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Programmatic Overlays:

A Park/Cemetery in Jersey City, New Jersey

Roger Williams University
School of Architecture, Art and Historic Preservation
In fulfillment of the requirements of the M. Arch Degree in Architecture
In May 2011

Programmatic Overlays: A Park/Cemetery in Jersey City, NJ

By

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Abstract

The development of sensory invitation and discovery will be the guiding premise infused within the architectural construct. Allowing one to recognize and identify with their emotions by establishing a heightened sense of 'place' and 'time' are steps towards realizing ones' essence. Creating spaces that foster this awareness by using physical forms, textures, and colors that will aid in the manifestation of a building that engages, interacts and touches the soul.

As cities expanded, cemeteries would typically be built alongside their development. Today space is limited for burial with the dense urban fabric of the 21st century. Thus, a proposal for a 21st interpretation of a final resting, one that infuses itself with a rich social landscape, is the primary component's in the investigation of reclaiming essence.

The existing site is an existing park known as Riverview Park in Jersey City, New Jersey. A large percentage of the site will remain open for public usage while working to achieve a level of homogeny with the cemetery's programmatic elements, which include a small chapel, larger funerary commemoration space, and five burial chambers.

The project manifestes itself in such as way as to establish strong connections between past, present, and future. The program, itself, is a literal memorial to the lives of those who have pass but is infused with life in the form of visitation from the living. By giving the living spaces, both interior and exterior , to be alone with their thoughts a simultantous fushion of the past mixed present and future will in a symboic harmony occure within one's self.

These provoked thoughts, memories, and the conjuried curiosity to discover are the cataylists of 'place' and propel the programmatic intent and function. In turn, the project demonstrate an enriched acceptance of a complete cycle of life, allowing the city of the dead to interact with that of the living.

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A Personal Manifesto

Architecture is a medium by which we use to formulate our understanding of the world around us. Creation of place is a social response to our surroundings and a mark of evolving cultural ideals. It allows one to explore our capacity to understand the passage of time.

The visual perception of building is only one of the cultural elements involved in the conception of a building. Architecture must interact with and engage all of the primary senses.

Aldo Van Eyck 'The Playgrounds'

Case Study I: The Playgrounds, Van Eyck

Aldo Van Eyck had quite a diverse background, but his roots lay with the Netherlands School of thought in combination with an influence from a post war Avant-Garde art world. Van Eyck had a lot of contact with young artists that shared his desire for a new, playful and informal society- thus the notion of designing playgrounds throughout the city of Amsterdam was concived. (Fuchs, 7)

Van Eyck was driven by a strict architectural discourse that ultimately bled through to his distinct architectural character. His theories about the space/place distinction in relation to architecture and urban design are crucial to understanding the origins of the playground endeavor within the city.

"The playgrounds themselves consisted of a distinct language of elements that included sand pits, stones, a collection of frames, and benches. The frames usually were shaped as arches, domes, or bridges. All of these archetypal elements were formed in unique ways depending on the site allotment. They sought compositional character in order to provide a place that harvested the stimulus for discovery." (Fuchs, 7)

Context

A fusion of architectural construct within the totality of context is essential in the creation of a responsible edifice.

Luminous interior spaces that engage those within the walls of the exterior environment iis the reslult of an understanding of the notion of context.

A distinct level of homogeny should be achieved between landscape and building creating a seemless experience by the user.

Creation of Place

The building should fit into the linear advisement of society, providing evidence of a responsiblie continium of the ideals of the past. References to the past are crucial, however, the building should not manifest itself in a manner that does not parallel the advancements conceived subsequent to the reference.

"Space is perceived as the outcome not only of the technocratic state but also of unbridled market forces along with new information technolgies and means of mobility, not to mention the gaping voids left by war and terrorism." (Lefaivre, 24)

Social Consciousness

A strong social consciousness must be applied, regardless of the scale and budget. Aesthetic concerns should be secondary to environmental and health concerns. A pragmatic planning approach must be taken, balancing an essential need for efficiency of resources without sacrificing the architects obligation to provide optimal space.

Case Study II: Schouwburgplein, Rotterdam
West 8 Architects

"Commissioned in Rotterdam in the early 1990s was the Theater Square, located centrally among the cities urban fabric. The square itself is situated 35 centimeters above the ground level, just enough to make walking across a conscious act and heightening the experience phenomenally, allowing the visitor to become part of the act or spectacle of the theater." (Molinari, 72)

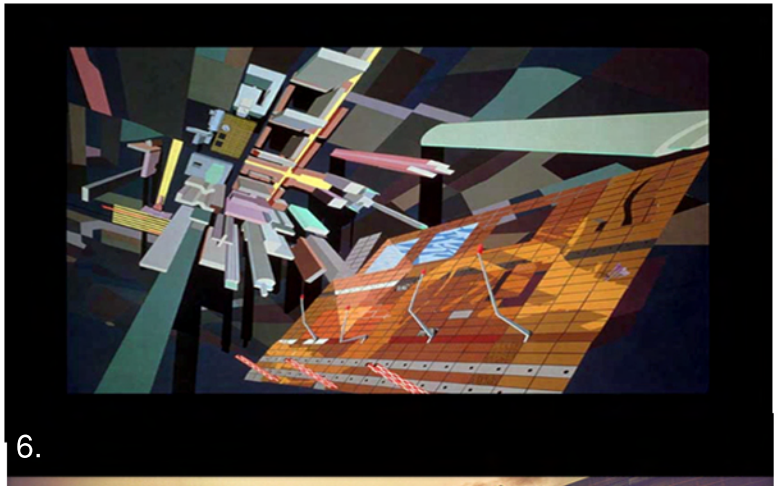
"The material palette plays a critical role in how the visitor engages this recreational space. Wood, perforated steel plates, granite, epoxy and rubber elicit different activates within the space, allowing for football players, skaters, children, and musicians to choose their own zone. The only elevation change in the space are the red light masts, the glass entrances to the underground parking garage that service the adjacent theater, and the 70-meter long wooden bench." (Molinari, 72)

5.

A Personal Manifesto

Cohesive Unity of Ideas

Underlying order must be established for a concept to hold as the building materializes. Maintaining the purity of space and construction can only be achieved by the careful governing of ideas. The ability to filter and provide a cohesive unity of only the absolute necessary or required thoughts required to understand the relevance of the building will allow for an unclouded perception of architecture.



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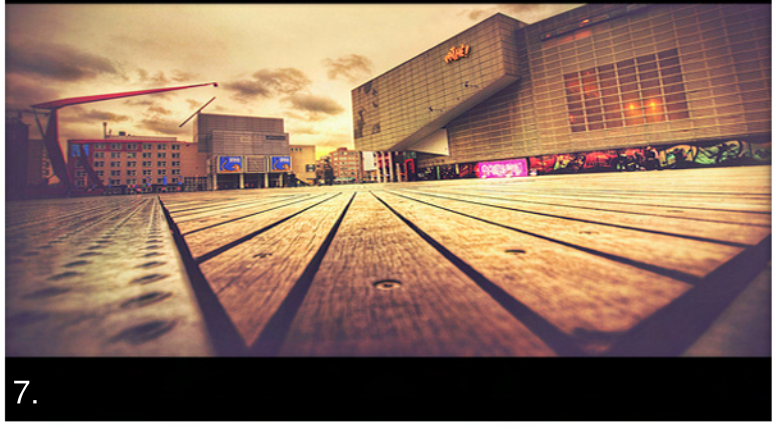


7.

Schouwburgplein, Rotterdam, West 8 Architects

Lower Left Images:	A clear understanding of conceptual ideolgy allowed the architects to be consistent in throughout all phases of design, including detailing.

Building design needs to be driven by a multitude of constraints that exhibit no hierarchy. The user will benefit from a holistic vision of a responsible designer, one that can balance social, environmental, and economic issues in a manner that is distinctively tailored to match the requirements specified by the user.

Materiality

Materials applied to surfaces have their own distinct language and character. When applied in the right context, these materials begin to have a dialogue with each other and with the users, speaking to habitants about issues of time, region, and authenticity.

"Beauty is the logical result of having everything in the right place."
-Hapacity and Time, Juhani Pallasmaa

Introduction

Introduction

The integration of a distinct conceptual framework, one that allows for flexibility of thought and interpretation, but with the austerity and rigor to provide distinctive clarity of beliefs is critical in the development of strategy.

In this project, development of sensory invitation and discovery will be a guiding premise infused within the architectural construct. Allowing one to recognize and identify with their emotions by establishing a heightened sense of 'place' and 'time' are steps towards realizing one's essence.

Creating spaces that foster this awareness by using physical forms, textures, and colors will aid in the manifestation of a building that engages, interacts, and touches the soul.

"In life, time and space is what matter. It is about the journey."
-Architecture of Time, Enric Miralles

An appropriate precedent in detecting the notion of creating a multi-sensory experience lies in the fine arts, that of which include paint, film, and music. Painting and sculpture have adopted physical, mathematical and philosophical thought that aid in the interpretation of their own composition. Although these logical components are apparent within the given work, steps towards abstraction are made. There is typically a conscious manipulation of laws and pure ideas that are carefully governed by the work's author.

The use of form, color, and texture, once seperated from their physcial context, begin to imply conceptual networks of a higher level, allowing one to understand the underlying logic, order, and rhythm. Through abstraction, these arts learn towards a philosophy of essence.

Case Study III: Yayoi Kusama
Aftermath of Obliteration of Eternity, '09

Description:

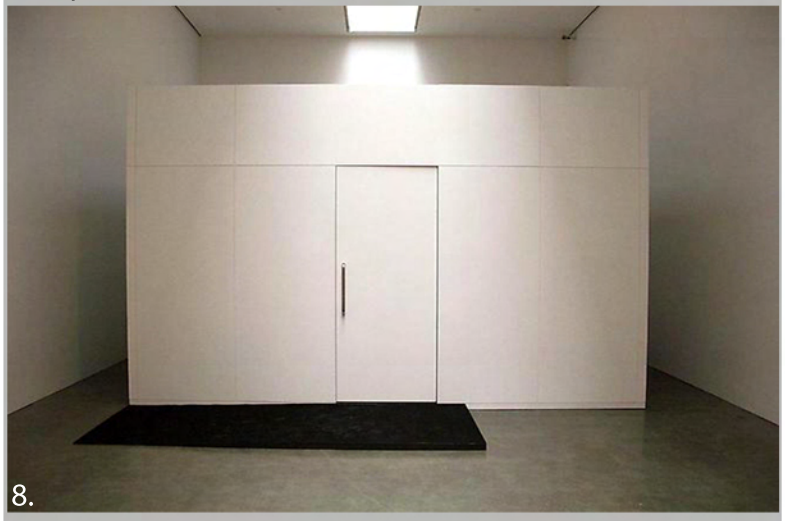
"A mesmerizing "infinity room" that operates on a system of simple yet ingenious optical devices. In a dark void, a delicate, shimmering mirage unfolds around the viewer, a myriad of gleaming lights that reproduce and reflect endlessly upon each other in golden silence. Titles of recent figurative paintings, i n which worms, eyes, and other more indeterminate biomorphic forms abound, reflect a preoccupation with mortality, as well as with enlightenment, solitude, nothingness, and the mysteries of the physical and metaphysical universe."

http://www.gagosian.com/exhibitions/2009-04-16_yayoi-kusama/

Relevance:

The author's ability to transport the visitor through a series of experiential juxtapositions enable with the ability to unlock prescribed emotions from the user. The notion of 'place' is fully exemplified, as she is able to take you on a journey beginning with museum,to room, to sculptural box, to cascade of darkness and chaos.

The sequence begins with a simple confrontation between box and man. The black mat slightly raises the ground plane, clueing one into the departure from one environment and into a distinctly isolated experience.



8.

When the door opens, a radically different space is located within. One begins to question time, place, and occasion.

9.

10.

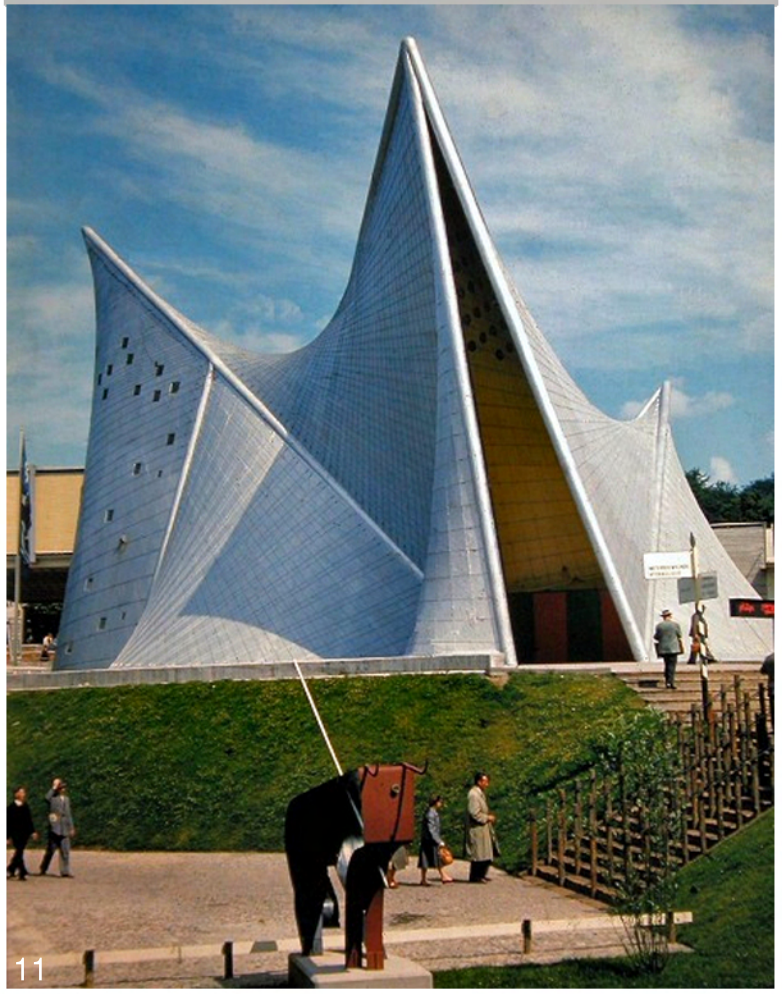
When the door closes behind, one encounters a mixed-media expression of apocalyptic proportions.

The development of the built environment, in this manner, is important to fostering the discovery of one's own aura. Aura is a distinctive, yet intangible quality surrounding either a person or thing. Aura lies in the spirit, the physiological, and in emotion. Providing the framework for a conceptual consciousness and technical infrastructure that leads to an architecture conceived of experiential events that have a dialogue with the user are critical in the expression of 'place'.

Music also follows the path towards abstraction, but in a direction that is opposite to that of painting and sculpture. Painting associates itself with the temporal category (time). Music concerns itself more with space (reverberation, surroundings).

Case Study IV: The Phillips Pavilion
Iannis Xenakis, Brussels, 1958

A first experiment in this artistic synthesis of sound and light in architecture, it was a step towards an 'Electronic Gesture". It was an exploration of the unlimited synthesis and possibilities for color, imagery, music, words, and rhythm.



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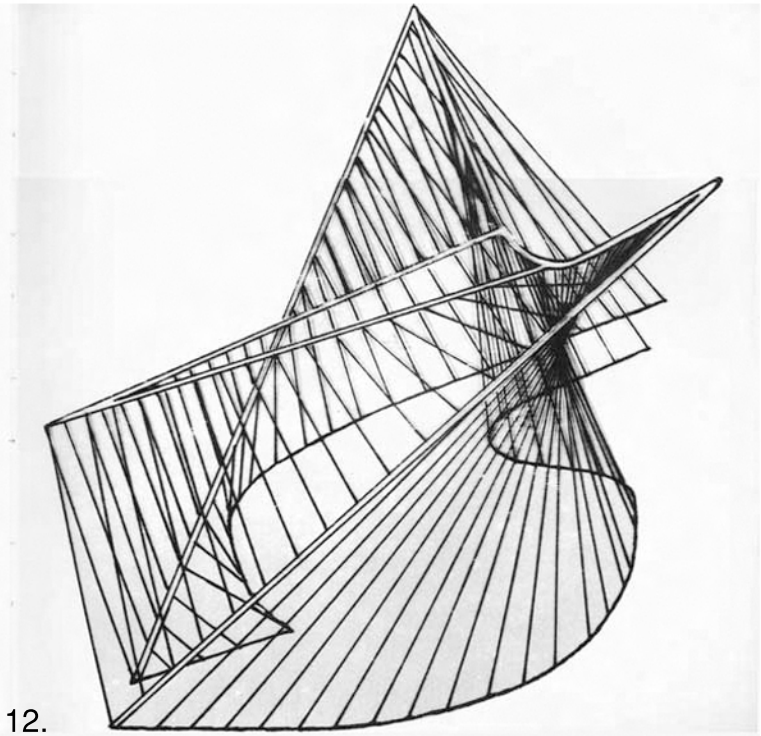

12.

"The structure is composed of hyperbolic-paraboloid shells which, up to now, have not been used for the problems of the type. The walls are constructed of rough slabs cast in sand moulds on the ground, measuring about 5'-0" on a side and 2" in thickness. They are mounted in place by means of a movable scaffolding and are supported by a double network of cables, 3" in diameter, suspended along the cylindrical directrices of strongly reinforced concrete. Such is the principal of the structure."

-Le Corbusier 1910-60, Hans Girsberger

Project Proposal Investigation

Proposal One

Cineplex:

The proposal for this building typology stems from the pursuit ofdeveloping a built environment that can foster the development of a transformative state of place. The medium of film has the ability to alter the moods and manupulate the emotions of those engaging with it.

In this proposal, there is the intent to provide for a hieghtened relationship between mixed-media arts and society. This cinemplex would not only use the art of film to bridge this relationship, but also exibit fine art and allow spaces the capibility and flexibility to exhibit other forms of personal expression, such as dance or musical performance.

Case Study: Broadway Cineplex, Hong Kong China, 1999

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The eight-screen multiplex cinema's catalysis for development was to 'create a sense of coherent unity'. (http://www.arcspace.com/architects/Edge/cineplex_index.html)

Light and color are the main architectural elements used in creating related identities that merge together with a distinct cohesiveness. A system of localized lighting elements that put emphasis on elements, rather than use of materials and finishes which would increase costs, is the major organizational technique.
(http://www.arcspace.com/architects/Edge/cineplex_index.html)

14.

Program Outline:

-Entrance Lobby Space with ticket offices
-Theaters for viewing films
-Studio spaces for creative expressions
-Exhibit space for mixed-media arts
-Linkages to the public (cafe, park, informal art display)

A Center of the Applied Arts:

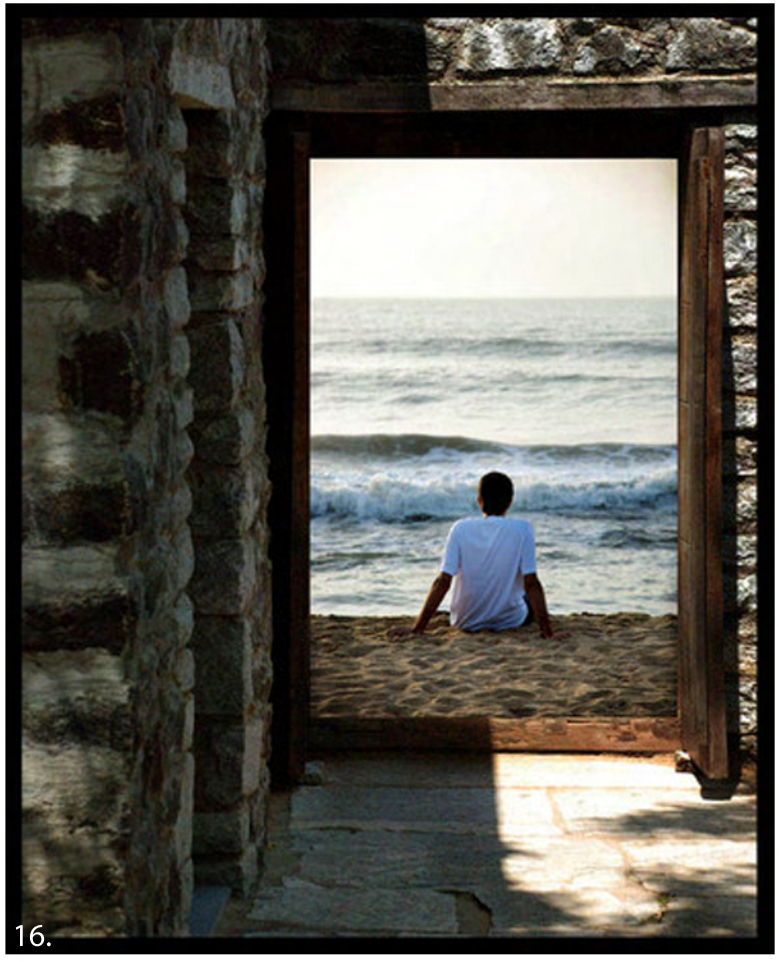
The proposal for this building typology is rooted in the notion of fostering the discovery of one's self. Allowing individuals to make choices about which medium of art is best suited to their personal discovery would be the driving force in the conception of a building that has a variety of spaces with specific programmatic function.

15.

Program Outline:

-Fine Arts Studio
-Theater, Music Pavilion
-Spiritual Retreat
-Sound Rooms
-Expostition Center

"Discovery consists of seeing what everyone has seen and thinking what nobody has thought."
-Albert Sezent-Gyorgyi, 1962



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Proposal Three

Cemetery

Death, and the art, architecture, and landscapes inspired by it have been explored since mankind began to leave records of civilization. Depending on culutral beliefs and hierarchy of any given society, their burial chambers, rituals, and habits were typically well documented in literature, as well as in building, giving evidence that issues pertaining to death and the afterlife are a cultural common denominator.

"Present day Western practices of remembering the dead as been a relatively rapidly evolving condition that beholds several practices that rely mainly on location, natural resources, and individual beliefs. They are typcially places where people visit to pay respects to a life or reflect upon life." (Death and Architecture)

Case Study: Extension to Saint-Pancrace, '92
Marc Barani

17.

18.

Mass, depth and opacity are the three modes in developing an architecture beyond human scale. The vast thick walls and textured concrete that enclose spaces aids in controlling one's experiences moving throughout the structure. These large walls also fixed views, shutting out most of the outside world, only allowing fixed vistas. The structure is always in control of the visitor.

Traces of bural customs by early humans in prehistoric times who would drop the dead into a hole and cover it with stone are amougst the first recorded, although some of the earliest tombs were made in Egypt, China and Rome.

During the Middle Ages and into the Renaissance, the dead were simply buried around churches, which caused problems stemming from lack of space and knowledge of proper burial.

As cities expanded, cemeteries would typically be built along side the development. Today, however, space is limited for burial and under utilized by the living.

...who knows the fate of his bones,or how often he is to be buried? Who hath the Oracle of his Ashes?

Sir Thomas Browne (1605-82 from the Dedication of Hyriotaphia

A proposal for a 21st century interpretation of a final resting place for the dead is the primary component in my investigation of reclaiming essence. A cemetery can provide the means to capture the spirit, both literally and figuratively, as well as provide powerful, peaceful places of reflection and discovery.

Architectural Intentions

Intentions

The program should have a fluidity and movement to it, establishing itself as a hybrid between a recreational park for walking, biking, and other outdoor leisure activity while paying respect to those who are laid down to rest. Careful consideration needs to be paid to controlling the experience or the sequence of human situations and encounters.

Thinking of the architecture and the landscape as a homogenous construct for something that can create a supportive background for human activity and reflection is crucial. This layered and multi-sensory experience should work towards evoking feelings of domesticity and comfort, rather than admiration and awe.

Sustainable issues are important and should be taken into consideration; however, it should not take way from the architectural intentions. Materials, forms, and geometric gestures should be thought about from a sonceptual standpoint and integrate sustainable features and technologies where appropriate.

Case Study: Yale Marble Garden
Isamu Noguchi

The designer thrived in his ability to bring art into the landscape, regardless of the scale of the project and had an astounding flair for conceptualizing and designing places that were spatially enticing and metaphorically profound.

Typically perceptible in Buddhist-Zen gardens, the landscape is a place to guide mediation and provide a place for intellectual reflection. In order to aid in this

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meditation process, it is traditional to “borrow” important landscapes and abstract them as garden elements. Appropriately sited centrally within the courtyard of a library, a place of Western reflection and obtaining knowledge, this garden uses traditional Eastern principals in a manner that is appropriate for a Western setting.

Perhaps the most important quality of this building is the manner in which it is experienced. The Yale Garden offers views from the perimeter of the building and is uninhabitable. The natural mineral garden is meant to be experienced in a three dimensional vision of totality, which enacts a higher emphasis on the highly structured circumstances Noguchi has provided. Traditional Japanese designers tend to place the greatest emphasis on the experience and enjoyment of nature in a highly ordered condition within the garden space.

Strict rules of seeing and experiencing are intended to best express the centrally valued features are strived for amongst designers. The monolithic quality of the material helps to unify the garden with the surrounding building and further engage the inhabitants through the glass curtain wall that seemingly dematerializes amongst the marble.

Program

Program Introduction

Formal Expression and Goals:

Establish a stronger connection between past, present, and future.

Provoke thought, memories, and curiosity to discover while also providing 'place' suited for its programmatic intent.

Experience the layers of time. Avoid atempts to control time, but rather evolve with it.

Demonstrate an enriched acceptance of a complete cycle of life, allowing the 'city of the dead' to interact.

Use mass, depth and opacity to reach beyond human scale

Connections to Site:

Understand the 'cultural landscape' and pre-existing traces, allowing the history of the site, nieghboorhood, and city to interact directly with the building.

Follow a natural order to conserve materials and energy, allowing the project to be more innovative in its approach to connecting nature.
IE: Allow rough ground to be eroded by rain

Establish what the technical components are:

- climate
- soils
- vegetation
- geology
- hydrology
- history/land usage

Respect the city planning commission's plans for redevolopment. (Detailed in Site Analysis)

User Groups:

Those coming to mourn the death of a friend or loved one

Visitors wishing to learn of the past: reflection and meditation

People employed by the facility:

- security
- grounds crew
- mortuary scientists
- leaders of worship

Chance visitors looking to escape the monotony of the city and expeirence the qualities of a park without having to leave the neighborhood

Client:

Jersey City, New Jersey would be the client in this situation. The city planning department is located at:

30 Montgomery Street
14th Floor
Jersey City, NJ 07302
Tel: (201)-547-5010
Fax: (201-547-4323

Jersey City is divided into distinct neighborhoods, so understanding the desires of the public located near the proposed site is important.

The city encourages frequent meetings with councils composed of members of the public looking to be involved with the redevelopment of their city.

Burial Typologies

Lawn Graves	200	7' x 3'= 21 SF		4200 SF
Burial Walls with Niches	800	7' x 3'= 21 SF		16,800 SF
Columbarium Walls	2000	1' x 2"= 2 SF		4000 SF
			Total Net SF:	**25000 SF**
			Total Gross SF:	**28000 SF**

Note: The hiearchy of typologies of burial was determined by the interpreting cultural trends of burial in combination with the space avaliable on site. The gross square footage number takes into account circulation between burial plots, as well as in between Burial and Columbarium Walls. The goal of this cemetery is to be able to grow without harming the fabric of the surrounding neighborhood in terms of their views in and out and paying respect to the scale of adjacent buildings, therefore these numbers are subject to grow as the passage of time continues.

Funerary Commemoration Building

Entrance				
Entry Atrium Space	1	800 SF		800 SF
Reception Desk				
Waiting Room				
Rest Rooms	2	400 SF		800 SF
Administration				
Clerical Work Space	4 to 6 people	300 SF		300 SF
Kitchen with Lounge	1	200 SF		200 SF
File Storage Room	1	200 SF		200 SF
Sanctuary				
Floor Level Seating	300 people	1800 SF		1800 SF
Mezzanine Seating	100 people	600 SF		600 SF
Clergy Preperation	1	200 SF		200 SF
Mechanical Room	1	1000 SF		1000 SF
			Total Net SF:	**6000 SF**
			Total Gross SF:	**7200 SF**

Note: The large entry space will accomidate an overflow of people for large funeral services, therefore it will be adjacent with visual connection to the sancturary space. The Sanctuary is divided into two primary levels of seating to provide a more suitable seating arrangement and break the scale depending on the range of scale of service. The Sanctuary will also have partions that can be shifted to accomidate more than one service at a time, if neccesary

Mortuary Building

Entrance				
Reception Desk				
Waiting Room	1	200 SF		200 SF
Rest Rooms	2	200 SF		400 SF
Administration				
'Undertaker' Office Space	2	160 SF		320 SF
Morgue				
Refrigeration Storage Units	10	7' x 3'= 21 SF		210 SF
Embalming Room	1	600 SF		600 SF
			Total Net SF:	**1730 SF**
			Total Gross SF:	**2000 SF**

Lawn Graves

A 'lawn' grave is covered by grass and marks each person laid to rest by a commemorative plaque placed at the head above each body. This intends to have a high level of uniformity with regards to the head stones, leaving little room for a social heirachy to be manifest.

A series of landscape architectural gestures such as curved paths for pedestrians and slopes combined with various plantings to break down the scale of the outdoor spaces will be used.

A 'lawn beam', which is a low raised concrete slab placed in a linear orientation may be utilized in order to achieve the desired homogeny of these plots.

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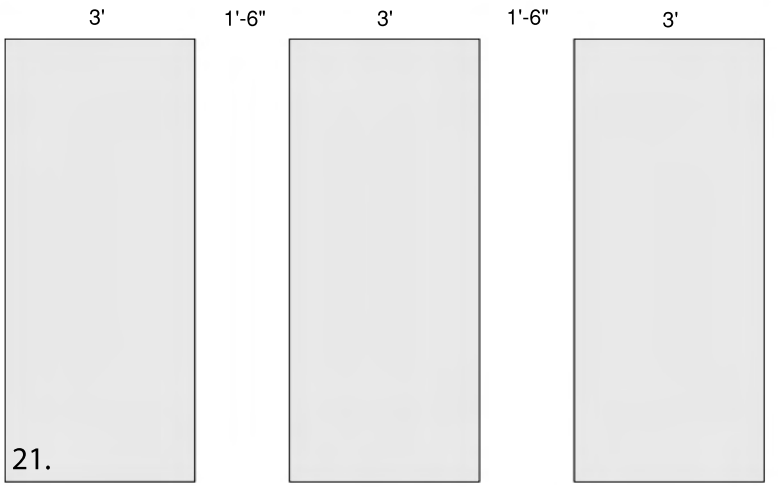
The living are surrounded by life, in the form of nature and the built environment (the skyline), however, they can engage with the dead along their journey through the site, connecting past, present, and future.



21.

Lawn gaves are typically constructed and laid out to the standards diagramed above. To cut down maintaince costs, this style of burial typically follows a similar linear pattern.

22.

Before the body can be lowered into the ground, the hole must be prepared: Being sure the slope of the ground where the graves are located are as flat as possible is important to ensure an effiecient and safe installation. Stepping the site along each row may be a way of dealing with slopes that are important to maintain the character of the site.

Burial Walls

The burial wall is another typology of final resting place utilized by nearly all contemporary cultures. This form of burial has become increasingly popular amongst communities throughout the United States as it effectively cuts down on the footprint of land needed to bury many more people than lawn graves.

This is not a new typology of burial, as it dates back to the earliest record of civilizations, including the Egyptian culture, but because of differing religious view, there was a shift in ideology as Western culture developed.

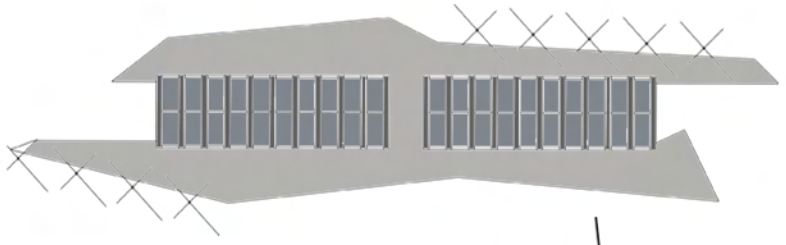
Burial walls can be constructed in a variety of ways, sometimes adapting to the slope of a site and building directly into the landscape, acting as a sort of retaining wall with progammatic functionality.

These walls can range in their scale, however, because of the view towards the East of the skyline, keeping their height to a minimum to not restrict views from the road and adjacent nieghborhood is important.

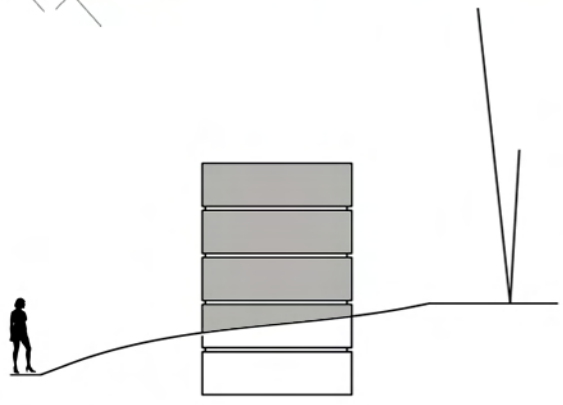
Typically, the material pallete associated with burial walls are stone and masonry, as these materials give a sense of timelessness and age gracefully.

As time passes, these structures should be flexable and able to adopt and grow as more people inhabit the cemetary. The design needs to reflect this passage of time and be thought about in phases of growth.

All access ways to burials walls will be outdoors, with open air protection from wind and rain elements.



Plan



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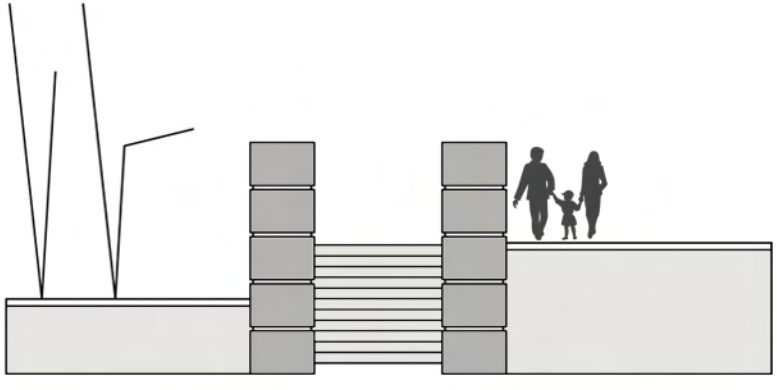


Elevation

23.
The diagrams above begin to speak of the engagement the burial walls could have with the site, as well as their aproximate scale.

Columbarium Walls

Perhaps the most economical and efficient solution of the three typologies of burial, the columbarium wall reflects the increased use of cremation rather than burial. This would allow for a permanent commemorative plaque to honor the deceased and provide a place for those to come to mourn and pay their respects.

A small plaque about 1' x 1' can be affixed across the front of each niche, where an urn would be placed within. Since the plaques are so small, constraining the scale of the font able to be used, these walls typically do not got higher than 3 to 6 feet above grade, thus allowing mourners or those passing by to identify with the plaques.

Designing small shelves to place a limited amount of flowers or other objects near the plaque is important. The use of small metal clips to hold flowers nearby may also be explored.

As flowers decay, they simply would fall to the ground into a recessed area where they would be left to decay, cutting down on maintenance problems as well.

These walls would be outdoors only, working with the slope of the land to provide a social landscape to pass through if desired, or stop to mourn.

Heavy masonry or stone would probably be the material used to manifest these walls.

24.

A typical columbarium wall under construction at Anchorage Cemetery.

25.

At Mount Jerome Cemetary, the Columbarium Walls save a considerable amount of space and materials by carving into the site.

Second Level

Seating

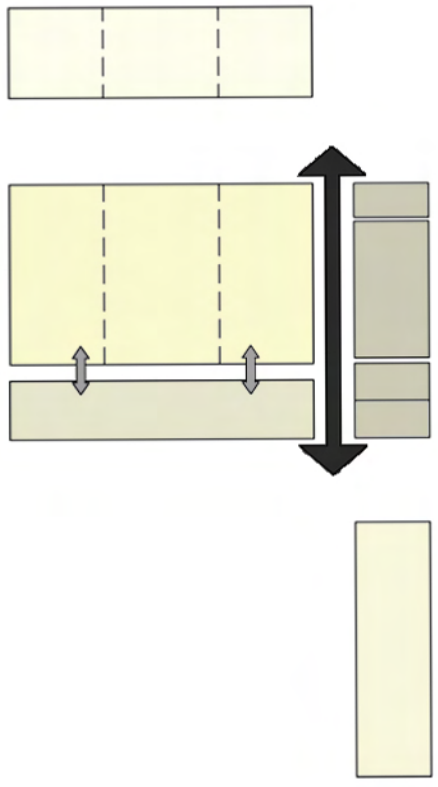
Ground Level

Entry Atrium

Admininstration
Sanctuary

Sub Level

Mechanical



26.

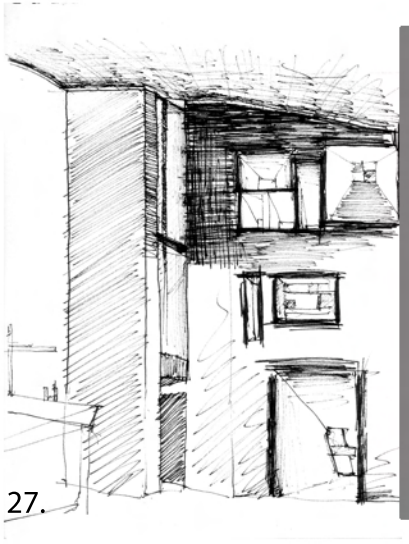
The primary spatial component of this portion of the program is the sanctuary. This space will have no religious connections. However, it will incorporate many traditional elements of creating spaces that are designed for connecting with a higher power.

Careful control of lighting arrangements, both natural and artificial are a concern, as is the scale and texture of materials used. This space should be relatively monochromatic, allowing for visitors to make choices on how the service should be held.

The lobby is to function as a reception area not only only for this building, but for the entire cemetary as well, acting as a portal that one must pass through to gain entry into the rest of the site. By enclosing the peremiter of the site, saftey of the graves, as well as those visting will be controlled and monitored.

This building will house full time cemetary administration. These people will be in charge of allocating plots of land and meet with families to discuss the burial options avaliable.

The sanctuary will take into considertion orientation on site to ensure its fit seemlessly into the context, however, it will be a self contained space, meaning the outside world will be ignored. Light will enter from above and views outward will not exist. This space is meant to aid as a gateway into the afterlife and provide tranquility and reflection. The Sanctuary may carve itself considerably into the landscape to avoid becoming too large and blocking views.



27.

At Ronchamp, by Le Corbusier, light filters in through a large concrete wall with carefully choreographed punctures in the concrete bearing wall. This sketch illustrates the quality of light that begins to take control of the feeling of the place within.

Understanding the Function of a Morgue

The word morgue comes from the name of a building, originally in Paris, where bodies where laid out for identification. The term was later adopted in the 1880s to describe the place where autopies were performed.

Mortuaries today are typically attached to a place where funerary commemoration takes place or in some cases attached to buildings where forensic investigation takes place.

In modern mortuaries, there are usually rooms that have stainless-steel tables to prepare bodies for embalming and refrigerators to preserve and store the bodies before funeary services are carried out.

'To embalm' means to impregnate with aromatic substances. In the past, substances such as honey, wax, alcohol, oils, herbs, and spices were used to preserve, disinfect and mask decompostion. Modern embalming involves the injection of chemicals directly into the body through blood vessels for the purpose of sanitation, preservation and presentation.

Embalming may only be carried out in a mortuary by a certified embalmer. Some cultures do not permit embalming.

Temporary or cosmetic embalming, which improves the deceased's appearance, is often carried out prior to a viewing. (http://australianmuseum.net.au/Morgues-and-mortuaries)

Typically, morgue buildings preserve bodies awaiting embalming and final funeary services in refrigeration units similar to the ones above.

Adjacent to these units should be a space large enough for two or four 'undertakers' or those who undertake to prepare a body for burial, to work on the preperation of a body.

The people who work here typically are also in charge of running the business aspect of their profession, therefore, providing them with office space would be designed for.

This administrative area would also have a reception area for families waiting to discuss arrangements can be, as well as restrooms and ample office storage to allow for fluid functionality.

The mortuary will be a seperate volume from the sanctuary also on site.

Site

SIte Identification

'The dead were the first to have a permanent dwelling...The Jews claimed as their patrimony the land where the graves of their forefathers were situated; and that well attested claim seems a primordial one... [Thus], the city of the dead is the forerunner, almost the core, of every living city.'

-Lewis Mumford from The City in History

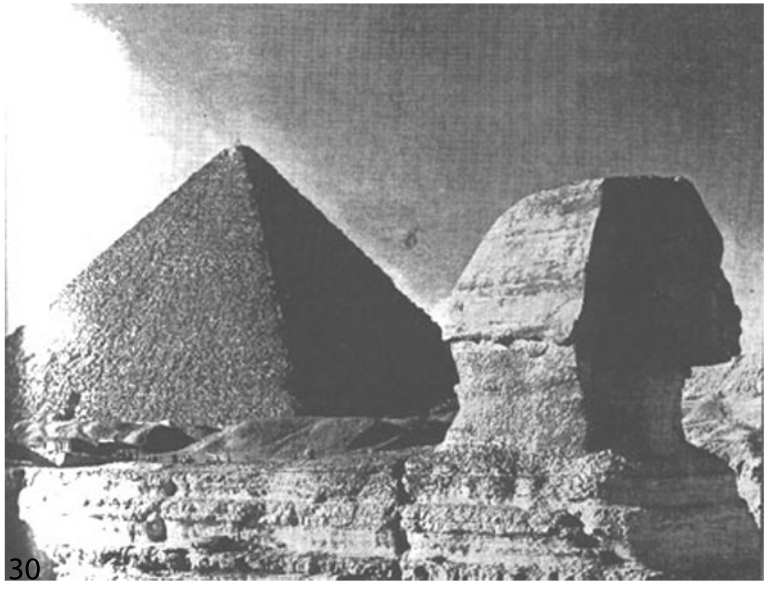
In Mumford's writtings, he refers to the city as a 'magnet', one that can atrract both people and ideas from outreaching places together. Cemeteries, with their potential to pull from the emotional core of human existence, have played an important role in the function of the magnet of the living city. "Cemeteries", he argued, "had extered a powerful influence of urban life."

Jersey City, New Jersey, like other modern cities has a handful of existing cemeteries located within its city boundaries, however, because modern ideology has shifted the relevance of the cemetery away from its core values, these few existing cemeteries have been i solated by modern infrastructural patterns and have lost the 'magnetic' core value critical for every 'living city' to behold.

Cemeteries have the ability to not only provide clues of cultural relevance to a given region, but can also provide rich environments for the living to find refuge from their busy lives by providing places for reflection and tranquility amongst the backdrop of life.

In the cities of New York, as well as Cairo, the dead are alloted plots of land with various references that commemorate their lives. Unfortunatly, these designated zones of offer little interaction with the people living in these cities, either because of the proximety of site, or lack of desirable recreational space they provide.

29.



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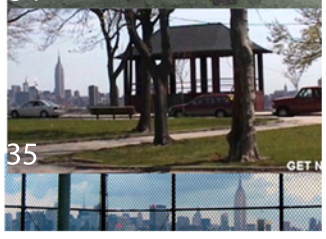

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Statistical Information:

- Blocks 768 and 769
- 5.53 Acres in Ward D of the 'Heights District'

Existing Conditions:

- Community Garden
- Children's Playground
- Basketball Court
- Picnic Areas
- Gazebo

The site is known as 'Riverview Park; on Ogeden Avenue

It is classified as a recreational zone, therefore it is criticle that the social landscape of the project provide enhanced walks, vistas, and experientail qualities.

The Master Plan of Jersey City is calling for 1.75 million dollors in renovations and repairs for this park alone, a clue to dismal state and condition existing.

Geographic Information

According to the United States Census Bureau, the city has a total area of 54.7 km2 (21.1 mi2).

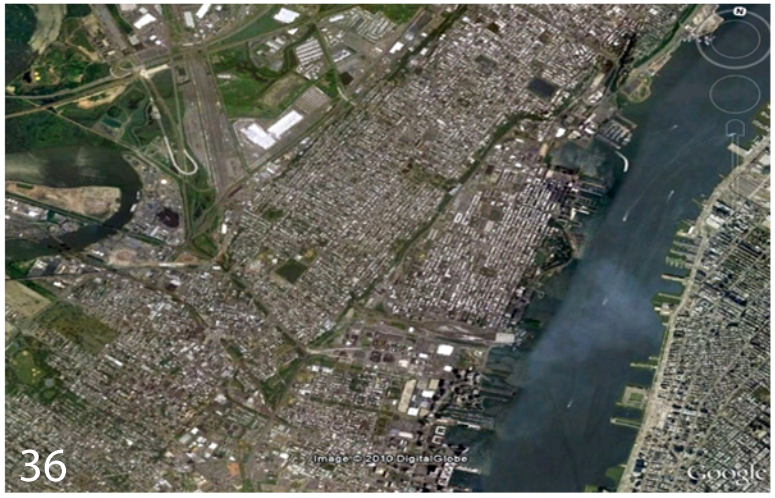
38.6 km2 (14.9 mi2) of it is land and 16.1 km2 (6.2 mi2) of it is water.

It has the smallest land area of the 100 largest cities in America. The total area is 29.37% water.

Jersey City is bordered to the east by the Hudson River, to the north by Secaucus, North Bergen, Union City and Hoboken, to the west by Kearny and Newark, and to the south by Bayonne.

Given its proximity to Manhattan, Jersey City and Hudson County are sometimes referred to as New York City's sixth borough.

Elevation: 20 ft (9 m)
Population as of 2009
- Total: 242,503 people
- Density : 16,271.6/sq mi (6,282.5/km2)



Demographics

As of the census of 2000, there were 240,055 people, 88,632 households, and 55,660 families residing in the city. The United States Census Bureau has estimated the 2004 population at 239,079. The population density was 6195.2/km2 (16,045.6/mi2). There were 93,648 housing units at an average density of 2,423.4/km2 (6,278.3/mi2).

The racial makeup of the city was 34.01% White, 28.32% African American, 0.45% Native American, 16.20% Asian, 0.08% Pacific Islander, 15.11% from other races, and 5.84% from two or more races. Hispanic or Latino of any race were 28.31% of he population. Largest ancestries include: Italian (6.6%),Irish (5.6%), Polish (3.0%), Arab (2.8%), and German (2.7%).Of all households, 31.1% have children under the age of 18 livingthere, 36.4% were married couples living together, 20.2% had a female householder with no husband present, and 37.2% were non-families. 29.2% of all households were made up of individuals and 8.2% had someone living alone who was 65 years of age or older.

The average household size was 2.67 and the average family size was 3.37.The age distribution is spread out with 24.7% under the age of 18, 10.7% from 18 to 24, 35.1% from 25 to 44, 19.7% from 45 to 64, and 9.8% who were 65 years of age or older. The median age was 32 years. For every 100 females there were 95.3 males.

The median income of its households is $37,862, and the medium an income of its families is $41,639.The per capita income for the city was $19,410. About 16.4% of families and 18.6% of the population were below the poverty line, including 27.0% of those under age 18 and 17.5% of those age 65 or over.

Note: All data directly from the Jersey City website

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Diagrammatic representation of existing and historical residential boundaires.

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The Heights neighborhood is primarily defined by its topographical position and can be divided into three general areas:

-East slope that encompasses the area overlooking Hoboken and the New York City skyline (which is where Riverview Park exists.
-Western slope that includes the housing west of JFK Boulevard
-Central Area that is relatively flat

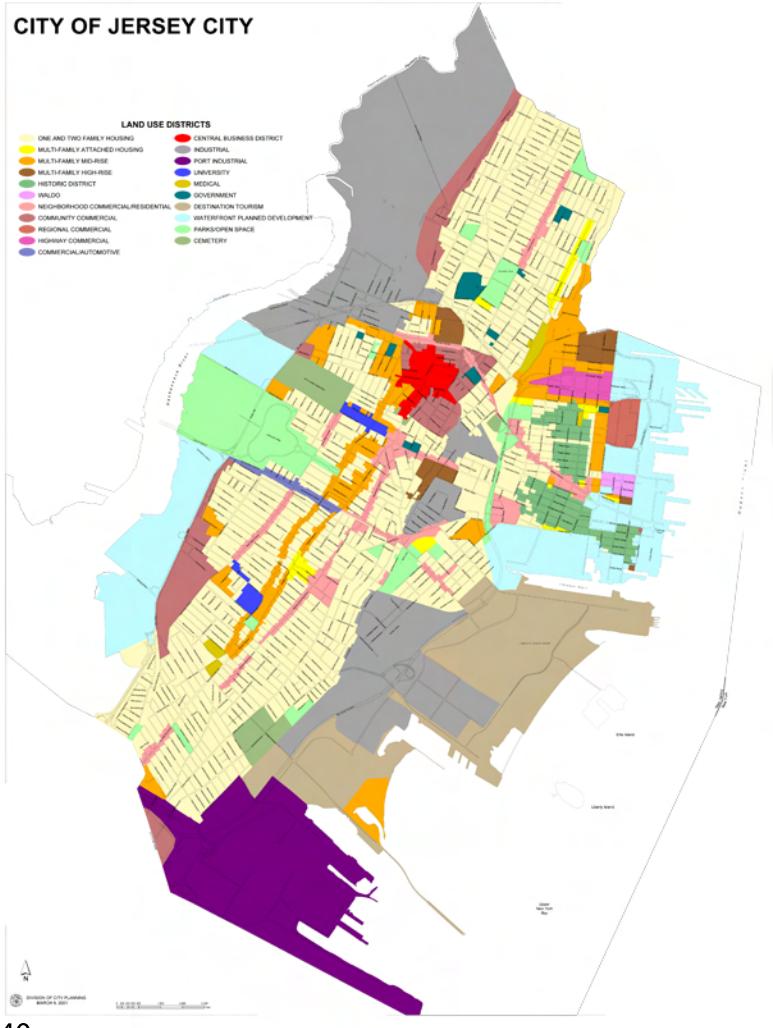
Central Aveue, the neighborhood's main commercial corridor, is the center of the Heights and one of the City's most viable commercial areas. Between these commercial uses and the amount/quality of its parks, the Heights is an extremely well served portion of the city in terms of its support services.

The architecture is typically two and three story, one and two family detached houses although conversions of some houses into multi-family units are evident. The major north-south streets- JFK Boulevard, Bergan Avenue, and Central Avenue exhibitdifferent development patterns in the form of attached structures.

Parking has traditionally been handled on street, however, new developments have followed the zoning ordinance and provided off-street parking in the form of lower level garages accessed from the street.

Urban Design Issues:
-New infill units do not reflect the character of neighborhood
-Residential and commerical parking is in demand throughout the Heights
-The Heights, and particulary Central Avenue, is poorly connected to other areas of the city

Contextual Diagrams



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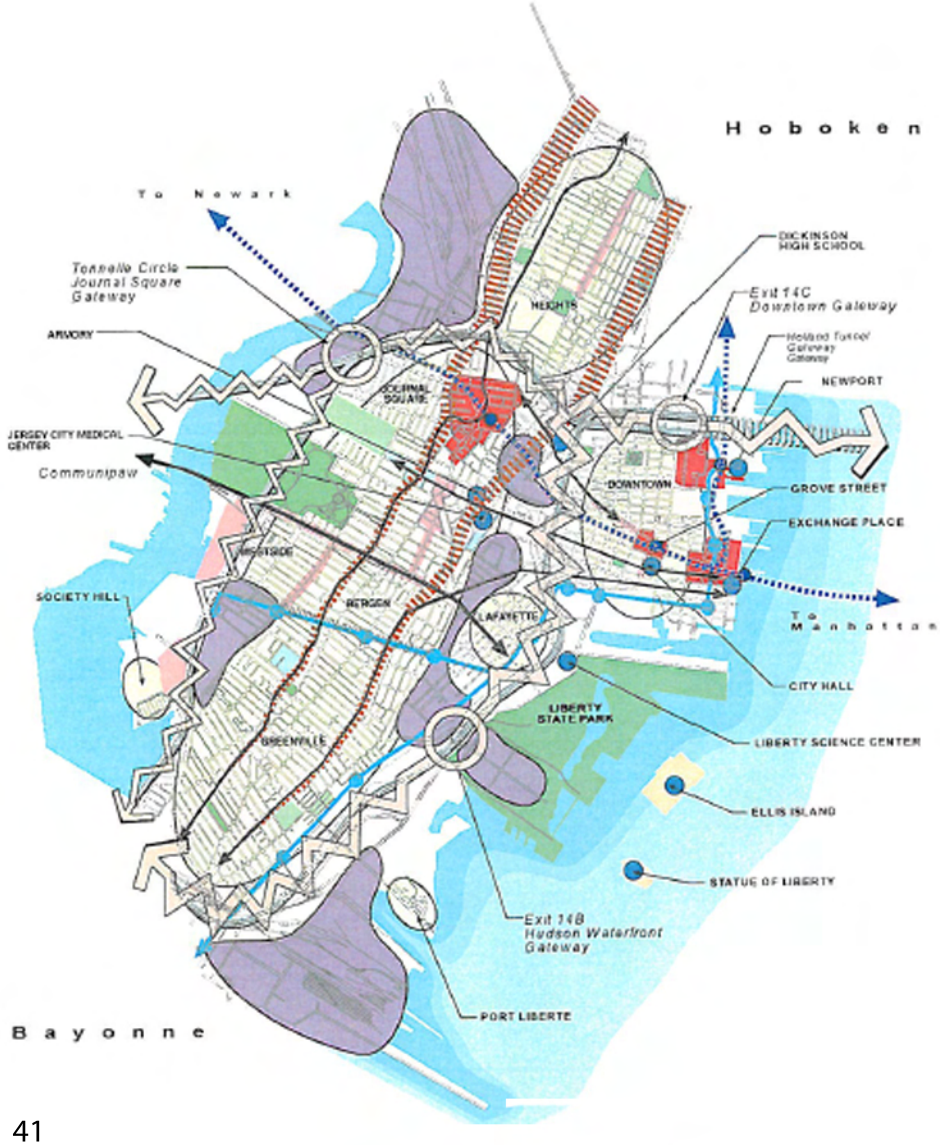
Master Plan Land Use Map



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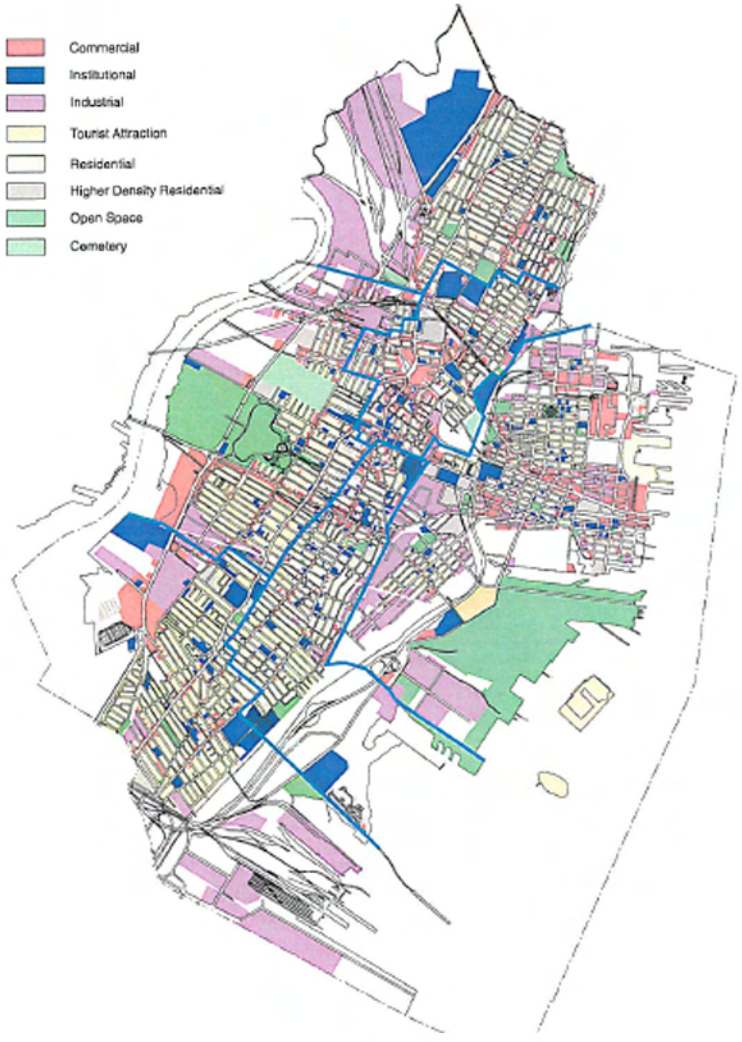
Physical Characteristics Diagram



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Existing Land Use Diagram

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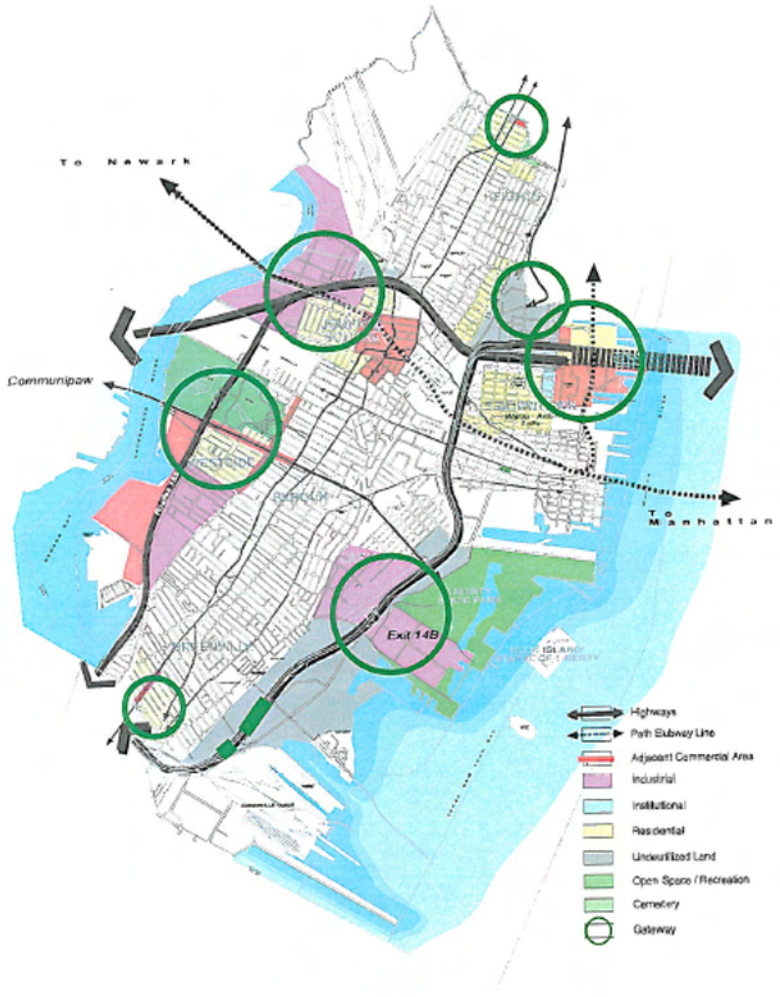
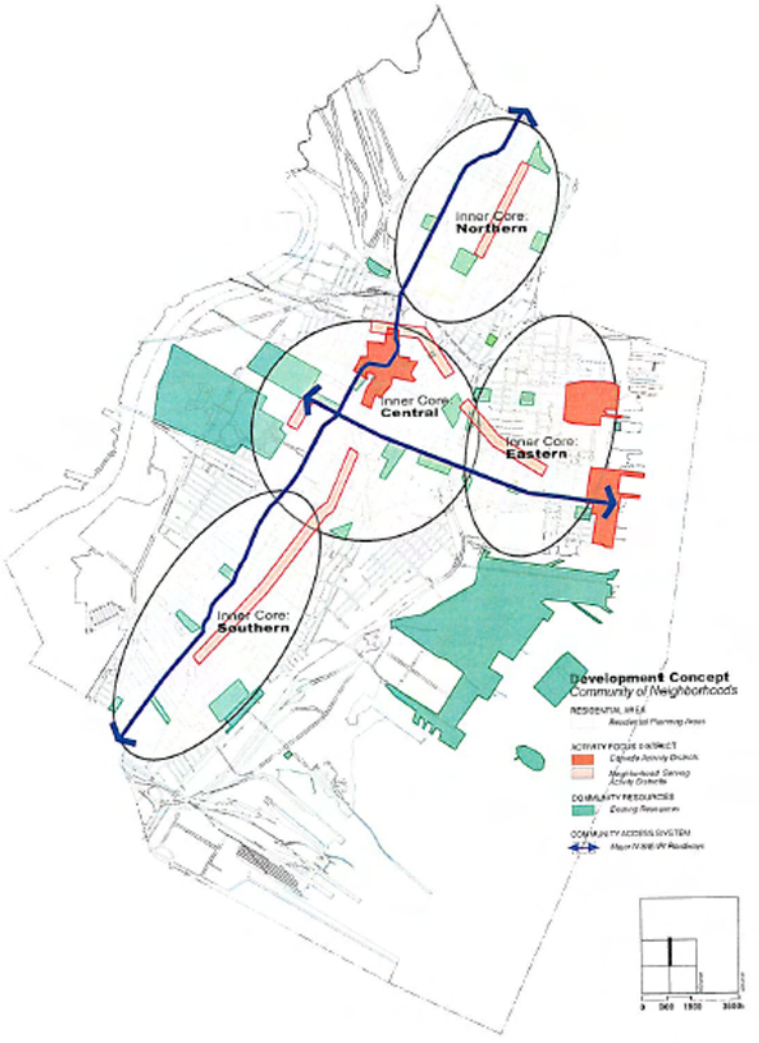
Exisiting Commercial Activity Area

Contextual Diagrams



44.
Exit and Entry of Existing Traffic Conditions

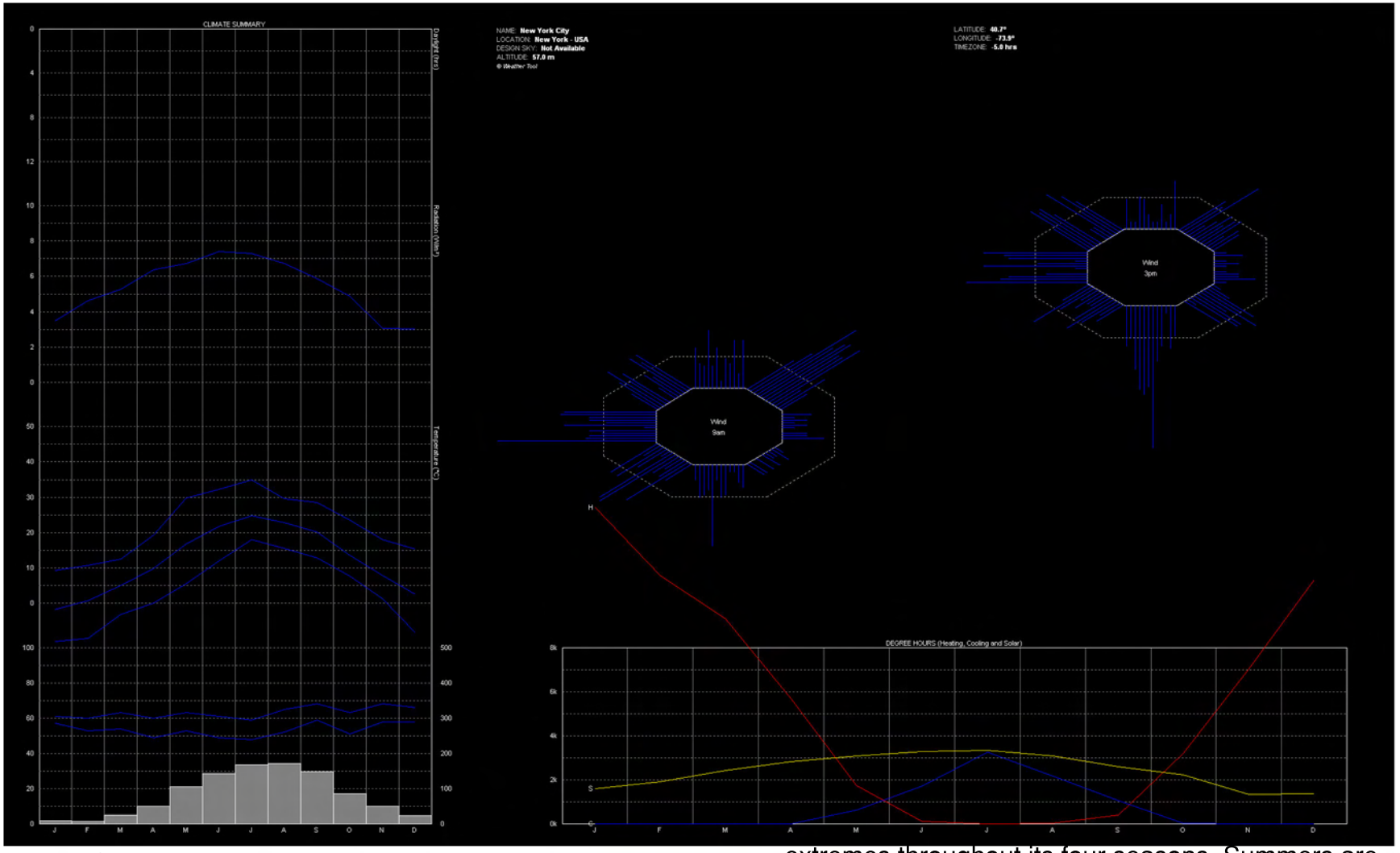
45.
Existing Community Access Network



46.
Development Concept: Community of Neighborhoods

47.
Proposed Community Planning Area Concept

Climatic Data



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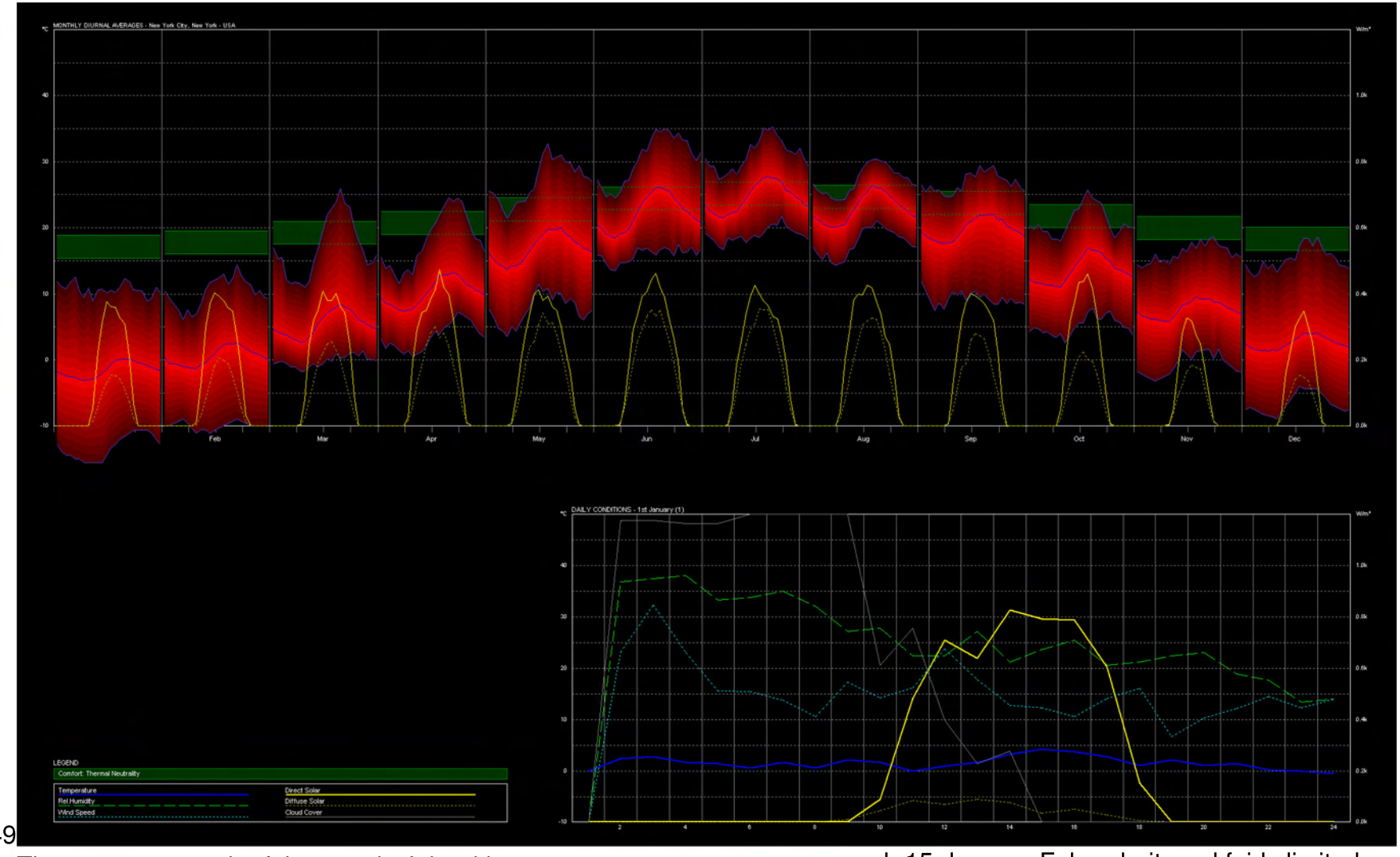
Jersey City lies on a peninsula between the Hudson and Hackensack rivers in northeastern New Jersey. Seven miles to the west is Newark, and across the Hudson River to the east is New York City's lower Manhattan skyline. The terrain ranges from low-lying flood plains to gently rolling hills. While Jersey City's climate tends to be continental, influenced by winds from the west, it does experience temperature extremes throughout its four seasons. Summers are hot and humid and winters are moderately snowy.

Area:	14.9 square miles
Elevation:	20' above sea level
Average Annual Temp:	52.6° F
Average Annual Precipitation:	47.4 inches of rain
	27.8 inches of snow

http://www.city-data.com/us-cities/The-Northeast/Jersey-City-Geography-and-Climate.html



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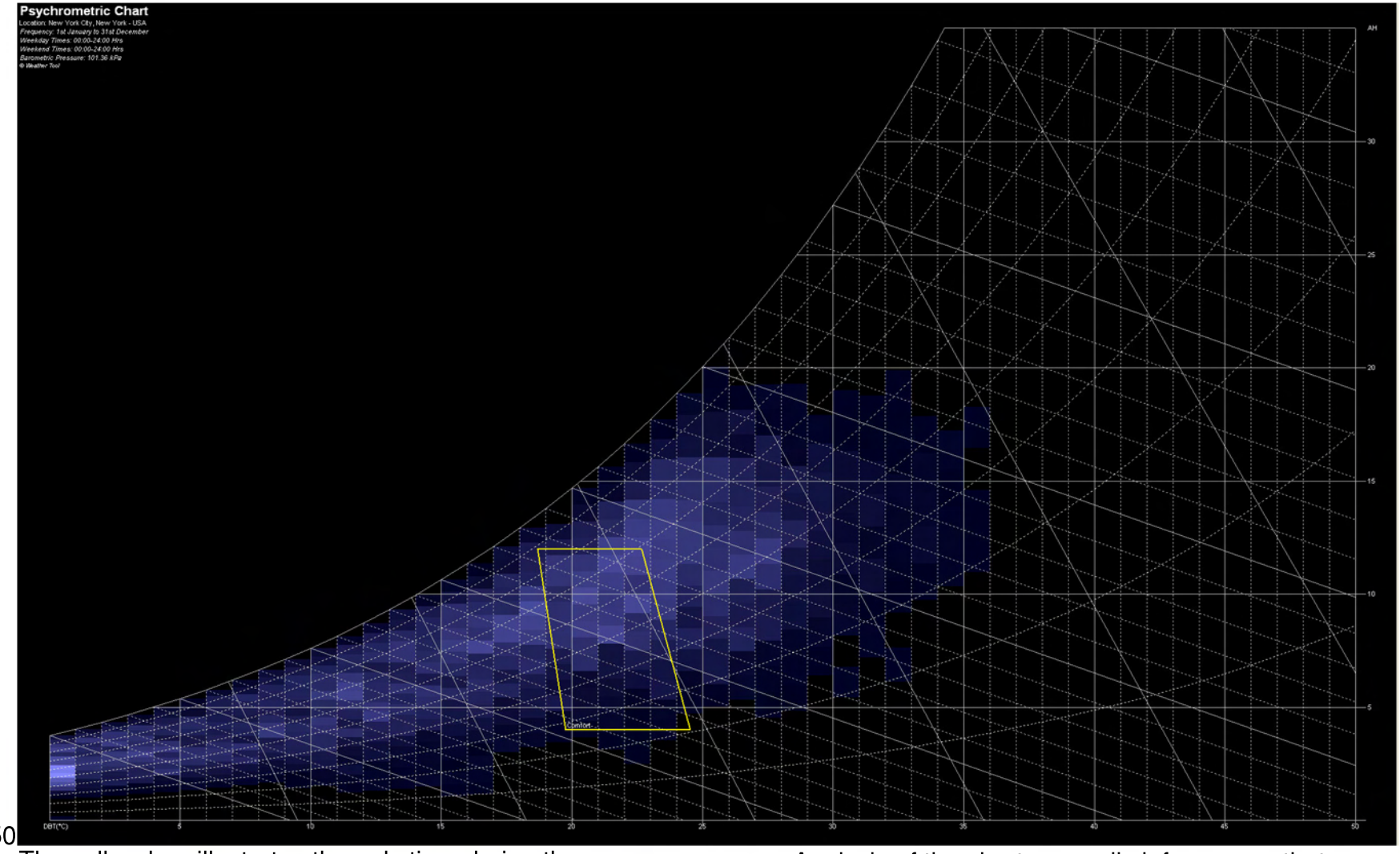
The warmest month of the year is July with an average maximum temperature of 82.50 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 22.70 degrees Fahrenheit.

Temperature variations between night and day tend to be fairly limited during summer with a difference that can reach 15 degrees Fahrenheit, and fairly limited during winter with an average difference of 15 degrees Fahrenheit.

The annual average variations between night and day tend to be limited during summer with a difference that can reach 15 degrees. Rainfall in is fairly evenly distributed throughout the year.

http://www.idcide.com/weather/nj/jersey-city.htm

Climate Data



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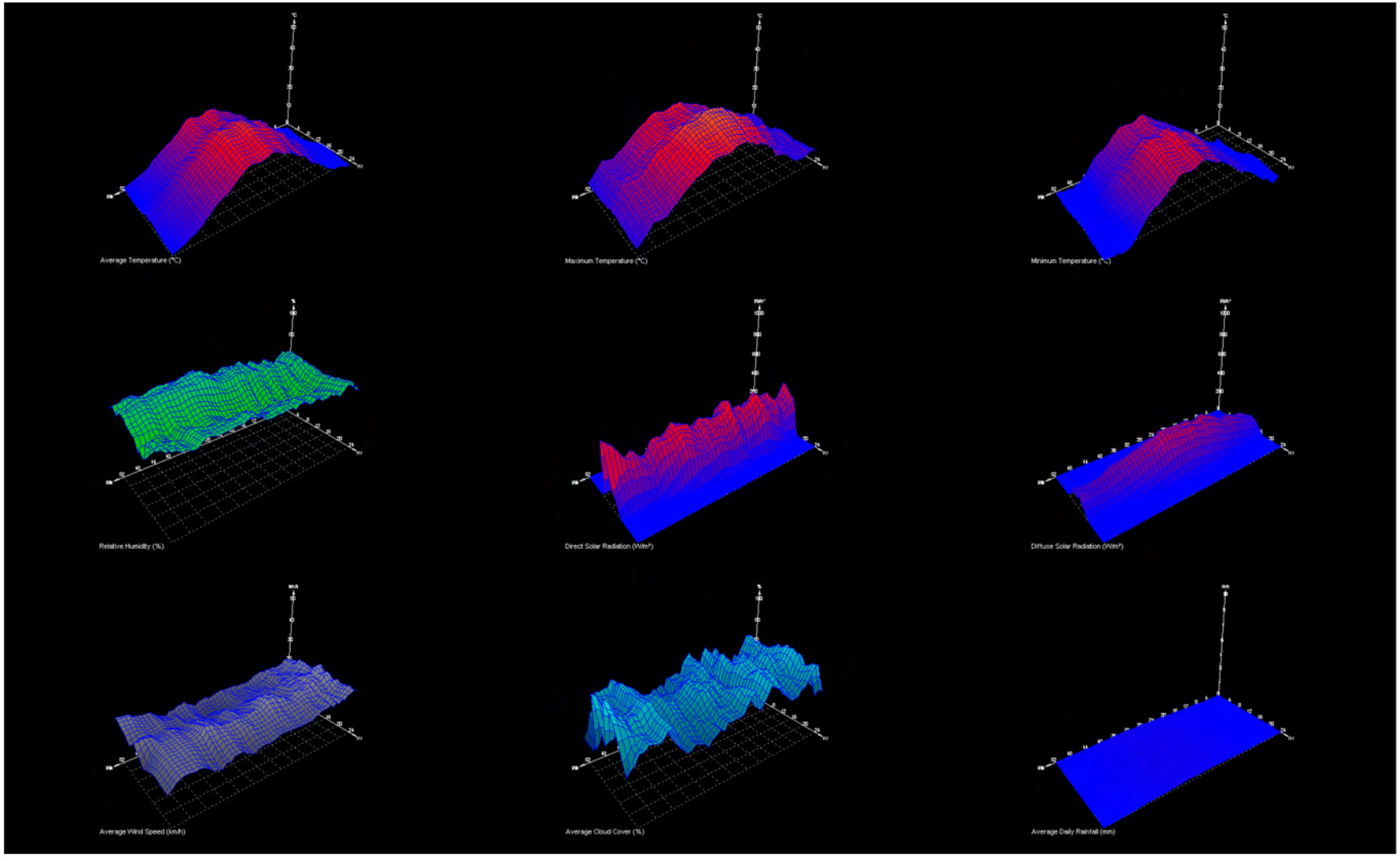
The yellow box illustrates the only time during the course of the year that thermal comfort levels within a given space in Jersey City are satisfactory, meaning they are not needed to be heated or cooled by artificial systems.

The darker the box, the more fequently during the year those levels of temperature are met naturally.

Analysis of the chart generally informs one that more often than not, thermal comfort levels within spaces need to be raised by artificial heating systems in order to make the space comfortable.



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The three dimensional diagrams above are graphic representation of the nine most important climatic components in Jeresey City. Since the diagrams move in in both the x-axis and the y-axis, one can see the changes on a monthly basis. The z-axis allow you to realize the changes on a yearly basis. The diagrams are keyed as follows:

Avg. Temp.	Max Temp	Min. Temp
Relative Humidity	Direct Solar Radiation	Diffused Solar Radiation
Avg. Wind Speed	Avg. Cloud Cover	Avg. Daily Rainfall

Soil Conditions

Downer is the New Jersey state soil. The Downer has four soil horizons:

Surface Layer:	dark grayish brown loamy sand
Subsurface layer:	grayish brown sandy loam
Subsoil - upper:	yellowish brown gravelly sandy loam
Subsoil - lower:	yellowish brown sand and coarse sand

Downer Soils

"Downer soils are used mostly as woodland. The natural vegetation consists of mixed oaks, hickory, and scattered pines. Some areas are cultivated for high-value vegetable and fruit crops that are usually irrigated. Downer soils occur on 291,319 acres in New Jersey." http://www.nj.nrcs.usda.gov/technical/soils/downer.html

Soil is the unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

-Resource Conservation Glossary, Third Edition, 1982

"Downer soils are on uplands and formed in sandy, highly quartzose Northern Atlantic Coastal Plain deposits. They have medium natural fertility and require fertilization for maximum crop production. The Downer series was established in Gloucester County, New Jersey, in 1960."
ftp://ftp-fc.sc.egov.usda.gov/NSSC/StateSoil_Profiles/nj_soil.pdf

This axonometric image, generated from Google Earth, shows the large contexual information surounding the existing site at Riverview Park. It is clear that the glacieral ridge the site is adjacent to, along with the Hudson River, are the major geographic features that defined the urban development patterns that have taken place in the New York City Metro Area. This image also gives a broad scope of the density located in each neighborhood.

A convention plan view further illustrates the power of geographical constraints on urban development. The glacieral ridge separates the cities of Jersey City and Hoboken straight down the center. Because of the severity of the slope, there are very few passages for pedestrians or vehicles to go down, which limits the lateral circulation.

To the East, resides the Hudson River and NYC. To the West, major North-South American infrastructure resides. Since space is so limited , it places a great importance on all the development that occurs.

Immediate Context

Reference Images

Figure 1	pg 42
Figure 2	pg 42
Figure 3	pg 42
Figure 4	pg 42
Figure 5	pg 43
Figure 6	pg 43
Figure 7	pg 43
Figure 8	pg 43
Figure 9	pg 44
Figure 10	pg 45
Figure 11	pg 45
Figure 12	pg 45
Figure 13	pg 45

Note: Images above are accompanied by descriptions on pages assigned.

All the vehicular routes adjacent to the site are designated for two way traffic, including the road that runs through the middle.

The largest arrow represents routes most traveled and the hierarchy of arrows illustrates street importance.

The grey box represents the perimeter of the site desired to be developed. All existing recreational activities (paths, basketball courts, gazebo, playground) will be removed.

Scale: 1"= 128'

1. Illistrates the existing circulation path of the park, as well as eludes to the slope of the landscape.

2. Taken from an East to West vanishing point, looking towards the main boulevard towards the community.

3. Looking north towards the main street. Notice the character of the surrounding neighborhood.

4. Another image focused on establishing the connection between site and the surrounding community

Site VIsit

5. Notice the width of the street in the foreground, as well as the width of the sidewalk adjacent.

6. The baskeball courts on site have poor light and in a state of disrepair. They would need replacement to function once again.

7. A view looking Southeast towards the buildings located immediately adjacent to the site.

8. The site slopes drastically as it approaches its Eastmost boundary.

9. The central view looking Eastward towards Hoboken, the Hudson River and the Manhattan skyline.

10. Looking Northeast towards Manhattan.

11. Continuation of the skyline.

12. The buildings in Hoboken are actually taller than those of Jersey City, however the grade change allows visitors a roof top view.

13. The West Side of Manhattan, and Brooklyn in the distance.

Regulatory Environment & Technical Report

BUILDING CODE COMPLIANCE

BUILDING CODES:
NEW JERSEY STATE BUILDING CODE
NEW JERSEY STATE PLUMBING CODE
NEW JERSEY STATE MECHANICAL CODE
NEW JERSEYSTATE ELECTRICAL CODE

FIRE CODES:
NEW JERSEY STATE FIRE SAFETY CODE

A-ASSEMBLY A-3 (ASSEMBLY SBC-1 SECTION 303)

A-3- ASSEMBLY USED INTENTED FOR WORSHIP,
RECREATION, OR AMUSEMENT AND ANY OTHER
ASSEMBLY USED NOT CLASSIFIED ELSEWHERE.

CONSTRUCTION TYPE:
(IBC 2009, SECTION 602)

TYPE 1A, NON-COMBUSTIBLE.

FIRE RESISTANCE RATING OF STRUCTURE ELEMENTS:
(IBC 2009, TABLE 601)

TYPE 1A, NON-COMBUSTIBLE.

STRUCTURAL FRAME	3-HOUR FIRE RESISTANCE RATED
BEARING WALLS	3-HOUR FIRE RESISTANCE RATED
EXTERIOR	
INTERIOR	
NONBEARING WALLS AND PARTITIONS	0-HOUR FIRE RESISTANCE RATED
EXTERIOR	0-HOUR FIRE RESISTANCE RATED
NONBEARING WALLS AND PARTITIONS	
INTERIOR	
FLOOR CONSTRUCTION	2-HOUR FIRE RESISTANCE RATED
INCLUDING SUPPORTING BEAMS AND JOISTS	
ROOF CONSTRUCTION	1.5-HOUR FIRE RESISTANCE RATED
INCLUDING SUPPORTING BEAMS AND JOISTS	

OCCUPANT LOAD:
(IBC 2009, TABLE 1004.1.1) SUBLEVEL(12,600 SF/30 SF GROSS PER PERSON = 415)
420 PERSONS
GROUND LEVEL (4200/30SF GROSS PER PERSON
140 PERSONS
SECOND LEVEL (4200/30SF GROSS PER PERSON)
140 PERSONS
TOTAL BUILDING OCCUPANCY: 700 PERSONS

EGRESS WIDTH:
(IBC 2009, SECTION 1005.1 140 OCCUPANTS X .2 (MULTIPLICATION FACTOR) = 28 IN. EGRESS DOOR
140 OCCUPANTS X .2 (MULTIPLICATION FACTOR) = 28 IN. EGRESS DOOR WIDTH
700 OCCUPANTS X .2(MULTIPLICATION FACTOR) = 84 IN. EGRESS DOOR WIDTH

EXIT ACCESS TRAVEL DISTANCE: 250-FEET (SPRINKLERED) USE GROUP M
(IBC 2009, TABLE 1016.1)

NUMBER OF EXITS: 3 PER STORY, 501-1000 OCCUPANTS
(IBC 2009, TABLE 1019.1)

PLUMBING FIXTURES:
(IBC 2009, TABLE 2902.1)

M-MERCANTILE (MALE/FEMALE WATER CLOSETS 1 PER 500) (MALE/FEMALE LAVATORIES1 PER 750)
1 PER 1,000 1 SERVICE SINK (PER FLOOR)

Component	2006 IRC	IRC Section	2006 IBC	IBC Section
Maximum rise (straight stairs)	7.75"	R311.5.3.1	7"	1009.3
Minimum rise (straight stairs)	no minimum	n/a	4"	1009.3
Minimum run (straight stairs)	10" w/nosing, 11" w/o	R311.5.3.2	11"	1009.3
Solid riser	not required	R311.5.3.3	depends on use	1009.3.3
Minimum stair width	36"	R311.5.1	depends on occupancy	1009.1
Landing depth (direction of travel)	36"	R311.5.4	width of stairs, max 48"	1009.4
Landing width	width of stairs served	R311.5.4	at least stair width	1009.4
Minimum guard height	36"	R312.1	42"	1013.2
Guard opening limitations	0" to 36", 4" sphere	R312.2	0" to 34", 4" sphere 34" to 42", 8" sphere	1013.3
Handrail adjacent abrasive elements	permitted	n/a	not permitted	1012.6
Handrail extensions	not required	n/a	required	1012.5
Handrail interruptions at newel posts	interruption permitted	R311.5.6.2	interruption not permitted	1012.4
Stair handrail, when required	four or more riser stairs	R311.5.6	all stairs	1009.10
Stair handrail location	one side	R311.5.6	both sides, intermediate	1009.10
Step at doors	permitted	R311.4.3	depends on occupancy	1008.1.4
Live load on deck	40 psf	Table R301.5	depends of occupancy	Table 1607.1
Live load on stairway	40 psf	Table R301.5	100 psf	Table 1607.1
Exception to foundation frost depth	when self-supported	R403.1.4.1	no exception	1805.2.1
Elevation changes in walking surface	not regulated	n/a	regulated	1003.5

All components comply to 2006 IBC Code as per City Requirements (http://www.deckmagazine.com/article/79.html)

Mount Auburn Cemetery

Mount Auburn Cemetery

Location: Cambridge, Massachusetts

Built: 1831

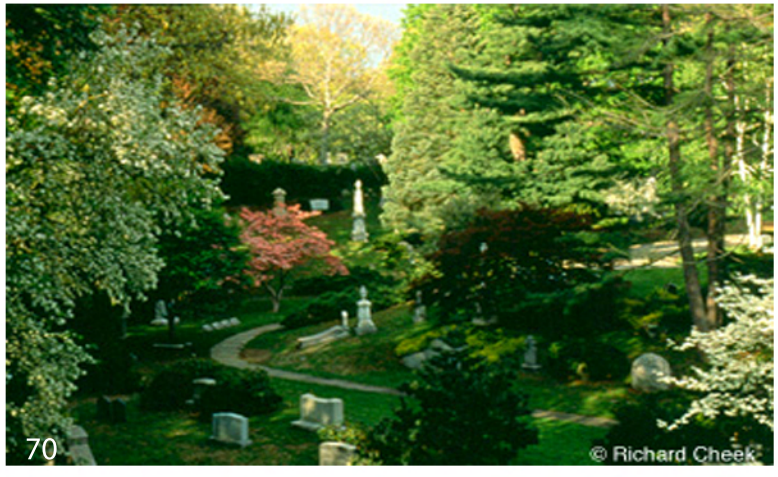
Architect: Alexander Wadsworth
Dr. Jacob Bigelow

Architectural styles: Exotic Revival & Gothic Revival

Governing body: Private

Mount Auburn Cemetery is know to be "America's first garden cemetery", or the first "rural cemetery", with classical monuments set in a rolling landscaped terrain. (Bunting, p 69)

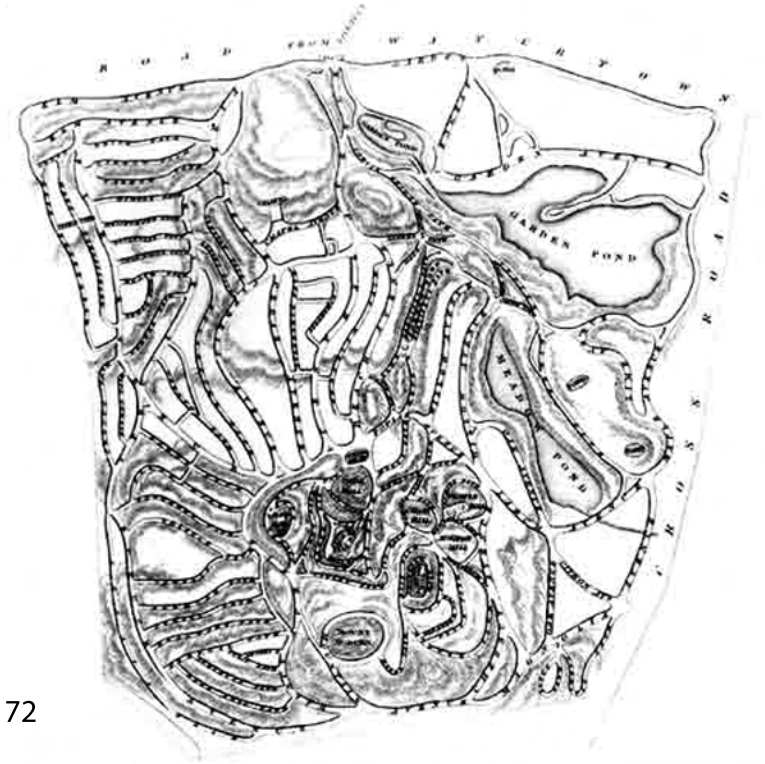
The appearance of this type of landscape coincides with the rising popularity of the term "cemetery," which etymologically traces its roots back to the Greek for "a sleeping place." This language and outlook eclipsed the previous harsh view of death and the afterlife, pictorialized in old graveyards and church burial plots. (Lang, McDaniel, 'Heaven: A History')



It was Bigelow who concieved the idea for Mount Auburn though a site was not acquired until five years after the intial conception. (Reps, p 326) Bigelow's purpose for the cemetery was twofold, As medical doctor, his primary concern was with the unhealthiness of burials under churches. Also, as Boston continued to grow expodentially during the late 1800s, there simply was not enough space alloted for proper burial. (Carrott, p 86)

With help from the Massachusetts Horticultural Society, Mount Auburn Cemetery was founded on 70 acres.

The cemetery was established at a time when Americans had a sentimental interest in rural cemeteries. By creating a picturesque “rural” cemetery within easy distance from the city center, Mount Auburn’s founders solved an urban land use problem while establishing a multifunctional cultural institution where they could attempt to improve experimental horticulture, cultivate taste for fine art and architecture, and most importantly, shape a usable past in the aesthetic term then in international vogue. (Linden-Ward)



72

Hitorical Plan of Mount Auburn Cemetery (James Smillie, 1847)

"Bigelow's proposed cemetery would not be purely functional, or to be put rahter crudely, a disposal of the city's dead. Mount Auburn was to filll many other cultural needs- honoring the deceased, cultivating the civilizing emotion of melancholy, taching moralistic lessons, and fostering a sense of the past as pertinent to the present future. The cemetery would permit a sort of commemorative impossible in existing grave-yards." (Linden-Ward, 172)

The founders equally valued nature's power to soothe grief. Nature dominated the spirt of place through the first decades of Mount Auburn's existence. The cemetery provided the sort ofsite that romantic writters fantasized about in their literature.

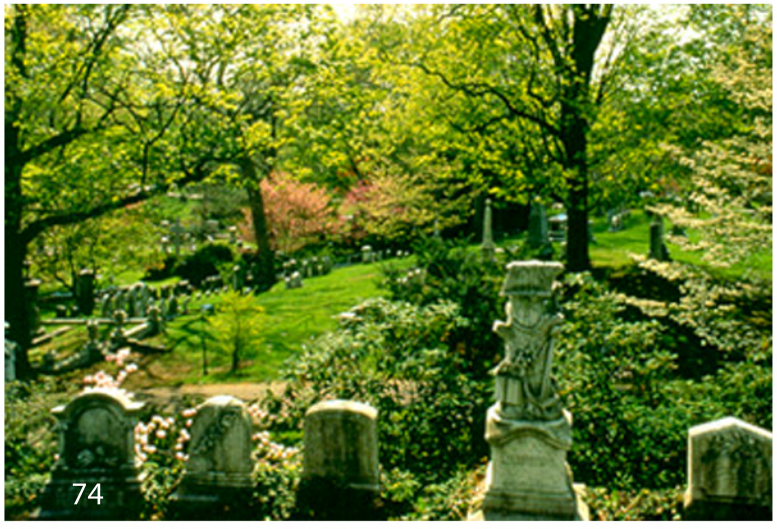
Material manifestiations of a symbolic consciousness appeared thoughout Mount Auburn's landscape and early structures. Many Bostonians reacted against forms inherited from their Purian and colonial past just as surely as the Puritans had rejected earlier forms associated with papism. Although there would be none of the grim, medieval symbolism of death's-heads or skeletons. there were certainaly few marks of traditional Christianiatny persent in the first monuments of the cemtery, deliberately declared nondenominational. (Linden-Ward, 333)

73

Many of Mount Auburn's first proprietors were Unitarians, who continued to reject traditional Christian symbolism, even the simple cross.

Art and Nature Balanced

Whereas Mount Auburn's founders encouraged the building of lot enclosures and monuments, they actively discouraged construction of crypts, tombs, and mausoleums. Bigelow was particularly vocal in urging the resolution 'that the resources of art shall not be wasted in vain efforts to delay or modify the inevitable course of nature,' that is the decay of the corpse that could be hastened by earthen burial.
(Linden-Ward, p 244)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He reasoned with Bostonians that 'the common grave affords the most simple, natural, and secure method by which the body may return to the bosom of the earth, to be peacefully blended with its original dust.' He recommended expenditures for improvements only 'above the surface of the earth, not under it because a beautiful monument is interesting to everyone…a far more soothing object than the most costly charnel house.' (Linden-Ward, p 244)

Unlike Boston's old graveyards, Mount Auburn provided plenty of space for the construction of tombs large enough to hold several generations of a family. Its topography permitted a wide variety of site choices that may or may not have had deeper meaning.
(Linden-Ward, p 249)

'What a change has a period of seven years produced The native wildness of the place is softened and subdued, but not destroyed, by the hand of labor and art. The visitors now sees in all directions the marble urn, the sarcophagus, and the granite obelisk. Seven years ago, Mount Auburn was the habitation only of the field-mouse and the squirrel, or of wild animals and reptiles more unfit for the companionship of man; it is now a City of the Dead, populous with all degrees and qualities of our race, rich with the treasures of memory, of love, or friend ship and affection.'

-Joseph T. Buckingham, 1838

Bigelow took great personal pride in the cemetery, to which he devoted increasing amounts of time and effort after the separation of the institution from the Mass Horticultural Society. Through the 1830s and 1840s, Bigelow retained his taste for the picturesque, enjoying Mount Auburn's rough, naturalistic landscape.

75

Mount Auburn's founders realized that the creation of a picturesque funerary landscape would entail more than simply choosing an appropriately varied terrain with rambling, reflective ponds, laying out gracefully curving drives and paths, and planting ornamental trees and shrubs among the natural forest growth. They planned from the start to 'embellish' the grounds with 'public' structures that would be both functional and ornamental. Art would 'improve' upon Nature. (Linden-Ward, p 257)

Architecture

The earliest structure, the Egyptian Revial Gateway was designed by Dr. Jacob Bigelow, and stands as the ceremonial entrance to Mount Aurburn. It was rebuilt in 1842 out of Quincy granite, since the original was constructed of wood dusted with sand.

The Egyptian Revival Gateway Entrance by Jacob Bigelow

Bigelow Chapel was designed in the Gothic Revival style by Bigelow as well. The Chapel reflects authentic architectural and siting ideals stemming from original Gothic structures during the picturesque movement.

Bigelow Chapel

Washington Tower, honoring the nation's first president, was also designed by Dr. Bigelow. The Tower provides panoramic views of the Boston skyline and serves as teh focal point within the cemetery. (http://www.mountauburn.org/national_landmark/architecture.cfm)

Story Chapel and the adjoining Administration Building (1896-98) were designed by the architect Willard Sears in the "English Perpendicular Style." Balanced by the natural surroundings and horticultural landscaping, the architecture of Mount Auburn serves as an important landmarks within the Cemetery.

Sculpture

The Cemetery contains an exceptional and diverse collection of 19th, 20th and 21st-century monuments. Over 30,000 monuments and associated structures provide a unique overlay to the Cemetery's horticultural landscape. The Cemetery includes important examples of works by the first generation of American sculptors. Before public art museums, visitors came to the Mount Auburn to view the art of the sculptor and monument carver. Popular monument styles include Neoclassical, Gothic and Egyptian forms and motifs. Marble, granite and brownstone monuments and gravestones are balanced by their natural settings and contribute to the site as a whole, establishing its historical significance. The cultural landscape also contains a rich variety of vernacular memorial art, including iron fences, granite curbing and mausolea of a wide range of styles, with particular strength in the mid-19th century.

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Landscape Design

82

Mount Auburn has been recognized as one of the most significant designed landscapes in the United States. The original landscape was a beautiful mature woodland. General Henry A. S. Dearborn, President of the Massachusetts Horticultural Society, took primary responsibility for laying out the new cemetery in 1831 and 1832.
With the assistance of a young civil engineer and surveyor, Alexander Wadsworth, and a committee of well-educated Bostonians, Dearborn laid out Mount Auburn's grounds following the natural features of the land.

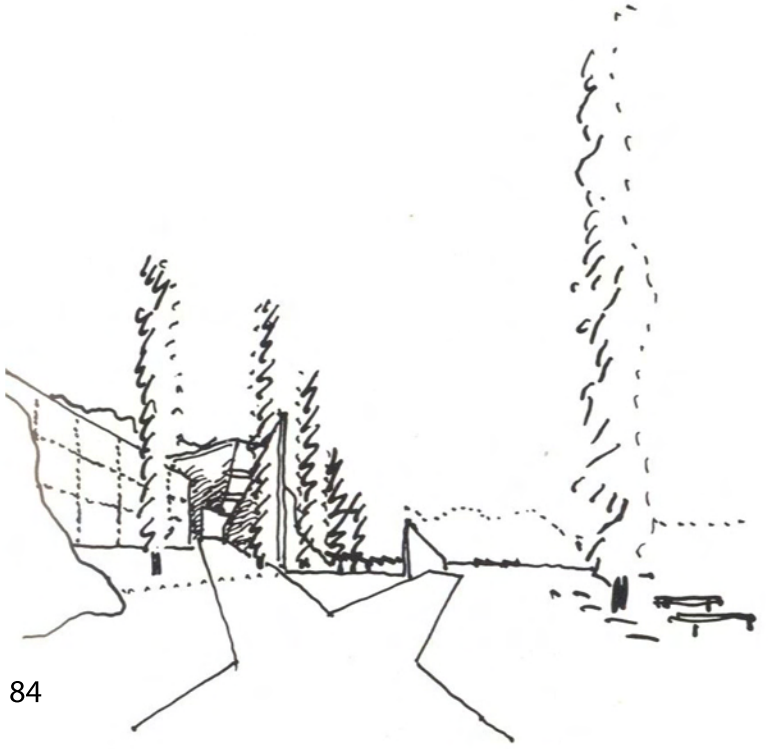
Inspired by Pere LaChaise Cemetery, founded in 1804 outside Paris, and design ideas from English picturesque gardens, this group of knowledgeable and gifted amateurs (working 25 years before the famous Frederick Law Olmsted began his landscape design career) created a new American landscape, the "rural cemetery."

(http://www.mountauburn.org/national_landmark/architecture.cfm)

Igualada Cemetery

Igulada Cemetery by Enric Miralles

Location:	Igualada, Barcelona (industrial zone site)
Client:	Building Department of the Town of Igualada
Cost:	180 Million pesetas Currency of Spain from 1869-2002 70 Peseta=1 Dollar
Architect:	Enric Miralles with Carme pinos
Competition:	1985
Planning:	1985-1988
Overall Construction:	1988-90



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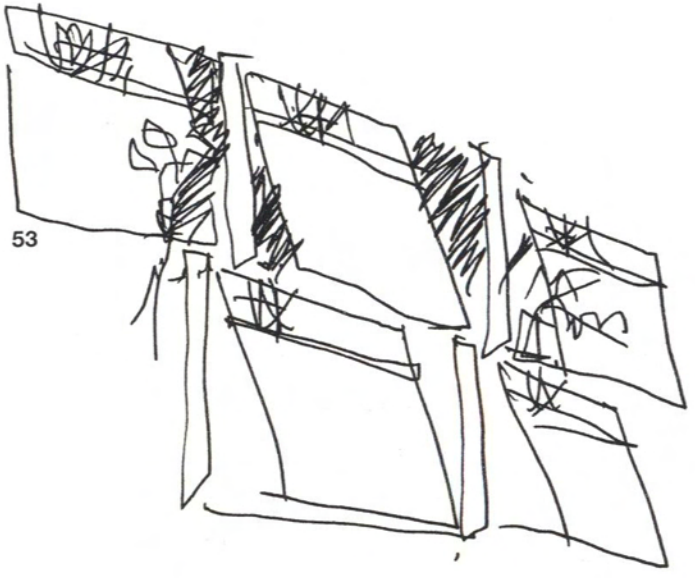

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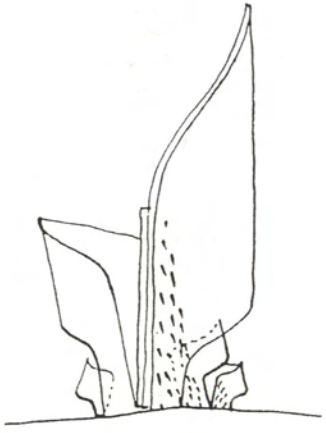


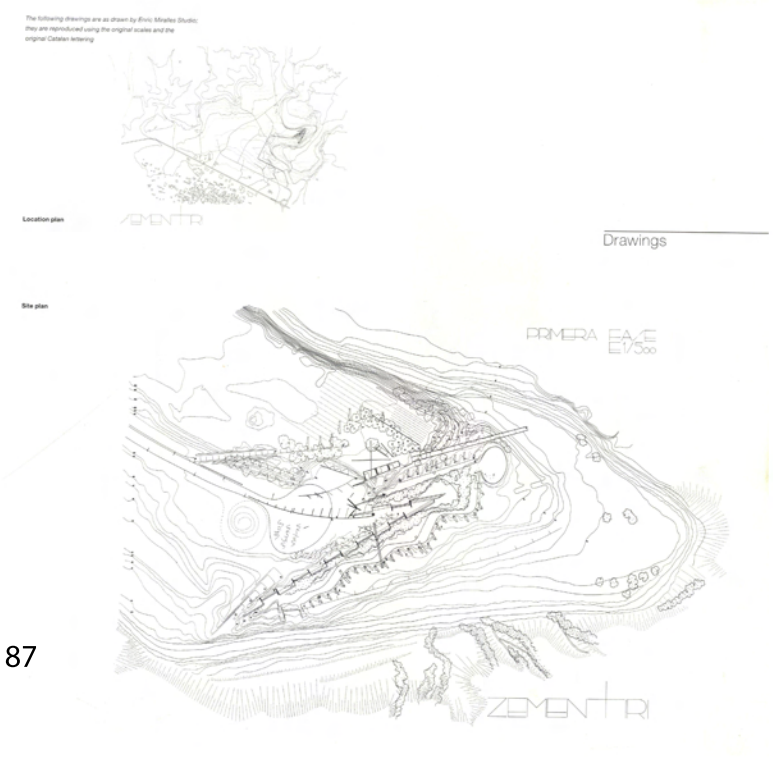
83

Competition sketch illustrating the curving roofs of the burial niches

'Burial' of the Cemetery

The concept involves passing of time, addressing the question of how the project would work in the years to come. Trees and other plantings grow and in time to cover the cemetery, effectively burying it.He challenges the notion of death as the end and allowing life to interact. Although created for the dead, the Igualada Cemetery was not to be a 'dead' site.

The cemetery is located on the outskirts of Barcelona. sunk into the ground, allowing the land on which the cemetery is situated to be seemingly untouched.
The architecture merges with the site to a point where it almost is the site. Creating tensions and visual forces of energy between site and construction. The site becomes a place of interaction-architecture as a living art to which the user can personally and physically relate.



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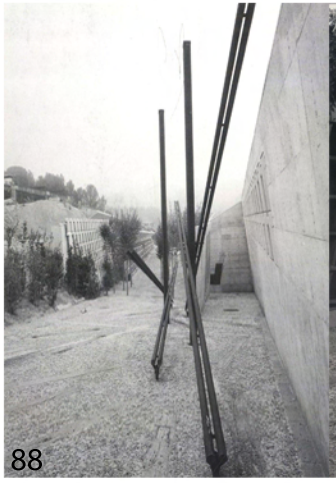
Attempts to engage with the pre-existing history of the site using elements of landscape design, architecture, urban design, sculpture and land art.



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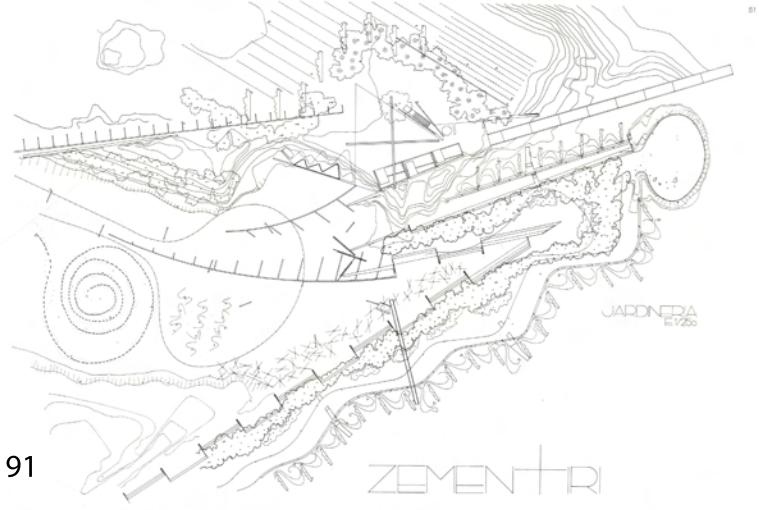
The cemetery was to be designed in the form of a path, a route which people could follow and which would itself be exposed to the elements. The dead buried here are neither neglected nor monumentalized. They simply occupy their place in the landscape, side by side along the path, allowing for others continually to enter the place.

The architecture formally consists of suspended fragments, tilting planes,interpenetrating volumes, sloping walls and layered sections. These qualities provide the proof that his work has to be very much about processes of construction.

The linking of program with a sense of place, time and presence, is mythically employed throughout, always with the help of intuition as a guide.



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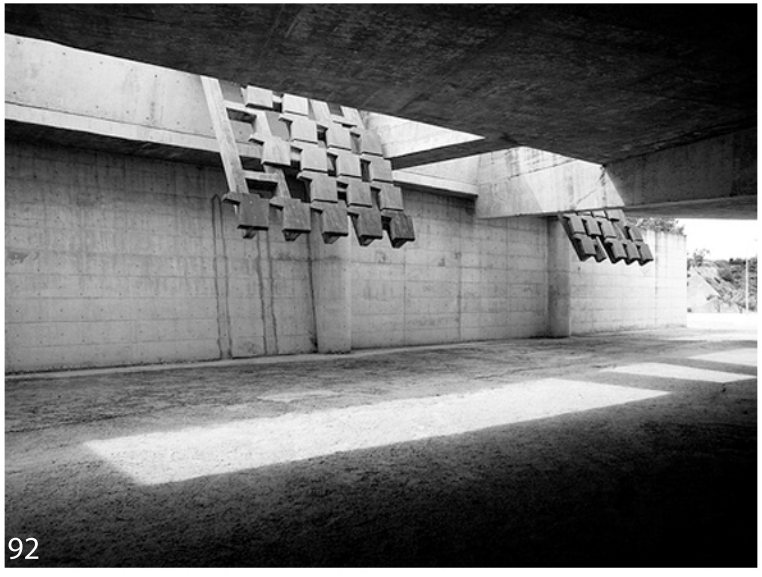


92

Entry Sequence

The Chapel

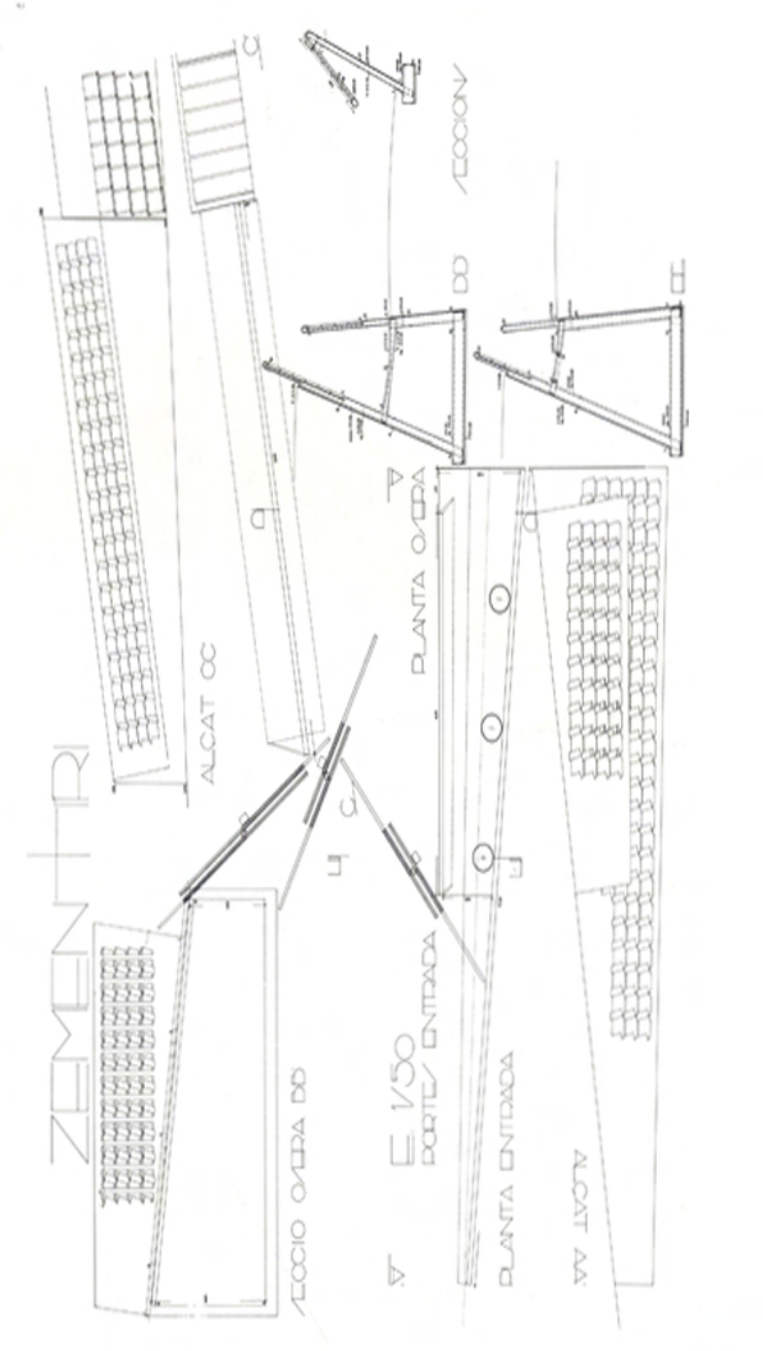
Mortuary

Mausoleums.

The Path

93

The Entry



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Program

Entry Sequence

The Chapel

Mortuary

Mausoleums.

The Path

The chapel is composed of think concrete walls, giving the openings and light that protrudes out of it a deeper emotional sense. Time is celebrated by Miralles, allowing the materials to naturally age.

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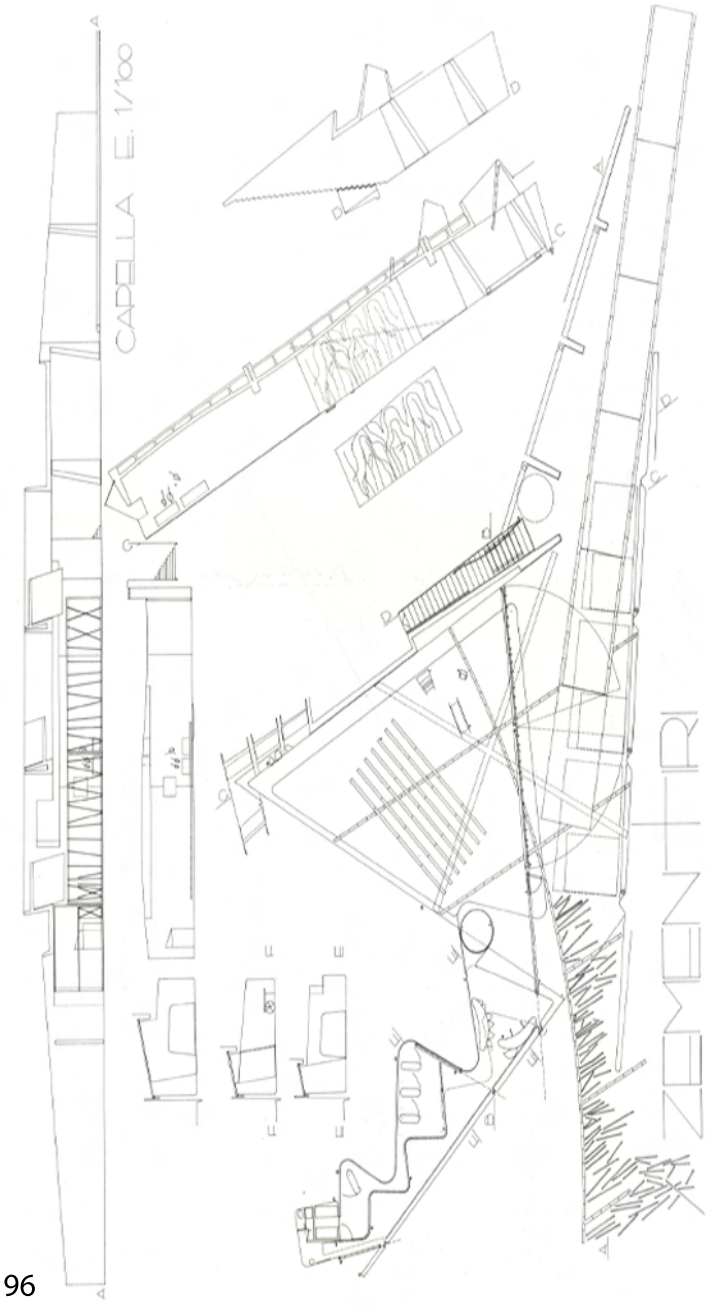

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Entry Sequence

The Chapel

Mortuary

Mausoleums.

The Path

The mortuary is submerged within the ground, therefore light filters in from above, giving the spaces within high quality of light and ventilation.

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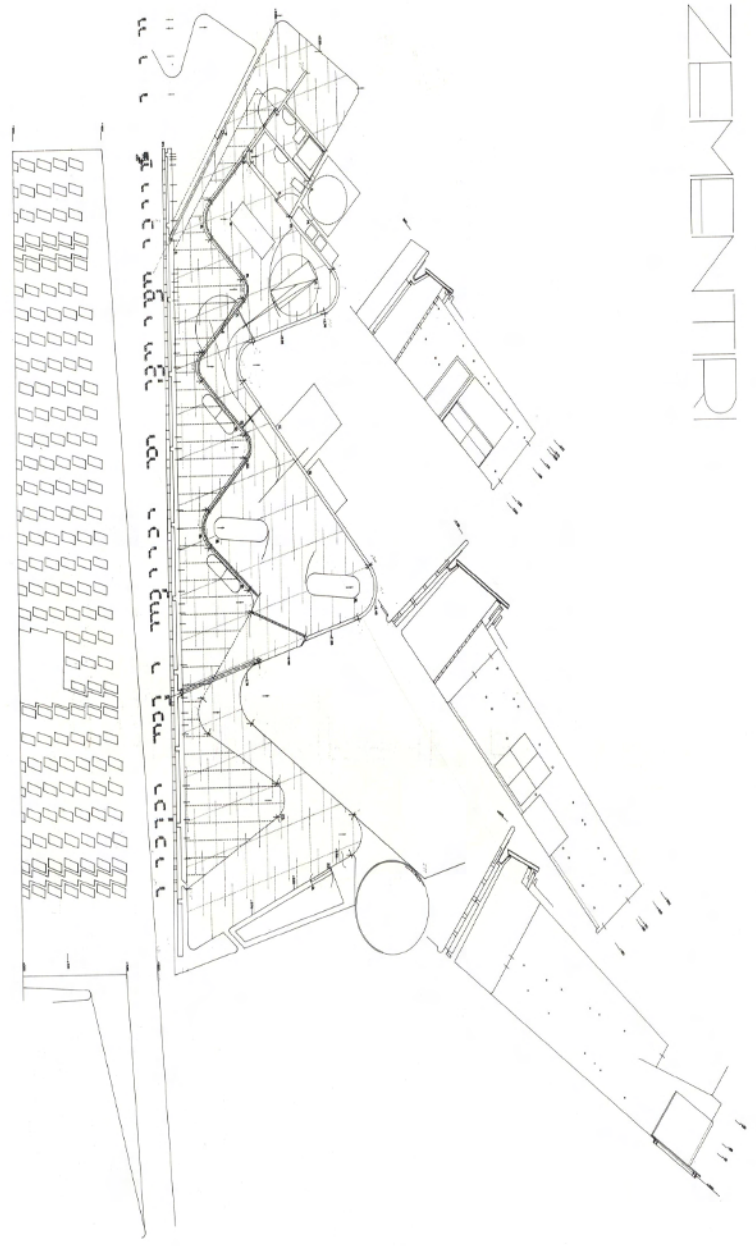


98

Program

Entry Sequence

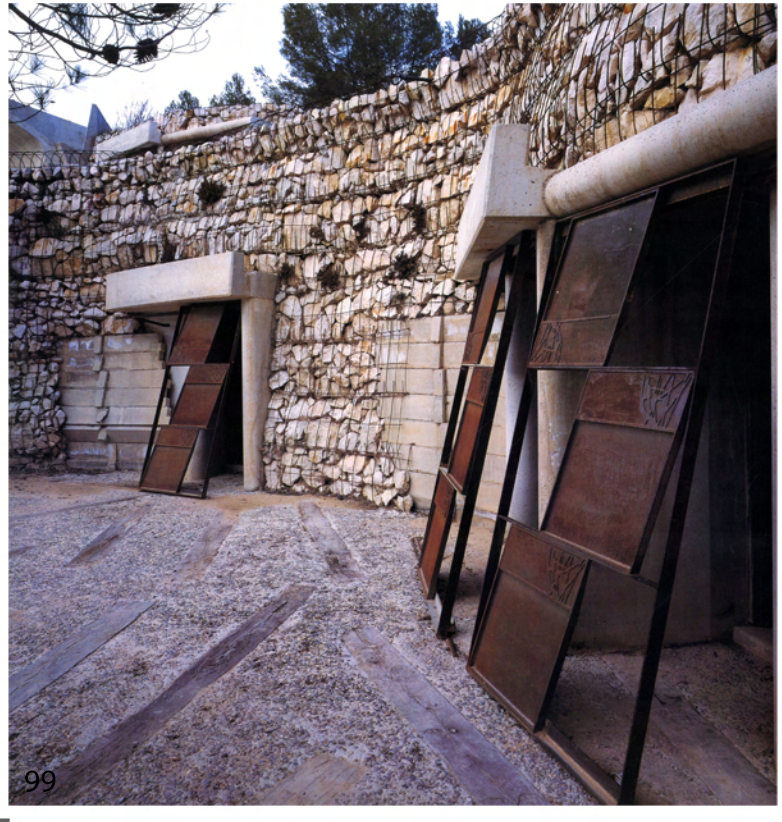
The Chapel

Mortuary

Mausoleums.

The Path

Merges with the ground without being subsumed by it; the work is therefore able to exist in its own right, without simply becoming another layer of the land on which it stands.



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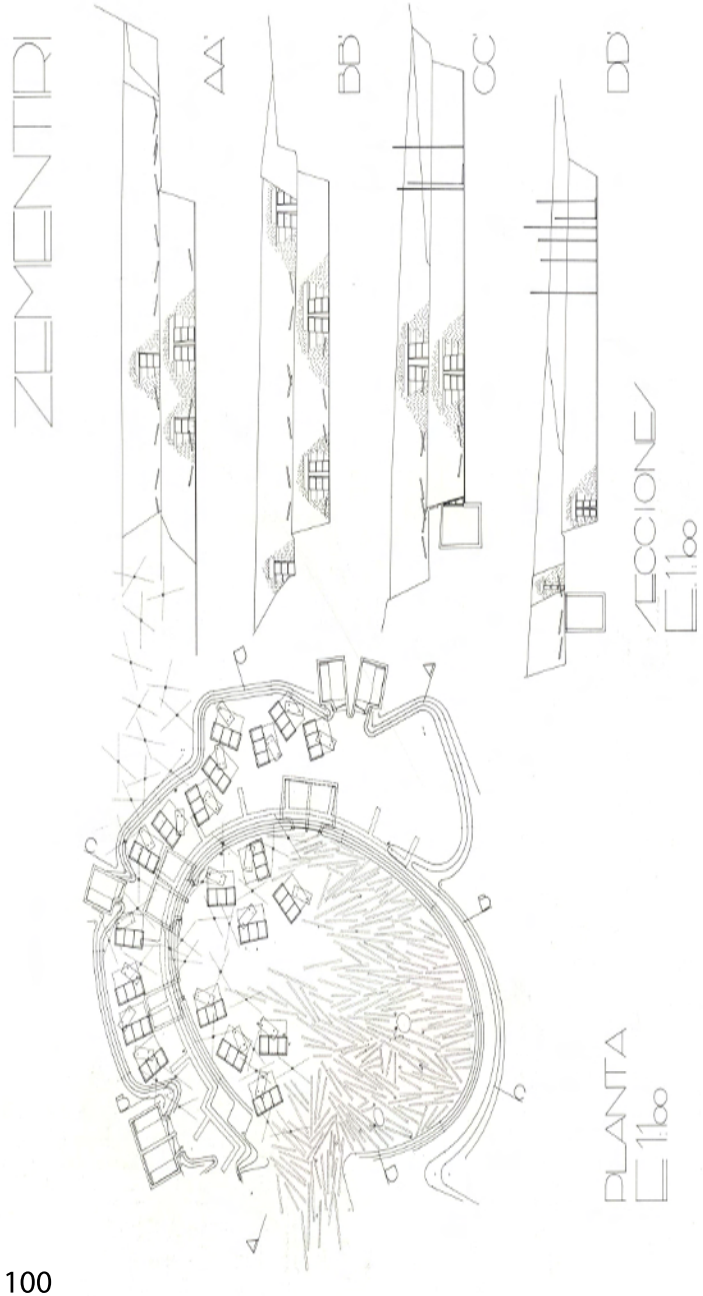

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Entry Sequence

The Chapel

Mortuary

Mausoleums.

The Path

The routes created by the concrete burial niches and the cast-ron partitions of the entrances to the mausoleums serve to set up a tension between discrete parts, creating a movement in the site that guides the visitor through it.

Construction elements such as ramps, decks, and concrete benches relate directly to human movement, giving the site a live quality, and one that is akin to certain artworks.

101

102

103

Structured for Discovery

Massive slabs of precast concrete house the burial niches along the perimeter of the social landscape.

Steel mesh supporting the stones that make up the retaining walls on the site allow for the visual effect of working with nature, as well as begin to show signs of of the erosion of time as the steel rusts, allowing its chemical properties to change the color.

Concrete floor plane infused with native wood panels layer themes of using a local material pallete.

The play of levels has become a central concern to Miralles, specifically with the definition of the ground floor. By lowering the ground level at the Cemetery, it provides the perfect solution to separate the cemetery from the industrial area nearby

This also permitted an engagement with the movement of the users who descend into the site to discover a series of walkways of trees and dynamic sculptural forms.

104

105

106

This place for the dead is in fact a living place, which is developing and changing. It welcomes its usage as a place to which the living can come to visit, walk and contemplate. In order to avoid the associating finality and death, Miralles used nature and decided to build a living cemetery.

108

A Continuum of Thought

Conceptual Design

The constant interplay between thought and production is essential to a thought paradigm that is justly cultivated and rightfully informed. Further emphasis was placed on this notion when deciding to investigate such a unique building typology, therefore, when analyzing and experimenting with design, each thumbnail sketch was used as an instrument of the highest importance.

Each drawing is an answer to a question; a survey of an idea and potentially the rooting of a higher sentiment. Exploration of formal aspects, spatial aspects, and metaphorical elements were examined rigorously. A careful balance of precedent research, accompanied by interpretive sketching yielded a rich understanding of prior architectural works that had achieved some of the primary metaphysical elements one would hope to cultivate.

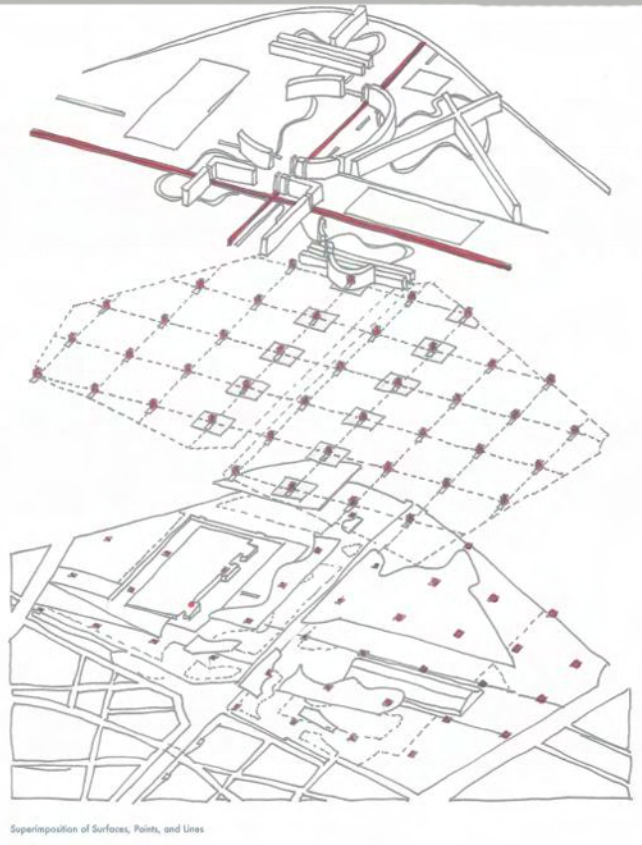
Case Study: Parc de la Villette, Paris
Bernard Tschumi

The design is decompossed into points, lines and planes. Early in the process, the architect rigoursly contrived a set of construction lines upon the site. Objects, spaces, and volumns must find their place within these lines. To add to the coherence of the scheme, the site should be a succession of spaces or textures or objects, in which each part relates to the next but in which there is a constant play of variation on the basic themes of:

-Access or Linkage
-Organization
-Anchoring
-Openness
-Articulation
-Character
-Overall Quality

Design Stategies:
- -Relating **Use** and **Time**
- -Relating **Design** and **Layout**
- -Style of the Design

The image below illistates clearly the design stategy ***imposed*** upon the site. A regularized grid sets up the contrants for the organization of a freeformed overlay comprised of programmatic elements organized to interact uniquely with one another.



Superimposition of Surfaces, Points, and Lines

108

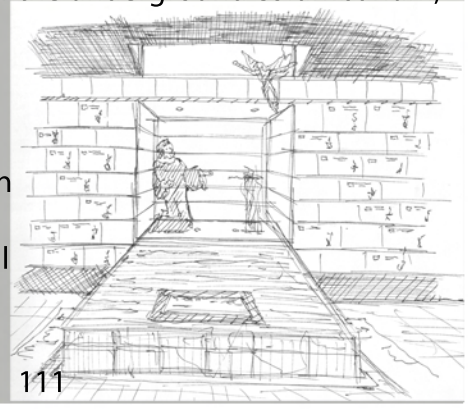
Looking to a variety of precedents, at times, regardless of their programmatic typology and focusing primarily on the critical elements has been a theme throughout the process. Extracting only the pertinent information from the context, interpreting it's importance, inflluence, and relevance to one's ideology are crucial in the conceptual stages of design.

Case Study: St. Mary's Church, Singapore
WoHa Architects

109

110

Two distictly seperate masses, connected by an underground labyrinth of burial chambers is defined by its spatial clarity, meticulous detailing, humble materials and design with natural light. Openings in the forecourt function as skylights for the underground columbarium, which are answered poetically by reflecting pools directly below. The main vista of the columbarium frames an uplifting scene, revealing the sculptural form of a kneeling human figure by the reflecting pool.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112

"In the darkness our eyes search for light. We must wait for the light to be revealed to us."
-St. Mark, Bjorkhagen

'On the Way to the Sea' by Verbakel Architects (sketch above) transforms the space in between the city and the sea into a place of its own rather than a place thought as an 'in between passage'.

'Moster Footprints' by MAD (below) are sunken spaces within a large green space, that function as a playground paved in pink EPDM material. The unique shape and free form give city dwellers a hightened level of freedom and joy. Each experience is unique.

113

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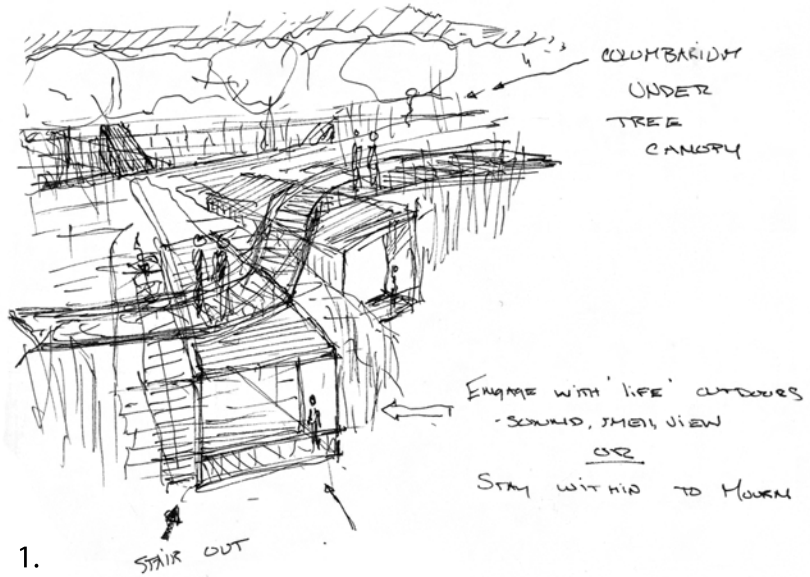
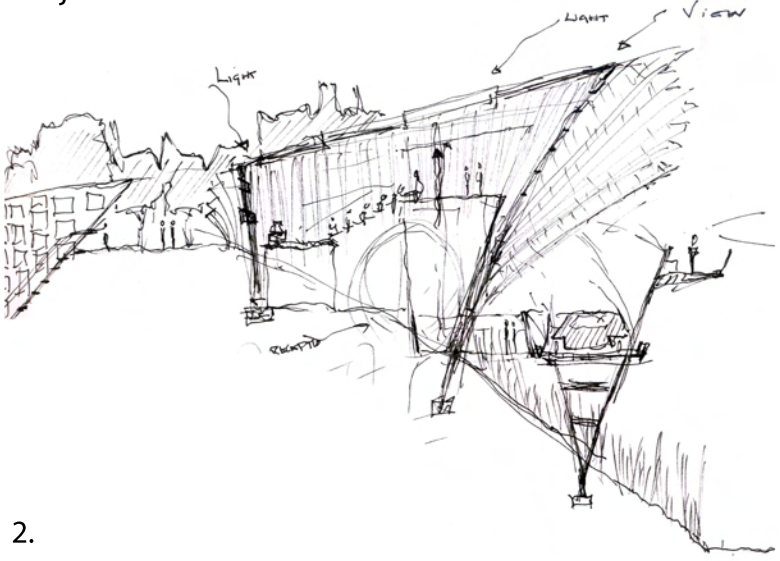
Conceptual Design



1.

In order for a park/cemetery to function homogeneously. It was understood early on that a careful orchestration of circulation would be necessary to achieve success in both realms. A series of schematics were explored in detail and analyzed by outside sources for feedback and conjecture.

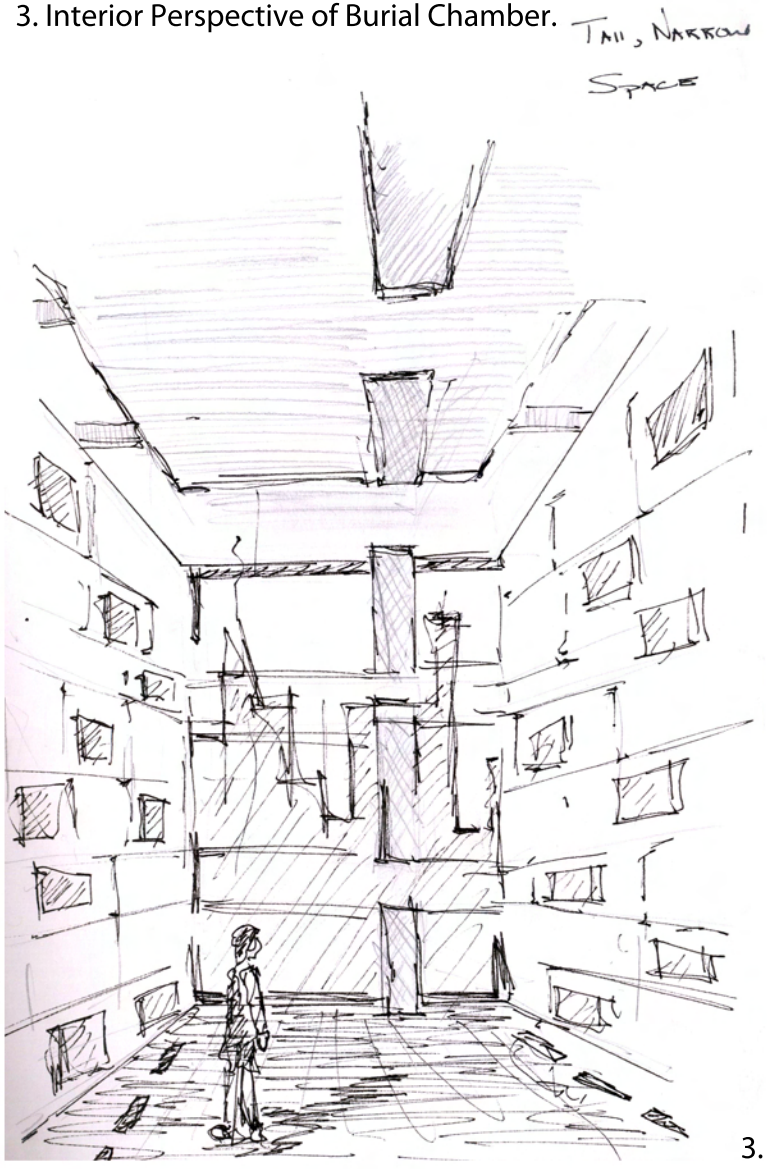


2.

1. Burial Chambers located underground with Public Space above and open to hill and views.

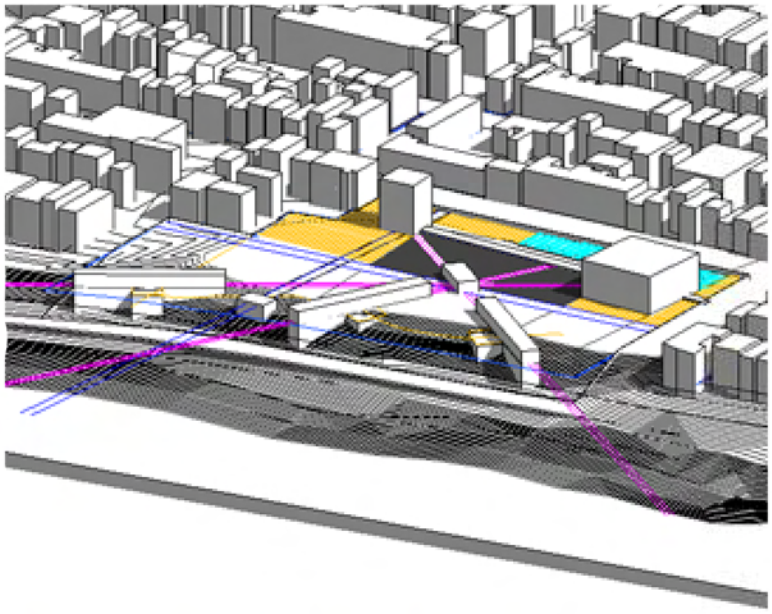
2. Funeral Commemoration Space built into hill.

3. Interior Perspective of Burial Chamber.



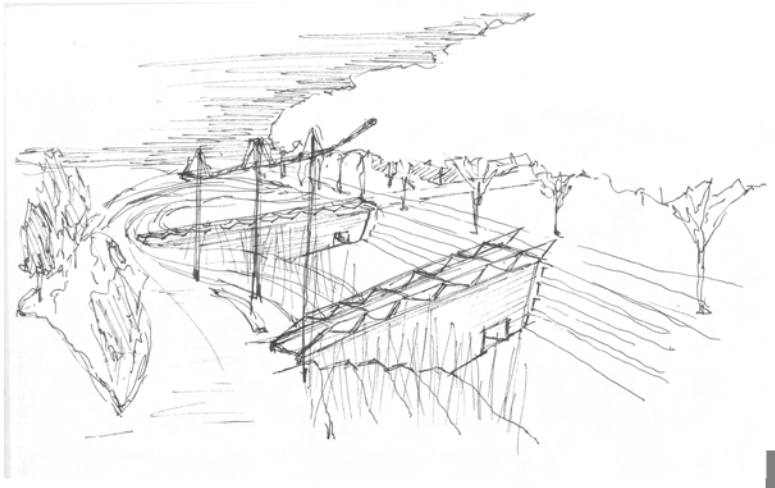
3.

Scheme 1

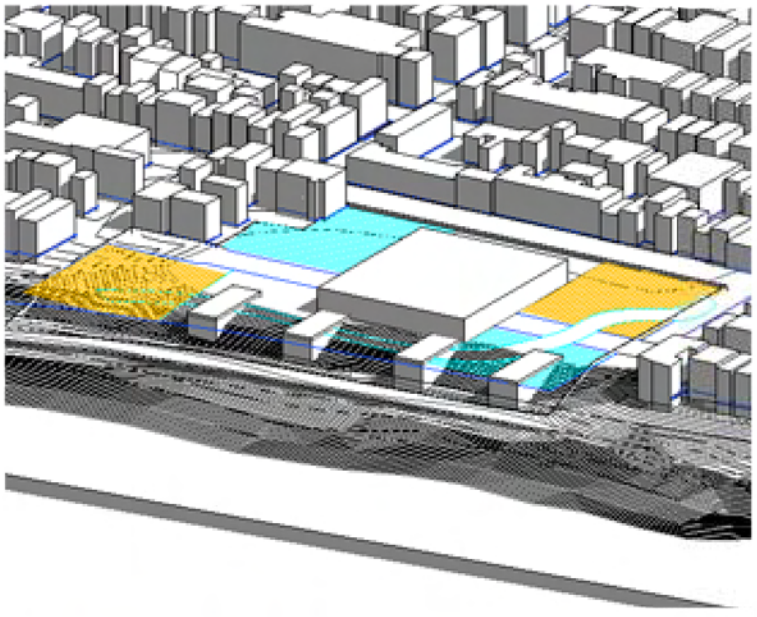


Much like the earlier referenced 'Parc de la Villette' by Bernard Tschumi, this design is also organized formally by points, lines, and planes. The objects, volumes, and spaces are concerned with destination, as well as with a 'weaving' between elements that are associated with the cemetery and with those used by the public. Along those paths of desitination, techniques will be employed to seperate public (park) vs. private (cemetery). The sketch below illiistates how intersections where these occurrances could be resolved.

Programmatic elements are organized by both how they are perceived and by what they are viewing. The largest volume is the main funerary commemoration facility, which also is home to the crematorium. It occupies the busiest corner of the site. Directly on axis, is the smaller reflection chapel. On the ridge, lies a combination of social viewing platforms and burial walls. Parking is located underneath the main volume.



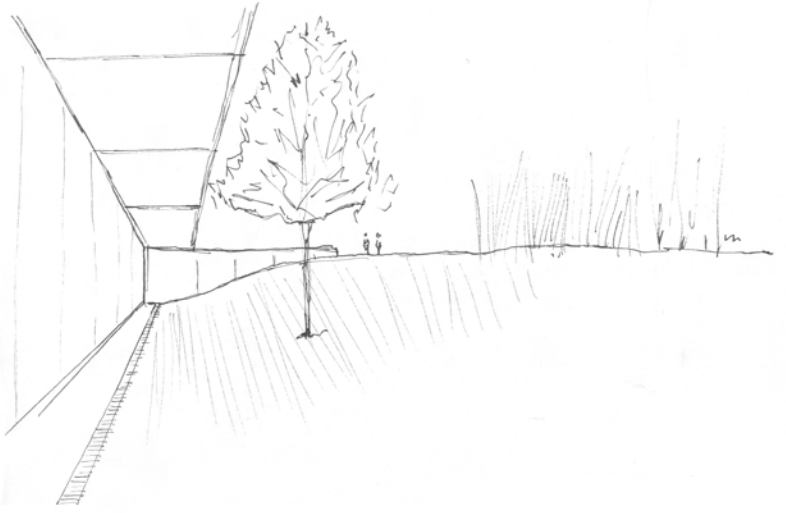
Scheme 2



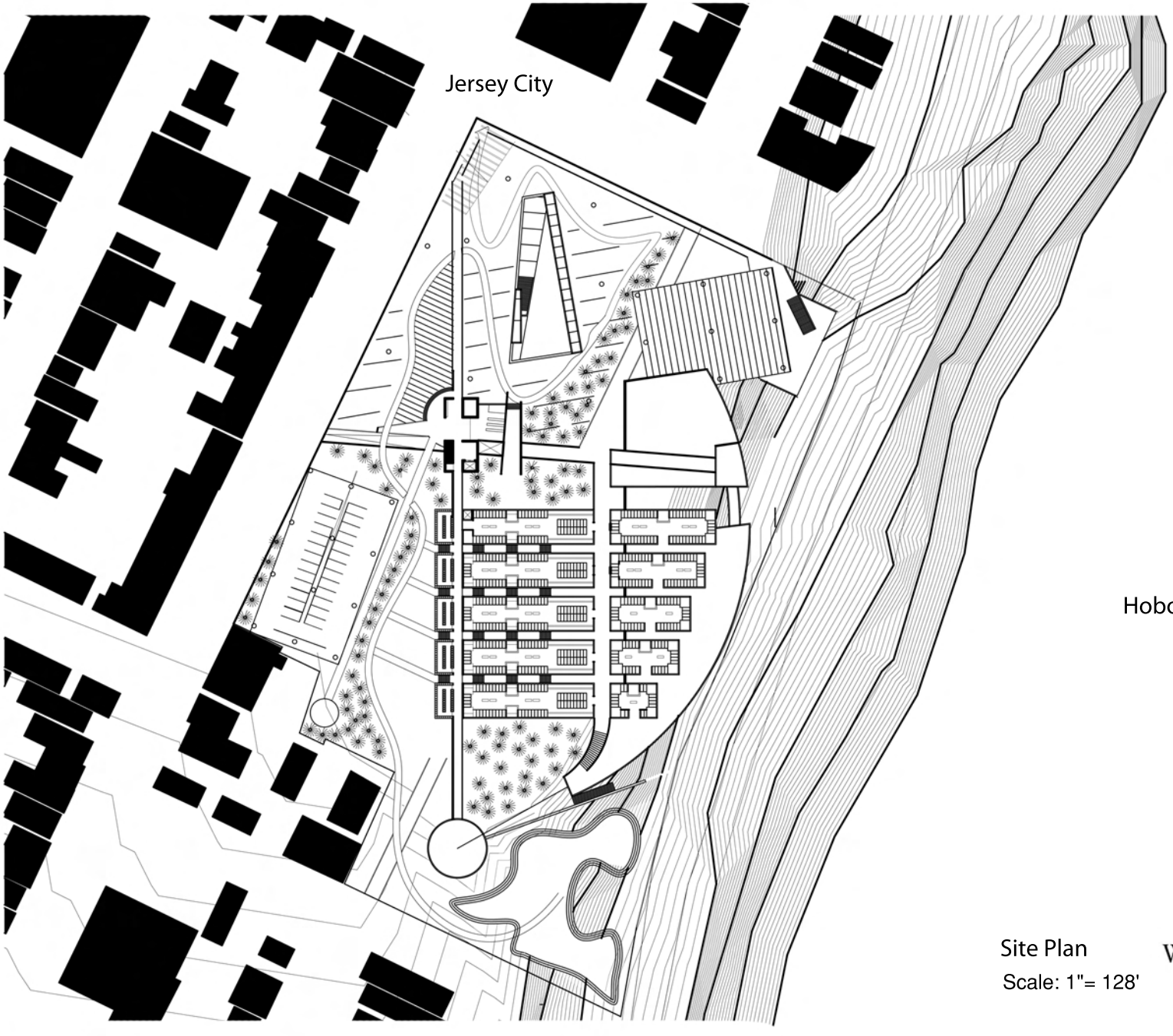
Those coming to the site to mourn the death of a loved one enter through the South passage and are put on axis with the Funerary Commemoration Facility. They drive directly in and through the building to their parking spots. Their symbolic journey there consists of 'passing through death' or through the lawn graves.

When the leave they are comforted by 'life' or the primary recreational space located on the busiest portion of the site. At this location, a path that winds along the ridge to take in views and provide places for reflection of life begins. Four burial chambers are built into the hill and are accessed by the main volume. Light is brought in from above.

There is a distinct simplicity and symbolic undertone associated with the organization. Elements are meticulously ordered because of their scarcity, thus enhancing their importance to the composition.

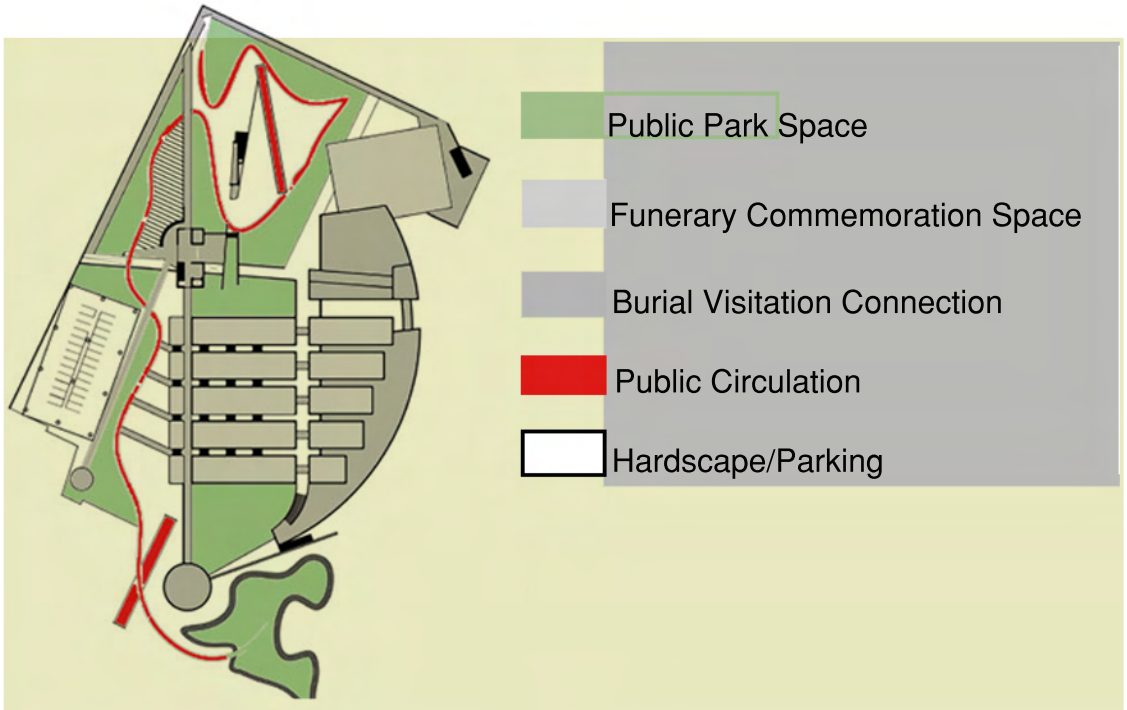


Schematic Design

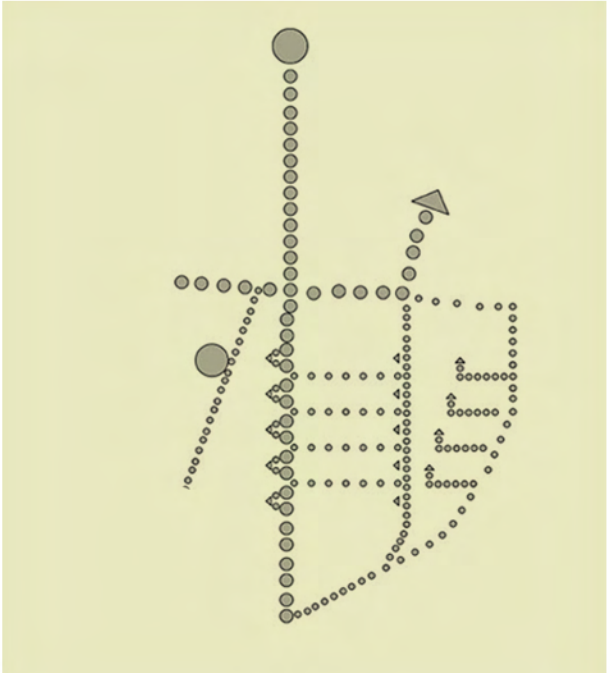


Site Plan

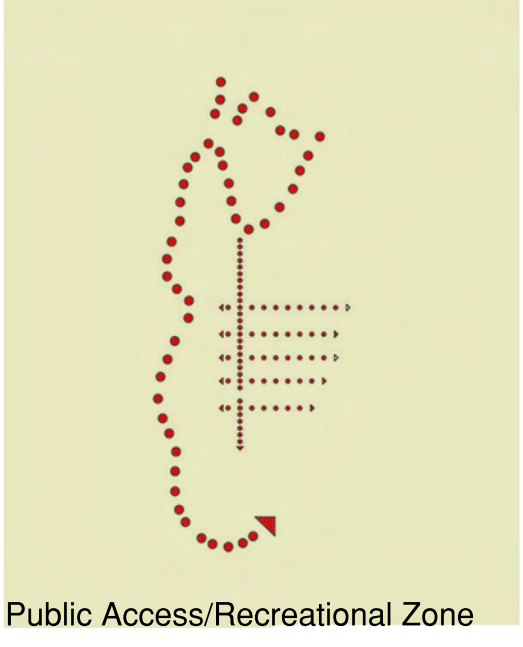
Scale: 1"= 128'



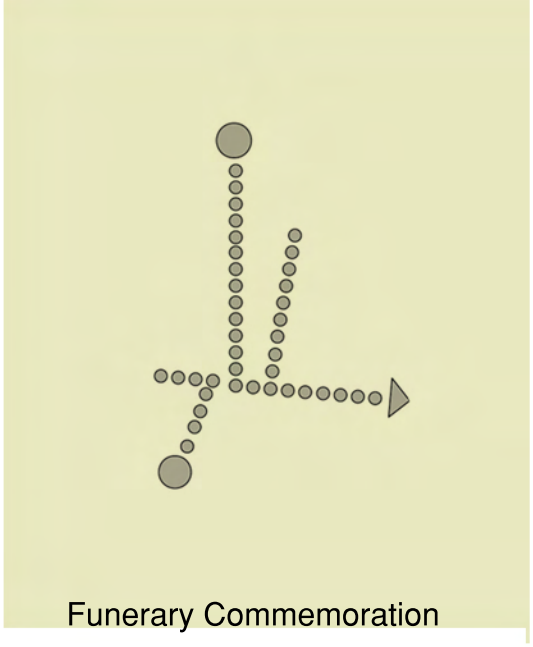
Program Distribution



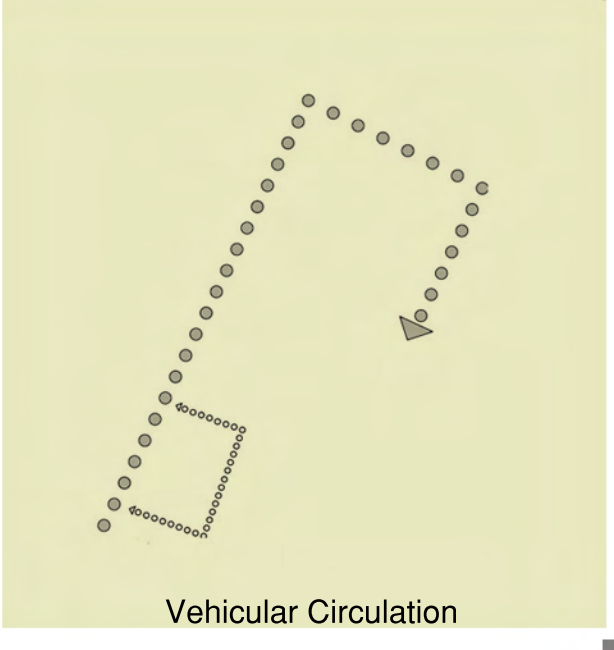
Burial Visitation Circulation



Public Access/Recreational Zone



Funerary Commemoration



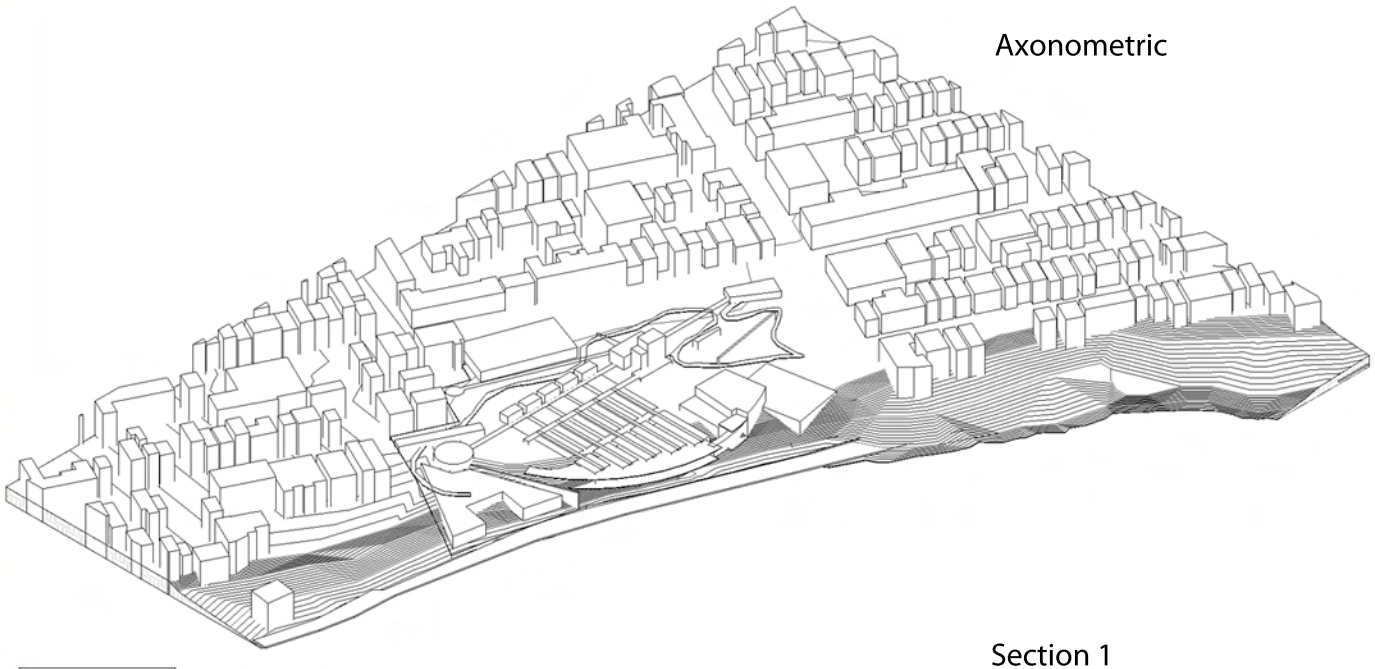
Vehicular Circulation

Depicted above is the outdoor conncection space linking the Funerary Commermoration location to the South of the site. Along this covered passage, visitors of the site can access the five burial units. This space would offer a peaceful oasis to escape the hustle of typical city life, while offering some of the best views of the Metro Area in the world.

In terms of materiality, this portion of the structure would be primarily composed of concrete to give the building a higher sense of timelessness and allow the material to age as time progresses.

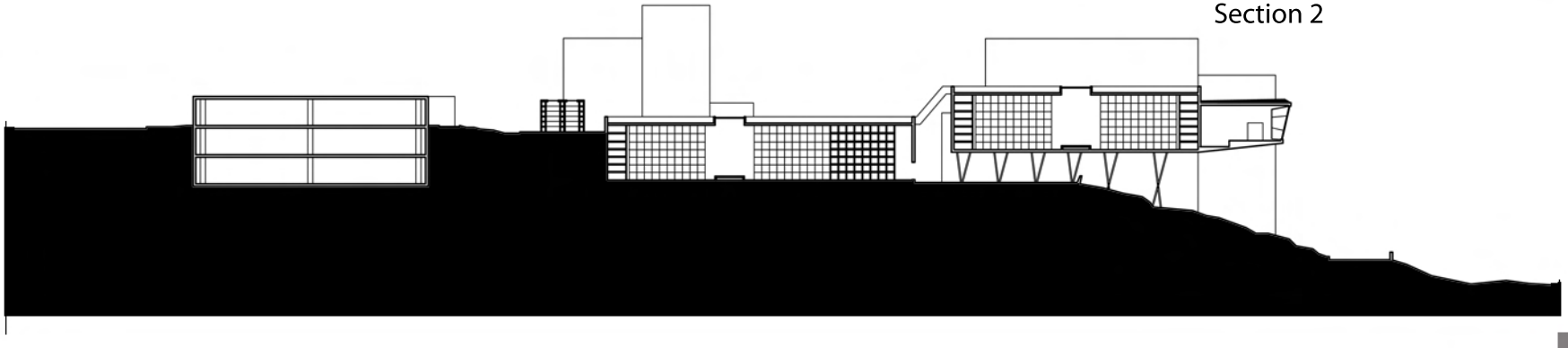
The conceptual idea to have the the burial chambers underneath the recreational area carrried over into this scheme. The funearary commemoration space moved closer to the ridge away from the main access road to maximize view corridors. A more playful, less direct recreational path was incorporated to juxtapose the more rigid aesthetic of the burial typologies.

Axonometric

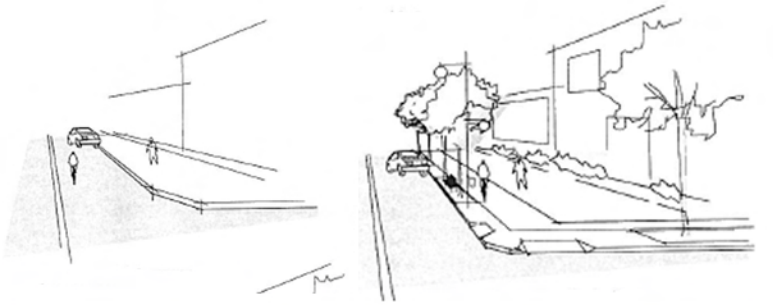


Section 1

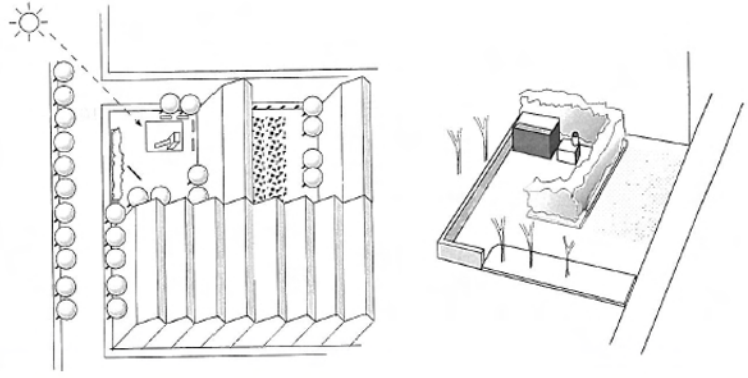
Section 2



Schematic Design

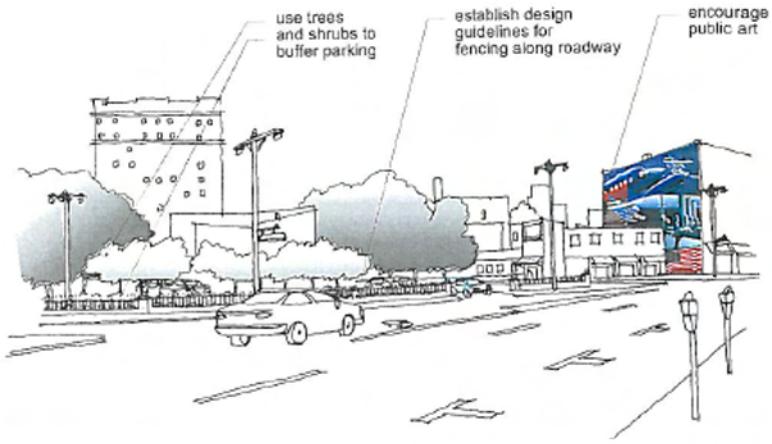


The diagrams above illustrate an undesirable streetscape vs a desirable streetscape (as defined by Jersey City, NJ). Moving forward, it is a goal to ensure the project meshes kindly with the street, activating the sidewalks adjacent to the site.



The city calls for public open spaces to be easily accessable for residents and well connected with pedestrian circulation systems. Another challenge will be creating attractive open spaces that are comfortable public areas without infringing upon the cemetery program.

The city also requests all mechanical units and garbage collection areas be shelded with a screen, either composted of traditional fence or hedges.



Jersey City is an advocate of public art to enhance utility spaces such as parking areas. They also encourage using trees and shrubs as a buffer between the street and park. Potentially, the use of a low fence may be necessary. Using pedestrian-scaled lighting, green edges, and decorative paving are suggestions the city has to activate public space. A good mixture of activities for old and young should be accounted for.

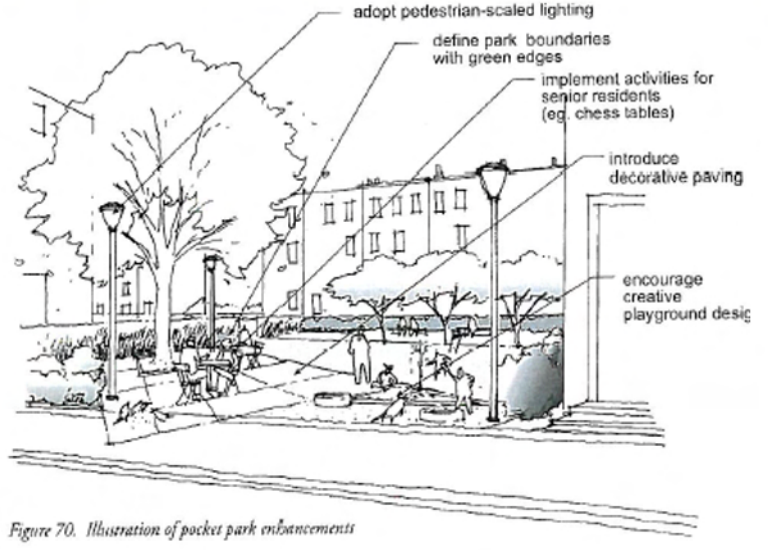


Figure 70. Illustration of pocket park enhancements

Design Development

Design Development

Alerations and Additions:

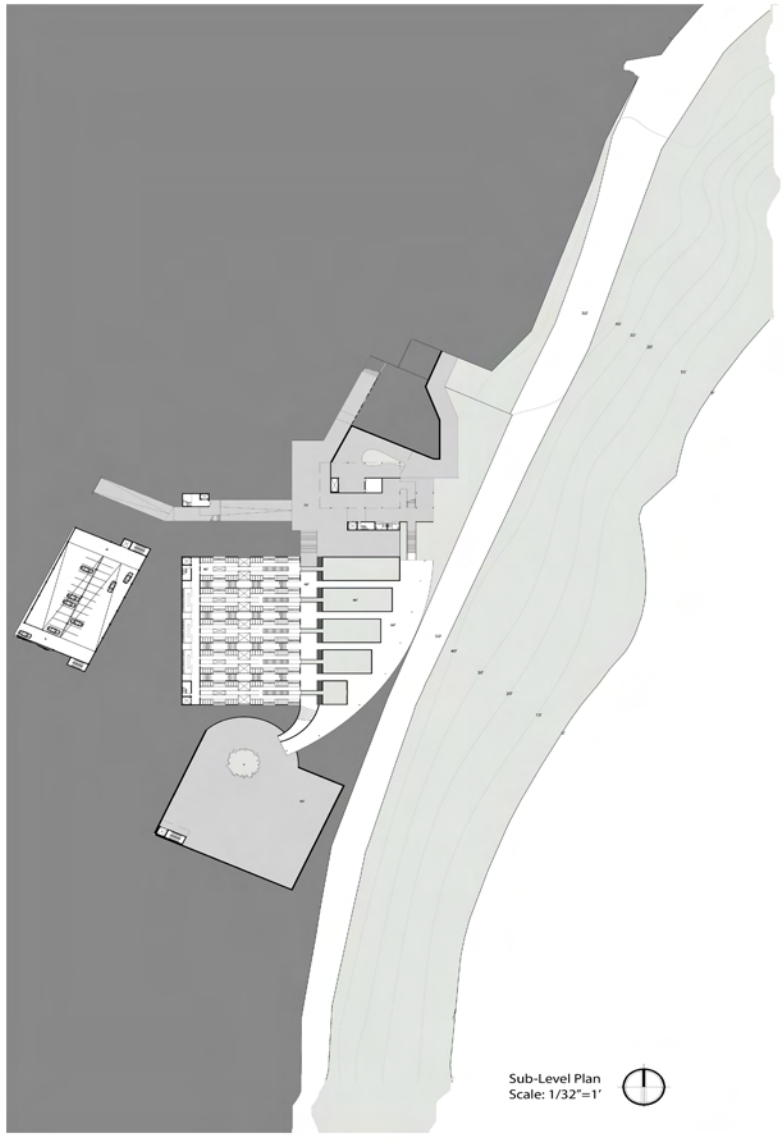
As the design began to evolve, it became clear that simplification of the circulation systems on both the private and public level should be addressed.

Sectionally, the building complex also needed to be simplifed to reduce confusion and maximize the desired relationships.

All major masses essentially stayed in there previous poisitions, however, their angles were altered slightly to enhance local relationships.

Above the burial chambers, where the recreational area now resides, it was determined to use grass as a roof covering and sink the burial chambers fully into the ground, rather than the previous interation where they were only partially submerged. These two moves maximized useable park space, while enhancing view even further.

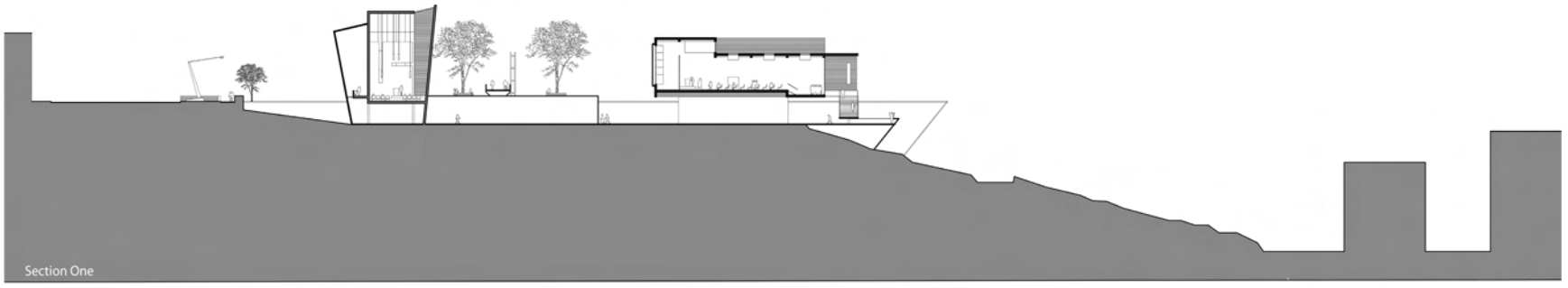
The morgue space was deemed unnecessary in a previous iteration, therefore, it was left out of the design development. It is the intent of this project to blend life and death together, making the living more comfortable with the circular pattern of life and death.

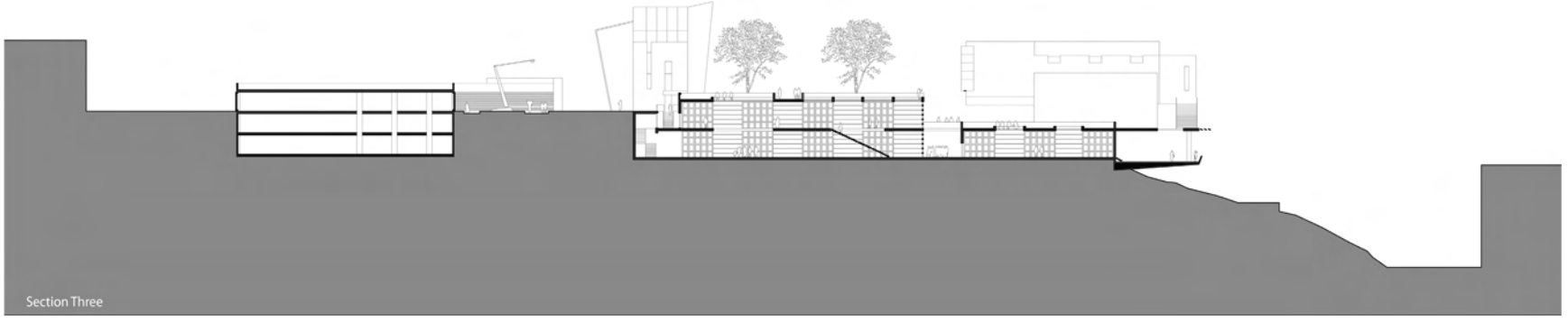


Seperation of the different use groups by changes in ground elevation was achieved in this version of the project, however, movement and access needed to be addressed further.

Ideas for how to organize the burial chambers were in place. A combination of burial niche walls that housed full bodies, as well as columbariam walls to house Urns line the walls of the five rectangular units.

Design Development





Final Review

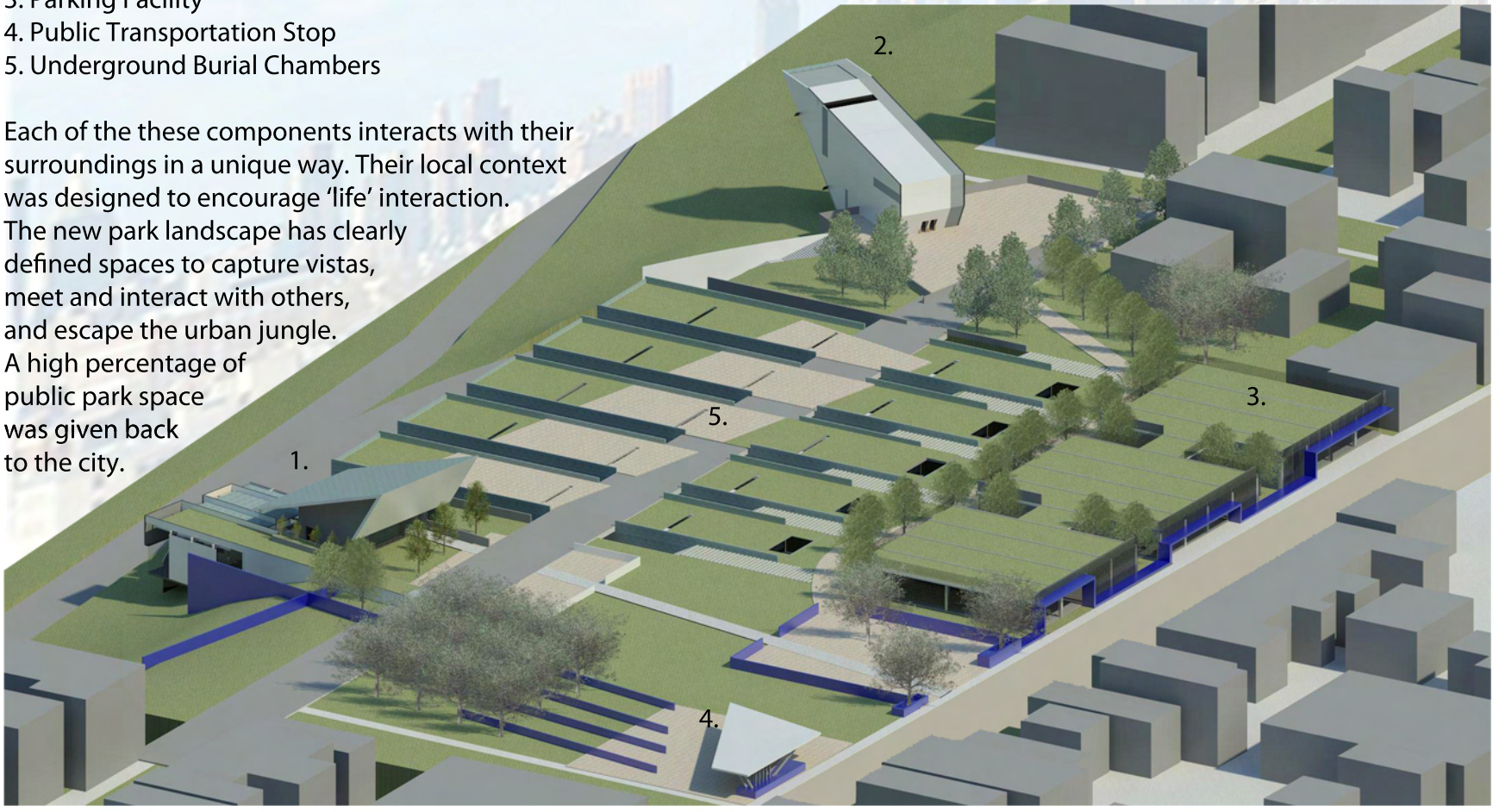
Final Review

Sitting high atop the city, the new park/cemetery at Riverside Park, is a central destination for recreation, reflection, and spiritual renewal. In it's final iteration, it is equipt with multiple spaces for civic gathering, religious worship, or individual contemplation.

Key:

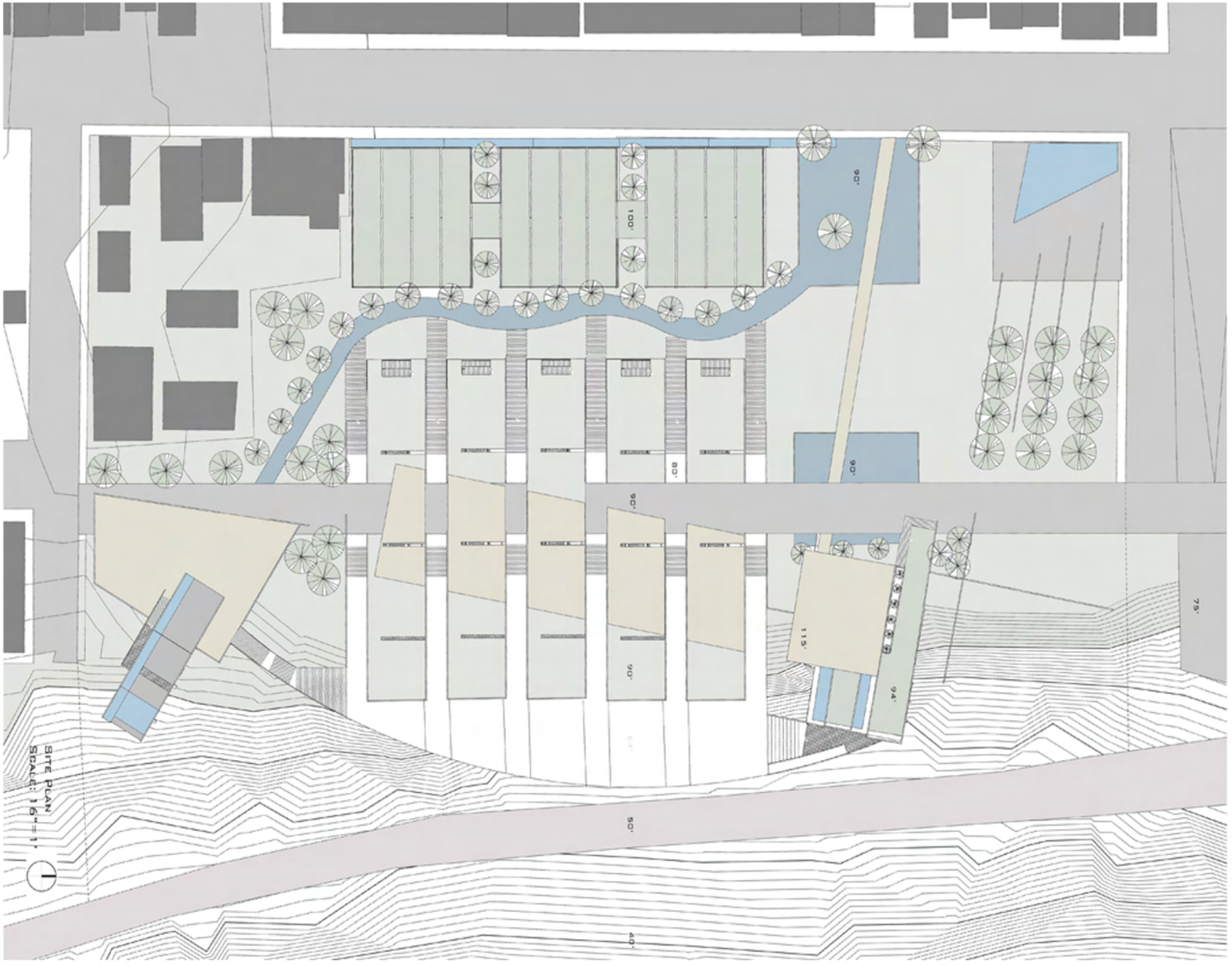
1. Funerary Commemoration Building
2. Civic Engagement Center
3. Parking Facility
4. Public Transportation Stop
5. Underground Burial Chambers

Each of the these components interacts with their surroundings in a unique way. Their local context was designed to encourage 'life' interaction. The new park landscape has clearly defined spaces to capture vistas, meet and interact with others, and escape the urban jungle. A high percentage of public park space was given back to the city.

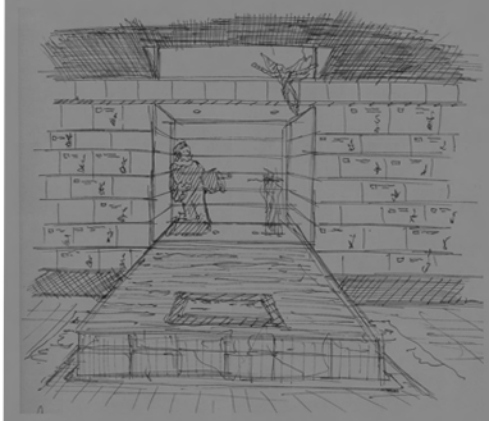


Ground Level: Green Space

Site Section

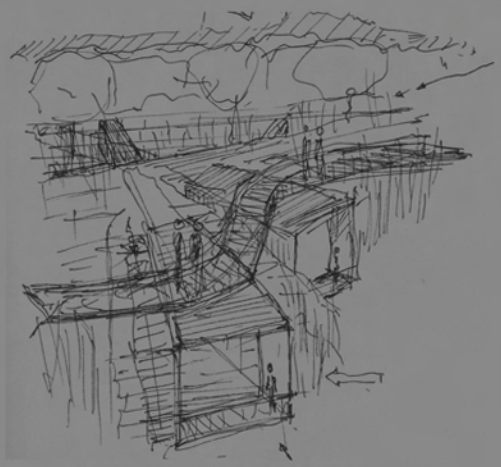

SITE PLAN
SCALE: 1/6"=1'
90'
100'
80'
90'
90'
90'
115'
94'
75'
50'
40'

Concept Development of 'Burial' Chambers'



Woha Architects_St. Mary's (Singapore)

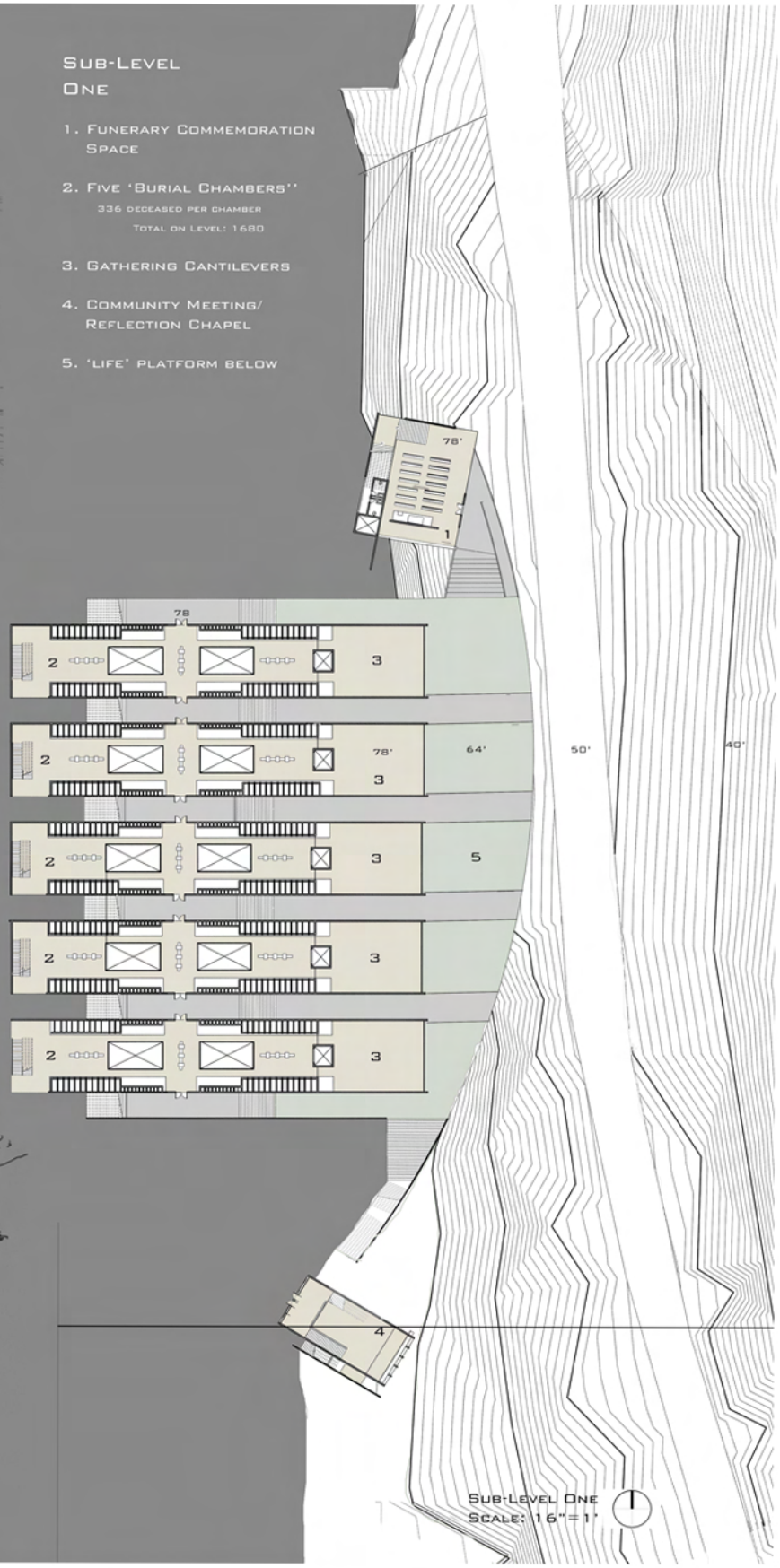
Orientation, scale, and light



'Engage with life while visiting a dear friend or family member

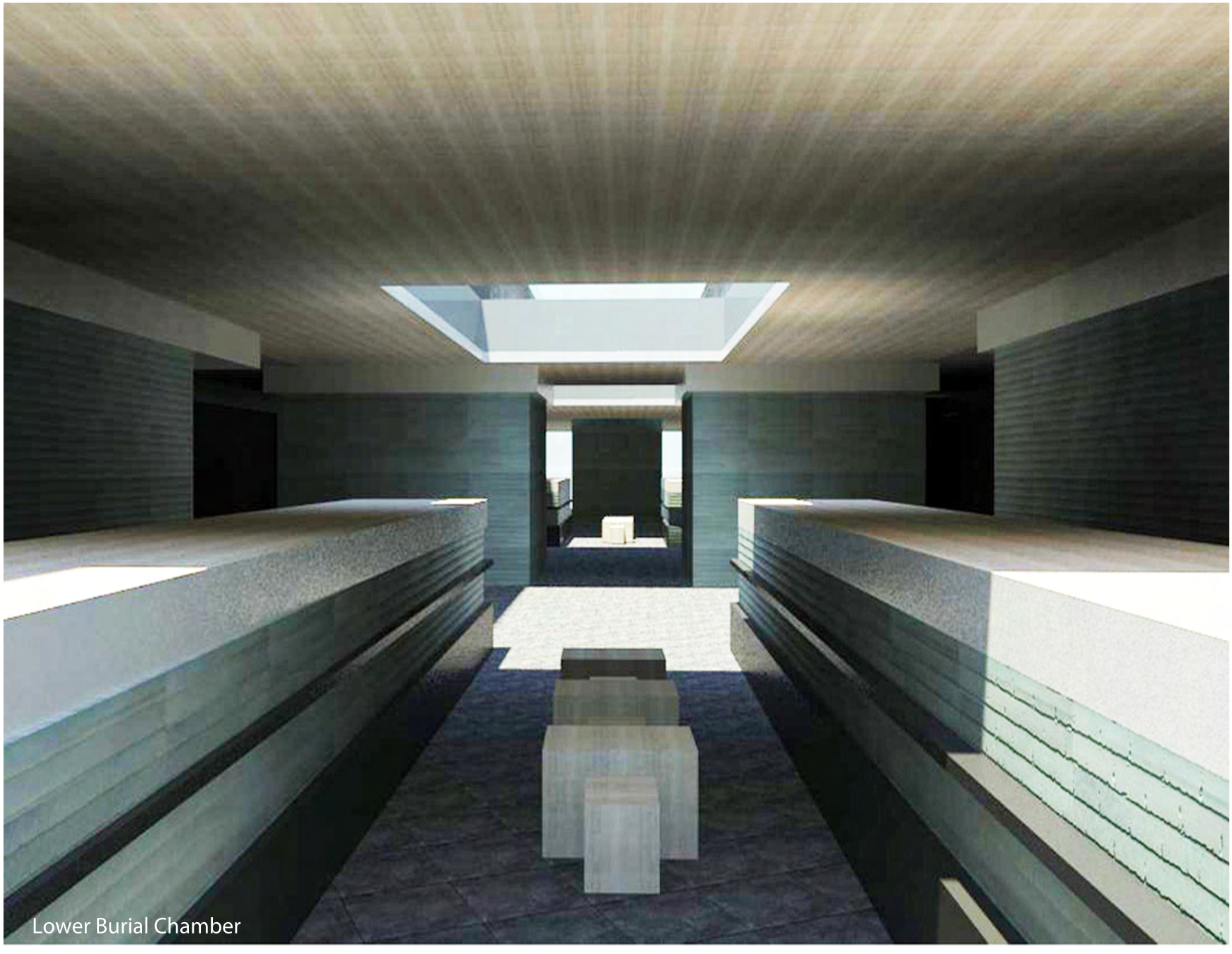
Sub-Level One

1. Funerary Commemoration Space
2. Five 'Burial Chambers''
   336 deceased per chamber
   Total on level: 1680
3. Gathering Cantilevers
4. Community Meeting/ Reflection Chapel
5. 'life' platform below



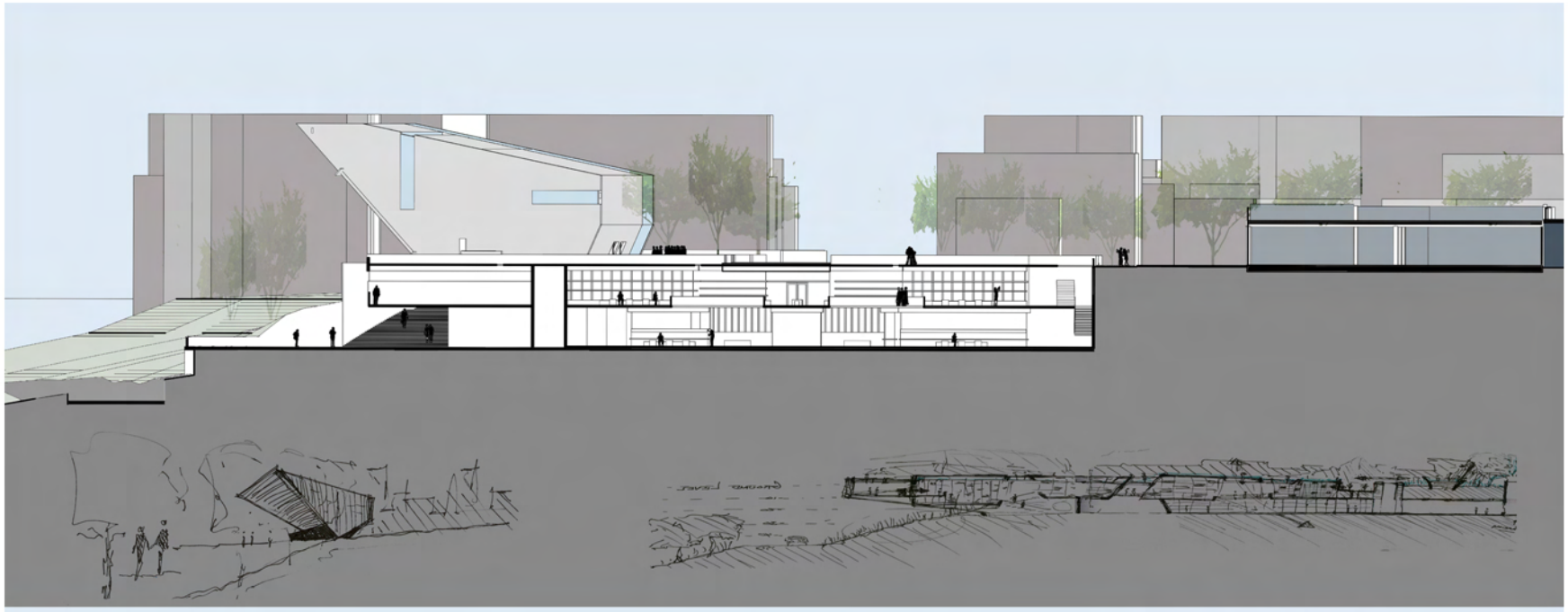
Sub-Level One
Scale: 16"=1'

Sub-Level Two
1. Funerary Commemoration Foundation
2. Lower Five 'Burial Chambers
75B deceased per chamber
Total on Level: 3790
3. 'Life' Platform
Cemetery Total: 5470
Parti Sketch
Sub-Level Two
Scale: 1/16=1'-0"

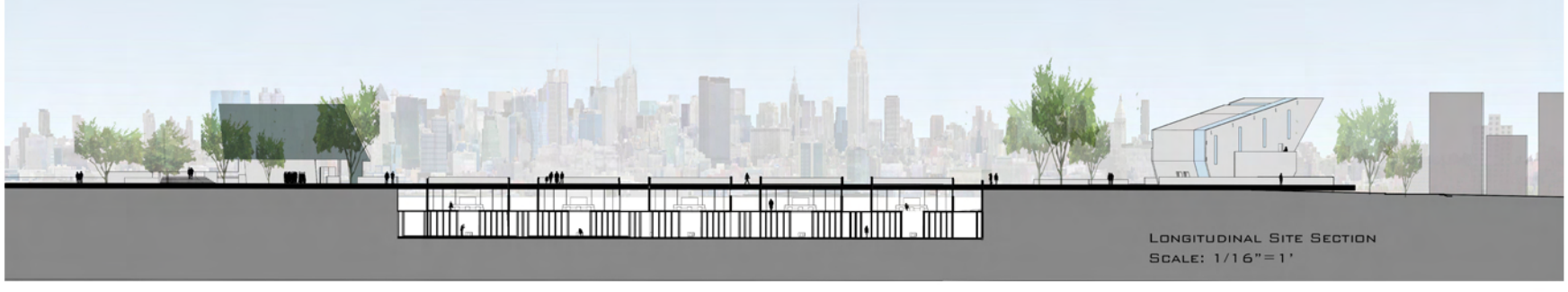


Lower Burial Chamber

Upper Burial Chamber

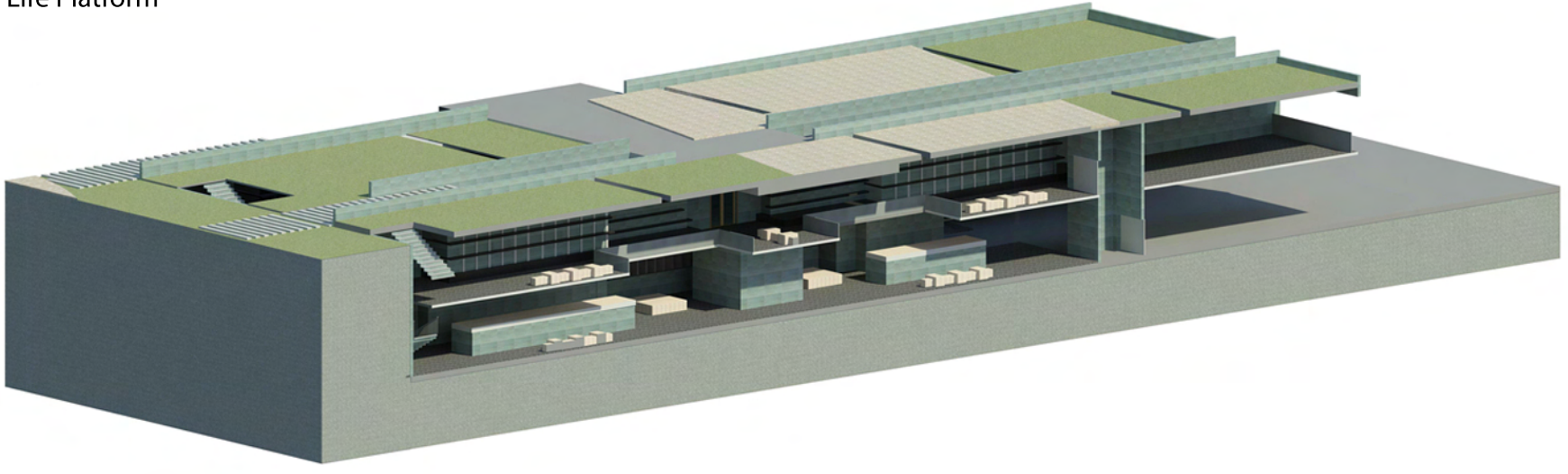


Cross Section Facing South
Scale: 1/8"=1'



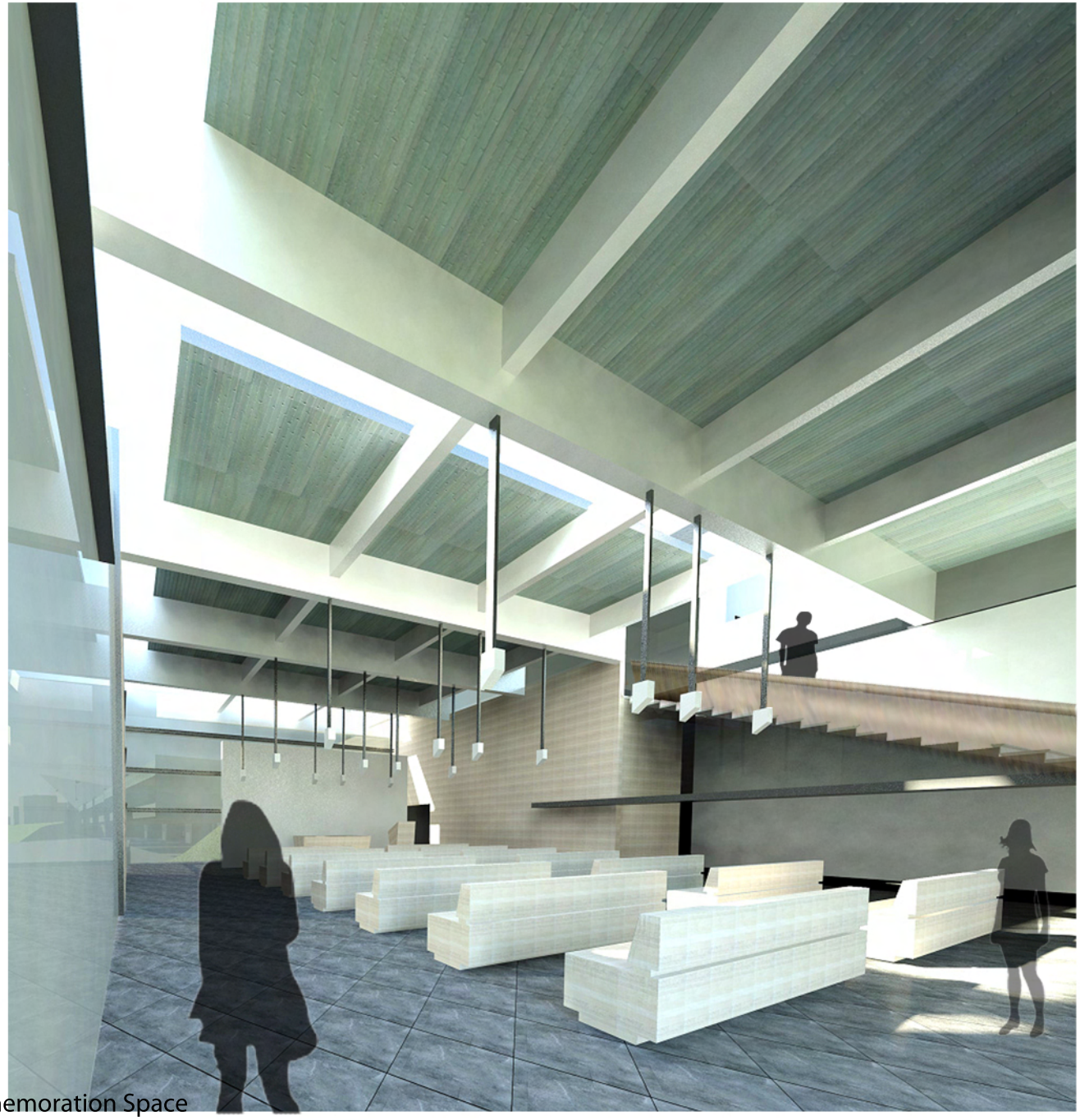
Longitudinal Site Section
Scale: 1/16"=1'

Life Platform



Burial Chamber Axonometric

Civic Engagement Center



Funerary Commemoration Space

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