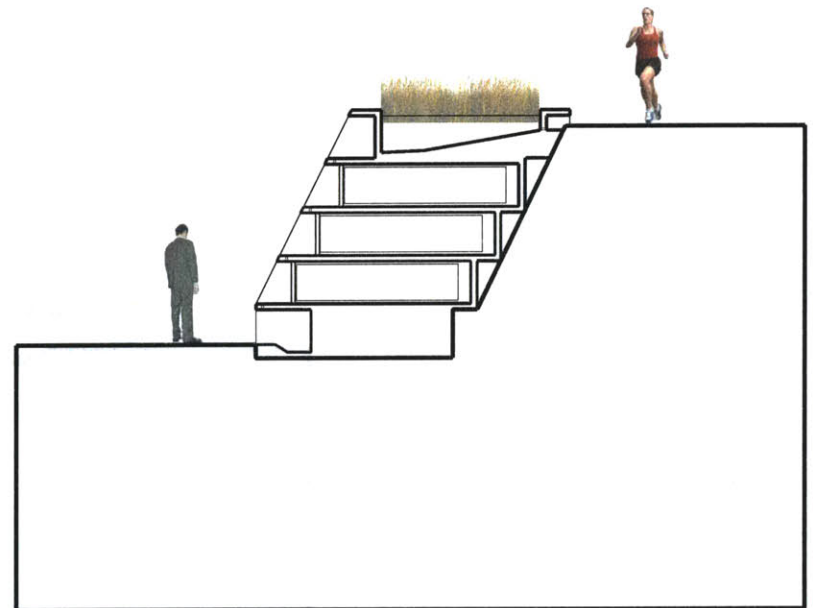


fig. 55: section through burial crypt wall

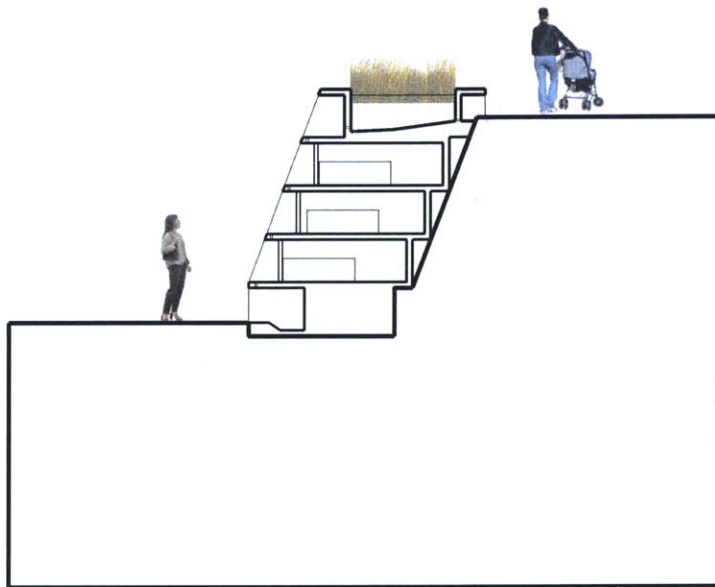


fig. 56: section through burial crypt wall

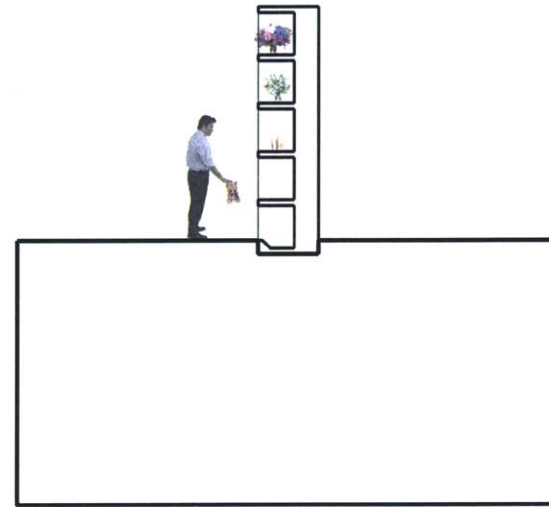
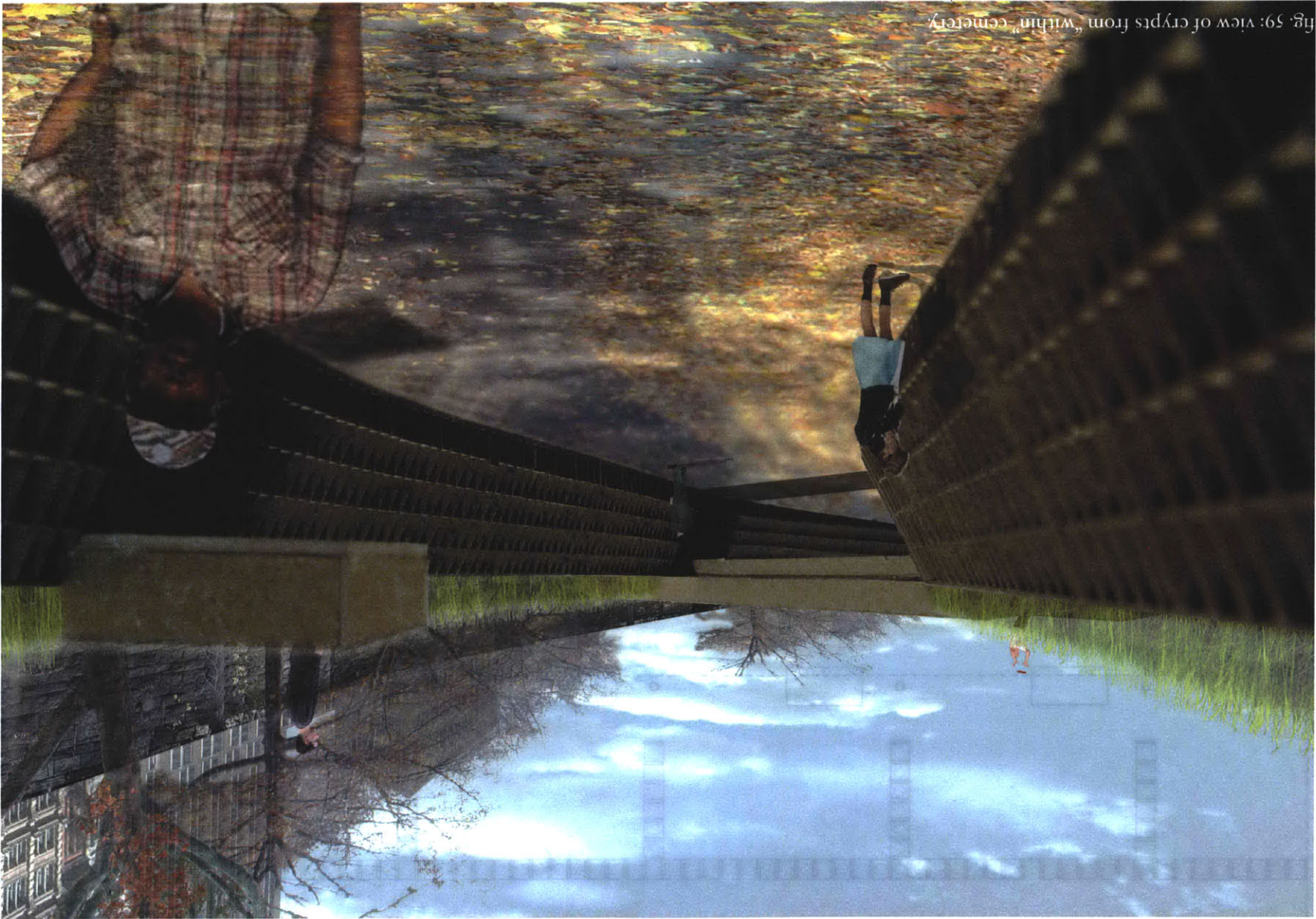


fig. 57: section through burial crypt wall



fig. 58: view of crypt walls from the park

fig. 59: view of crypts from "within" cemetery



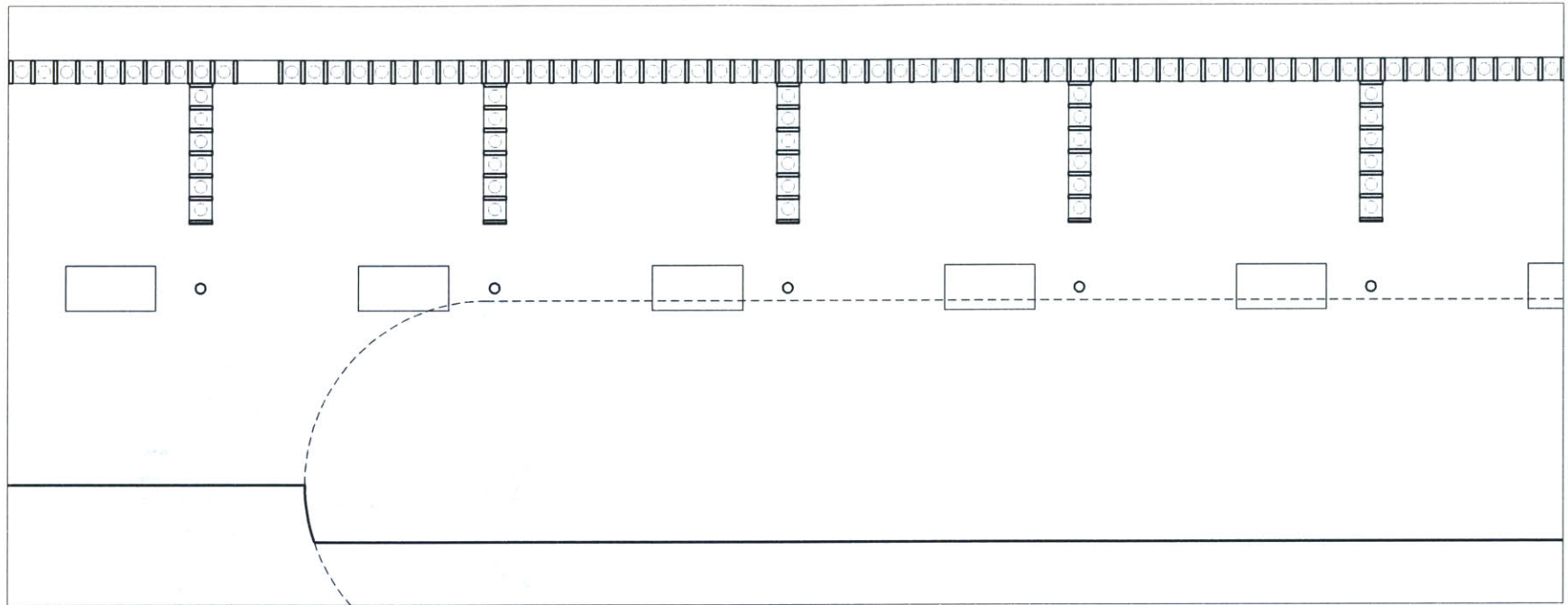


fig. 60: typical plan of columbarium space.

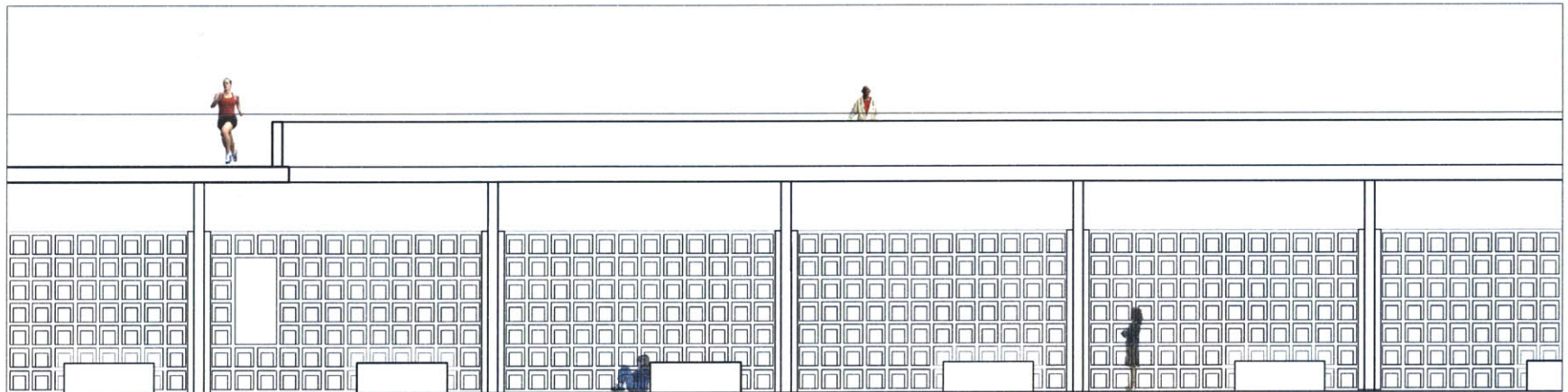


fig. 61: typical elevation of columbarium wall.

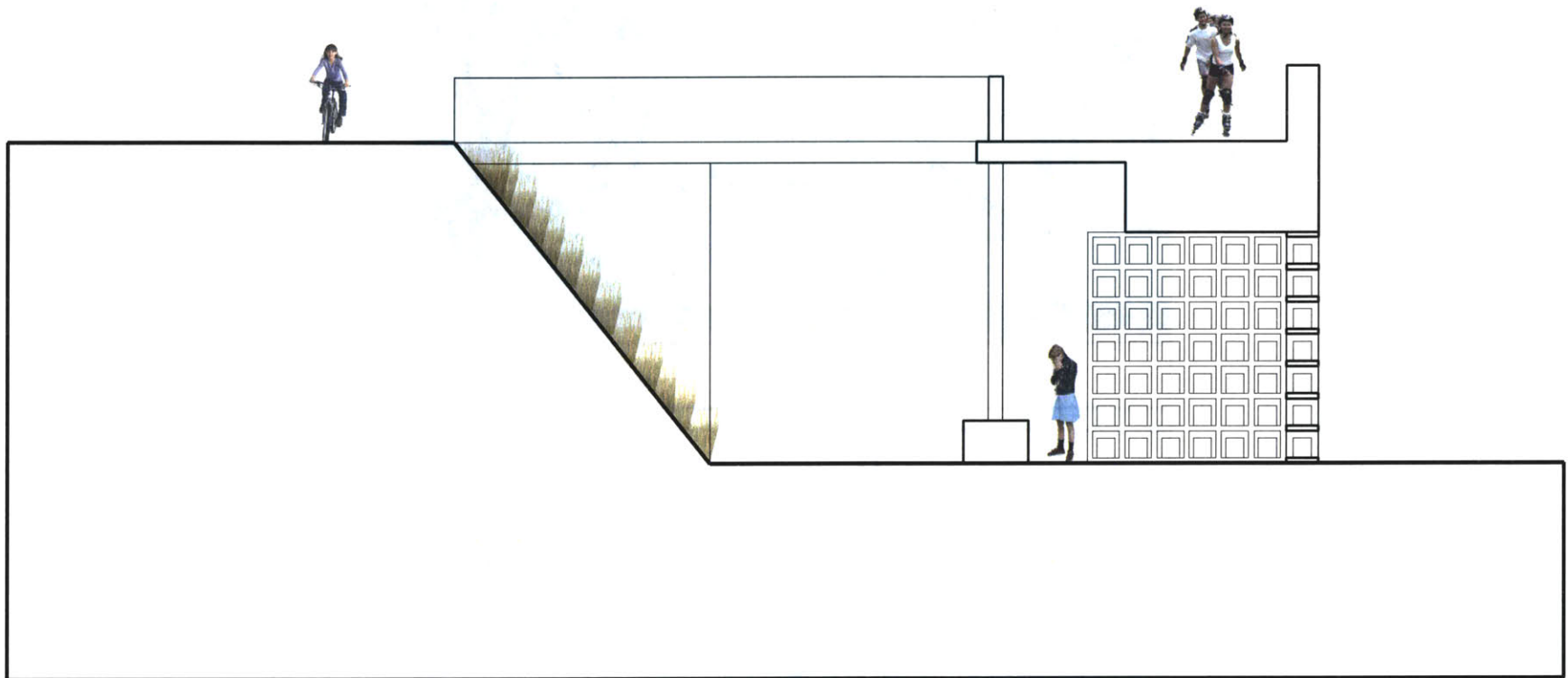


fig. 62: typical section through columbarium.

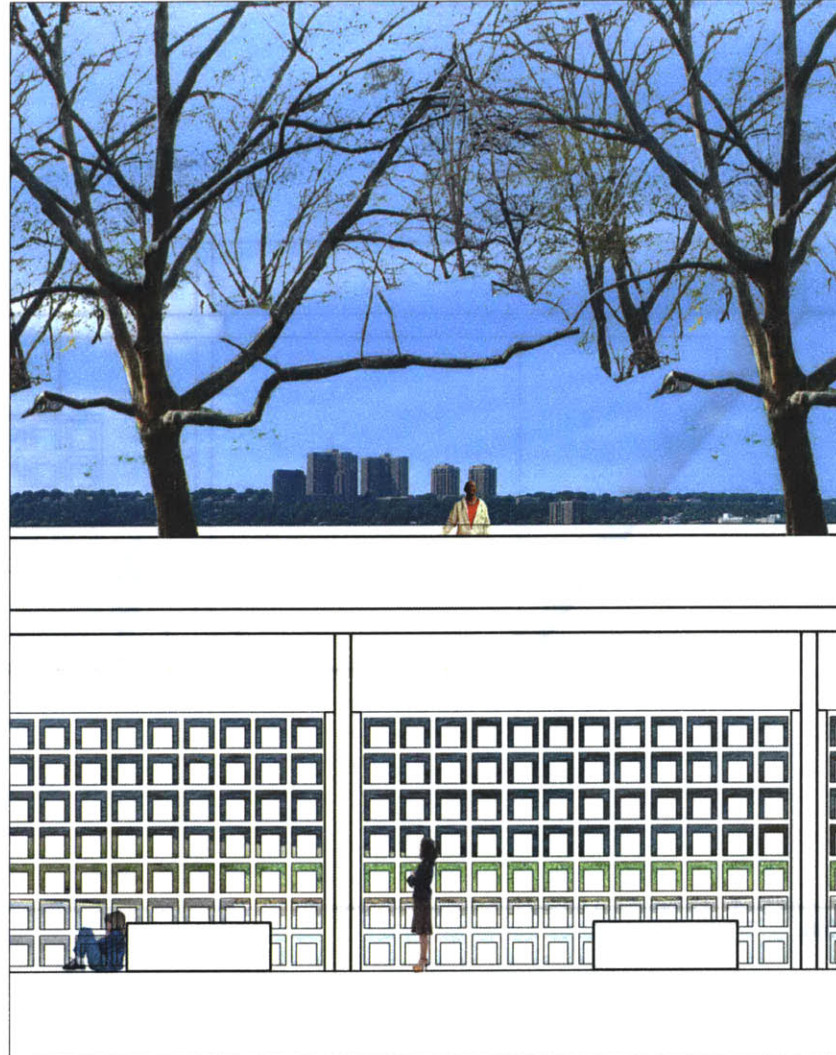


fig. 63: view through columbarim space.

Conclusion

The most difficult aspect of this thesis was dealing with the amount of traffic moving through the project. Considerable time was spent designing at a very large, gestural scale. And at times, the sheer numbers with which project dealt (for example: as designed, the crypt walls would be filled to capacity after only five years) presented considerable constraints. It was more important to ensure that the cemetery as a whole did not have an overwhelmingly institutional feel. As a result, finer details of the project remain unresolved - most noticeably, the design of the one-on-one experience between the person buried and the mourner.

During the early stages of the thesis, there was an intent to accommodate the diversity of the population buried at the cemetery, that is, to allow for the diverse range of rituals required by the aforementioned population. This intent eventually evolved into the spatial sequence that a single body took through the project. The sequence *itself* became the ritual - a civic ritual, rather than one dedicated to a specific culture. This new ritual, once hidden away on Hart Island, could be seen, accessed, and experienced; for it has been my belief that the Potter's Field, as a concept, is an honorable one that should be made transparent to the public.

model images.



fig. 64: 1:120 site model.

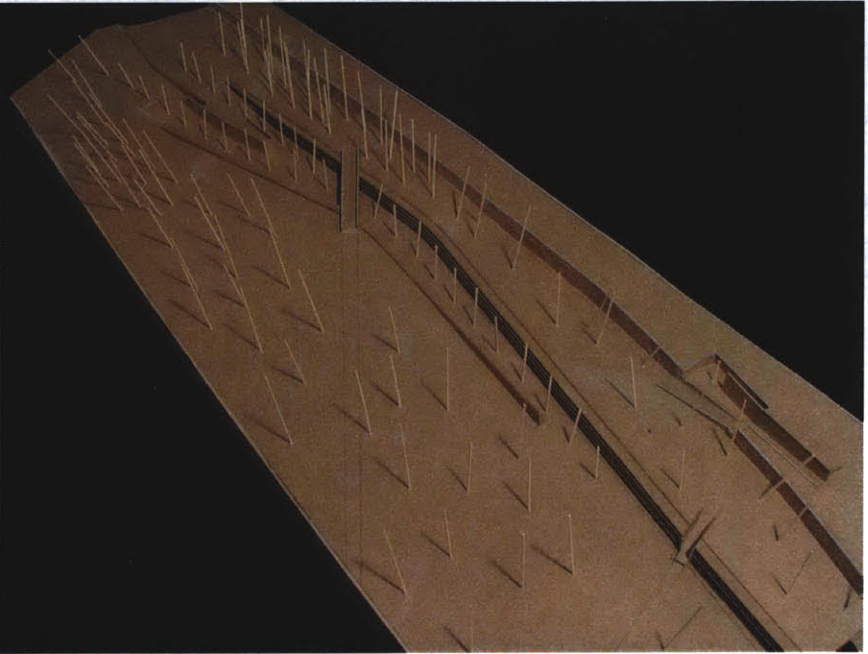
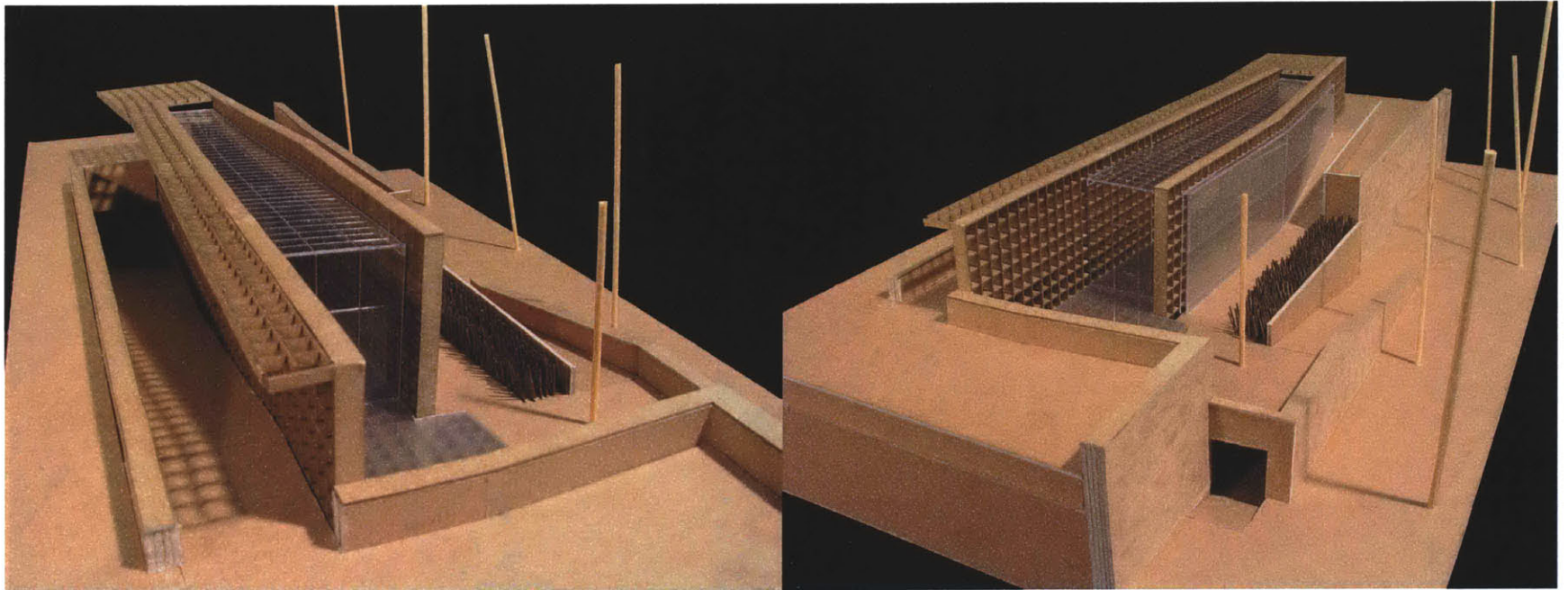
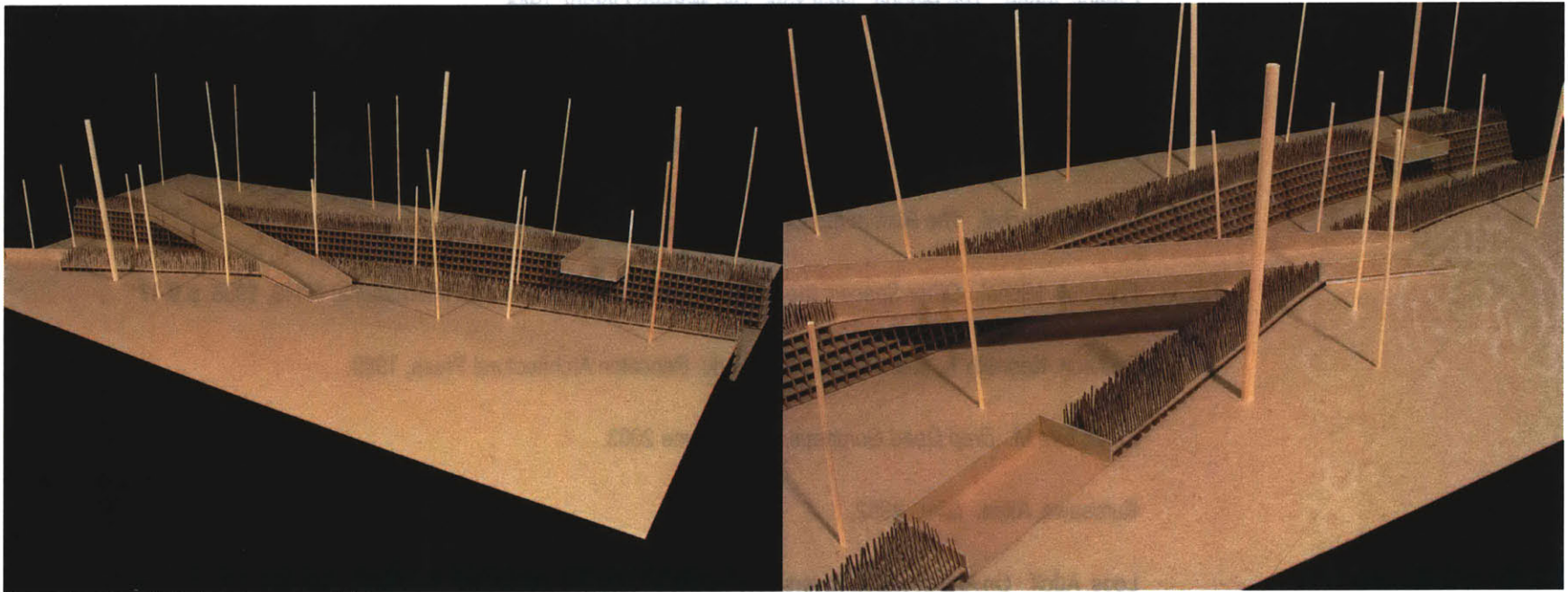


fig. 65: 1/32" = 1'0" model showing two crypt walls and an early version of the archive.



figs. 66 & 67: 1/8"=1'0" archive model, the ramp for active park users is in view on the left. the exit from this ramp is seen on the right.



figs. 68 & 69: 1/8"=1'0" crypt model.

sources.

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<http://forestlawn.com/>

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