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## F.F.A: Forensic + Funerary Architecture

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# F.F.A. [forensic+funerary architecture]

Michael P. Cafo

Master of Architecture

School of Architecture, Art, and Historic Preservation

Roger Williams University

December 2009



## Forensic+Funerary Architecture

Graduate Thesis Project submitted to:  
Roger Williams University, School of Architecture, Art, and Historic Preservation  
In fulfillment of the requirements for the M. Arch Degree in Architecture.  
In December 2009.

Roger Williams University  
School of Architecture, Art, and Historic Preservation  
Bristol, Rhode Island

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Signature\_\_\_\_\_

Date\_\_\_\_\_

Thesis Advisor: Julian Bonder

Signature\_\_\_\_\_

Date\_\_\_\_\_

Dean of SAAHP: Steven White AIA

Signature\_\_\_\_\_

Date\_\_\_\_\_





I would like to thank very much all my fellow colleagues and professors whom I learned a vast amount from over the past five and a half years. Special thanks to Dr. Wayne Carver II and Dr. Thomas Gilson. All have contributed profound expertise. Lastly, I would like to especially thank my family for their support throughout the years.



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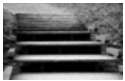
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## Executive Summary

In design ideas are generated with using a basis of pre-existing sources. Once an appropriate idea for an issue has been acknowledged, the use of art allows for an opportunity to investigate the design problem. The beginning concepts for the given problem are further explored with higher detail and varying scales. Progress, production, and presentation are the essential design tools for developing a project toward a solution.

This thesis document proposes the notion of an architecture that incorporates a three part program which involves violent and natural death cases. With scientific and larger public gathering spaces proposed in the building's program, the users are grouped in a common environment that deals the subject of death. The general public are a witness to the building's architecture and have the ability to react and become aware of their surroundings and possibly allow for an appreciation toward life.





## Abstract

Death is understood in diverse ways throughout the world. Among the many civilizations which had existed and those that currently exist, both express or ignore the event of death. Cultures which have symbolic and ritualistic events recognize death by way of mourning or celebrating the occurrence.

There are two forms of death which cause different emotional reactions. One is a natural death and the other is a suspicious or violent death. Suspicious cases for an area are investigated and resolved at the state medical examiner; this program strives for truth from the unknown. Once the case has been reviewed, the sequence of mourning begins. This mourning process is experienced at a private family level; however, the event itself, of loss, is viewed as an inevitable common experience. The situation of dealing with death and applying space for the mourning and studying of this event is challenging; however, these spaces are meaningfully reinforced and symbolically viewed on how the space is designed. This project's site is in Hartford, Connecticut, an urban area which for sometime has been struggling with violence and crime. For the community, this building can be viewed as an object, representing an appreciation to the reality around death and potentially provides awareness to the value of life for the urban area.

The building is organized around the program's prominent spaces, those which involve the deceased's body. Expressing and combining these spaces with the ground creates a dynamic and grounded architecture. This program and the site need to reflect back upon those experiencing the building through material usage and space planning. Although the architecture needs to function accordingly, there is connection between the people and the space. Spaces reflect and call attention to the sky in the areas where the body is placed. Combining the violent with the natural cases allows for a communal family experience and the potential for each family to assist each other in the mourning process and ultimately acceptance.





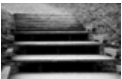


Project Description

## Introduction

The mind is an immeasurable entity which harnesses an abundance of thoughts and images that have occurred over a period of time. At specific moments, memory is activated and there is a recall of data, which has been previously encoded and retained. Cognition and the mind's components of consciousness reflect upon and establish memory. The psyche further allows for perceiving oneself while simultaneously interacting with the environment that exists around us. The natural and built surroundings interweave with the fabric of culture and offers people a chance for intervention, whether positively or negatively.

Malcolm Quantrill's manuscript *The Environmental Memory*, begins explaining the work of British historian Frances Yates (her book: *Giordano Bruno and the Hermetic Tradition* 1964) about aspects of memory which relate back to antiquity. The study of memory dealt as a "multidimensional ladder, a lattice of mnemonic codes constructed by a succession of mystics and scholars." The concept linked the events of the mind's conscious/reality realm to the mind's self unwitting unconscious experiences. This complex psychological discussion was to foster development of an individual's consciousness and manifest a classification toward the determination of a personal identification. Quantrill explains that early Renaissance scholars investigated to "weld the 'phenomenology of the mind' and the 'phenomenology of soul' (Bachelard's terms) into one coherent whole." In addition, the contemporary analysis of ethos, or one's character, is explained as a fragmented relationship between contemplating oneself as a human in terms of "thinking" versus the sensory aspect as "being" human. This sophisticated discussion on the issue of memory and identity, how people utilize past events/information and reconstruct those events in the present time to clarify information, is an engaging situation for an



architectural premise. Aldo Rossi in *The Architecture of the City* (1984) states the analytical or general approach to history (of cities) has been depicted with a strict viewpoint; however, with this idea there is the opportunity to use architecture which can perpetuate and interact with a community's life. "We must carefully elaborate a city's enduring elements or permanences so as to avoid seeing the history of the city solely as a function of them..." It seems that by creating a thought provoking and an inquisitive architecture that societies can begin to network internally and develop a more intelligent society.

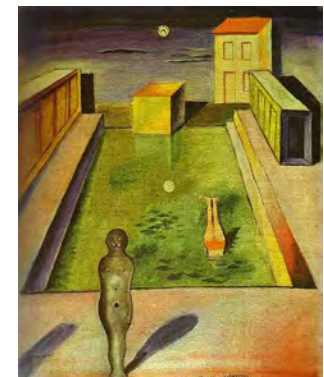
Developing an architecture which raises questions and promotes the pursuit of knowledge can be related with the twentieth century artistic/cultural movement known as Surrealism. Artists and writers stretched the rational realm with a philosophical and abstract character, thus supporting imagination and creativity to those creating and viewing these works.



*The Persistence of Memory* Salvador Dali, 1931 oil on canvas.



*The Red Tower* Giorgio de Chirico, 1913 oil on canvas.



*Aquis Submersus* Max Ernst, 1919 oil on canvas.



## Project Statement

Architecture that is constructed for the subject of death has been understood to be experientially melancholy and gloomy. There is an overbearing and unknown power when these spaces are approached. Similar emotional reactions are expressed through the Surrealist paintings. Civilizations throughout the world diversely recognize and deal with death's after effects. This project combines the forensic study and mourning process through one complex within an urban environment. The building will be sited with an existing hospital which can link the medical profession; and a small non-denominational chapel adjacent to the structure will reinforce the gathering and viewing.

Through criminal investigation and using science as one preliminary system to reconstruct past events, a new forensics institute for the State of Connecticut will become a structure that provokes inquisitive thoughts and be integrated into Hartford's urban fabric. Essentially the proposed project is a hybrid; containing both spaces that reflect on the notion of death and spaces that focus on investigation.

Pathology is a medical term for the study of disease. In forensic pathology, scientific methods are utilized to determine a cause of death to those of violent and unexplained cases. Negligence and crime have catalogued this profession as a very visual and specialized one. The state medical examiner's office is a public agency that deals with a difficult subject and time in peoples lives. Independent from other government agencies, this program has to provide accurate information and documentation for criminal matters in order to assist and protect those involved.



The building will be a complex in which among other spaces forensic research will assist in the community's unsolved, current, and future homicides. These laboratories, a selective number, will engage with the community on a limited basis as the public component and the private/confidential functions will be more restricted. The 'contemplative space' within the project shall be maintained as a semi-public space which functions as an outdoor space and can be experienced at certain levels and points in time. This space will be symbolic in nature, the surrounding active spaces for the public will be underground and the deceased spaces will be raised above thus allowing the exterior courtyard to have views skyward.

The majority of cases which will be worked on in this building concern suspicious deaths, where there is no clear indication to a cause of death and therefore a postmortem examination is conducted. The project deals with a working internal environment which allows for program elements to be penetrated by the occupant's circulation allowing for reflection and interaction. The mental stability and well-being of the employees in this type of working environment is an essential component for the design of a medical examiner's office and forensic laboratory. This building will process evidence from crime scenes which retain a high level of classified information, while at the same time allow for the society to be cognizant and aware of the program's function.

Implementing this charged program to Hartford's crime ridden area has the potential for the community to react and be cognizant to the value of life. Working in coordination with government officials and



utilizing the Hartford Hospital area as a potential site for relocating the University of Connecticut Health Center's Chief Medical Examiner's Office, the laboratories would provide information to legal proceedings along with an educational program. The education aspect of the program will provide continuing training for those involved and first hand experience to students interested in the field of forensic pathology and science.

The spaces for mourning will be accessible with the funerary component. A multi - family funeral home will provide a common gathering space and separate viewing rooms for each family. This European model for viewing can offer different families time to converse in one space then proceed to the private family mourning space and body viewing. Allowing multiple families to share emotions and stories for this one common event is a powerful tool for the healing process. A crematorium will be located on site, adjacent to the funeral home, for cremation services, a separate viewing room that links the family and the deceased. There will be a large non-denominational space linked underground to the funeral home which will reflect to the courtyard and crematorium.

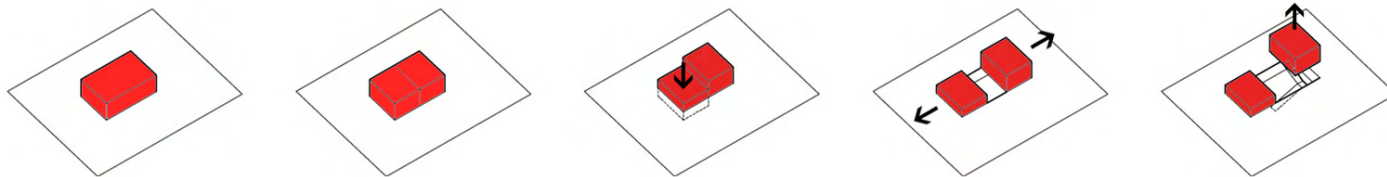
An important concept for the entire building is allowing for underground space to be carved out and activated by the users; and a larger massive presence (through materiality) at ground level to contrast with the surrounding context and establish spaces for the deceased.



## Architectural Intentions

Currently, given the reality that open land in developed areas has become valuable and limited, it is a common fact that most buildings are being developed to understand these factors. The density of an area should be maintained properly through a building's location within the urban fabric and how the existing conditions are dealt with implementing this new structure. This land-based issue is a starting point into spaces that can begin to respond to an individual or groups of people in order for an evocation into emotion/anticipation.

Sequence and a notion of exploratory progression have the intentions for an interactive experience on the physical and metaphysical levels. Light and dark space in conjunction with functional space and areas of inaccessible space reinforce the interaction. These spaces occur in particular locations and can be extracted from the natural environment; once these spaces emerge from a dormant state, the individual should be responsive to the total program and to the other users.



Program (red) sequence diagram in relation to site.

As an entity, the structure and its users should be in harmony with the ground and with the context that has been formed from history. This program should utilize these issues while maintaining the notion of spaces which seem to incorporate an exploratory process and destination. Activating memory and how one recalls the past in the present on such a personal level will be a challenge in design. It shall be interesting to implement architecture as a strategy for promoting remembrance and positive social interaction into a consistent whole.





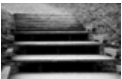


Programmatic Information

## Program Outline

The Connecticut State Medical Examiner's Office will contain high level security for the investigative, medical, and research laboratories; in addition, the public will be able to interact with the building through the funerary programs which relate to the public exterior courtyard for reflection and contemplation.

| <u>Program Space</u>                         | <u>Area</u>      | <u>Quantity [#]</u> |
|--|------------------|---------------------|
| <b>Forensic Education</b>                    |                  |                     |
| Administration Office                        | 300 s.f.         | 1                   |
| Library                                      | 800 s.f.         | 1                   |
| Classrooms                                   | 600 s.f.         | 2                   |
| Laboratories                                 | 320 s.f.         | 3                   |
| Cleanout and Storage                         | 180 s.f.         | 3                   |
| Lounge                                       | 750 s.f.         | 1                   |
| Gallery on Forensics                         | 900 s.f.         | 1                   |
|  | <u>5450 s.f.</u> |                     |
| Outdoor/Courtyard                            | 7700 s.f.        | 1                   |
| <b>Medical Examiner</b>                      |                  |                     |
| <b>Forensics Laboratory</b>                  |                  |                     |
| Pathology: Autopsy Room (3 stations)         | 1000 s.f.        | 1                   |
| Specialized Autopsy Room                     | 225 s.f.         | 1                   |
| X-Ray Room                                   | 300 s.f.         | 1                   |
| Identification/Viewing Room                  | 400 s.f.         | 1                   |
| Morgue                                       | 1000 s.f.        | 1                   |
| Morgue: Long-term Cold Storage               | 220 s.f.         | 1                   |
| Supplies Storage and Larger Specimen Storage | 1000 s.f.        | 1                   |
| Lockers/Cleanout                             | 170 s.f.         | 2                   |
| Toxicology: Laboratory                       | 250 s.f.         | 4 combined          |
| Short and Long Term Storage                  | 38 s.f.          | 2                   |
| Histology: Laboratory                        | 400 s.f.         | 2 combined          |
| Specimen Dry Storage                         | 800 s.f.         | 1                   |
|  | <u>7161 s.f.</u> |                     |



|  |                  |   |
|--|------------------|---|
| Administration                         |                  |   |
| Reception                              | 200 s.f.         | 1 |
| Public/Family Identification Room      | 150 s.f.         | 1 |
| Chief Medical Examiner's Office        | 250 s.f.         | 1 |
| Senior Investigator                    | 225 s.f.         | 1 |
| Investigator's Workspace               | 800 s.f.         | 1 |
| Medical Doctor's Offices (Pathologist) | 100 s.f.         | 6 |
| Administrative Offices                 | 100 s.f.         | 5 |
| Secretary                              | 800 s.f.         | 1 |
| Conference Room                        | 280 s.f.         | 2 |
| Business: Medical Records              | 400 s.f.         | 1 |
| Filing Room                            | 550 s.f.         | 1 |
| Networking Office                      | 600 s.f.         | 1 |
| Human Resources                        | 360 s.f.         | 1 |
| Lounge/Break out                       | <u>400 s.f.</u>  | 2 |
|  | <i>6795 s.f.</i> |   |
| Support Space                          |                  |   |
| Security                               | 200 s.f.         | 1 |
| Formaldehyde Handling and Lab          | 500 s.f.         | 1 |
| Photography Lab                        | 225 s.f.         | 1 |
| Storage                                | 800 s.f.         | 1 |
| Men's and Women's Restrooms            | 180 s.f.         | 4 |
| Mechanical                             | 2000 s.f.        | 1 |
| Evidence Storage                       | 500 s.f.         | 1 |
| Garage and Loading                     | <u>900 s.f.</u>  | 1 |
|  | <i>5845 s.f.</i> |   |
| Funerary Spaces                        |                  |   |
| Non-denominational Chapel              |                  |   |
| Worship Space                          | 1800 s.f.        | 1 |
| Service Space                          | <u>500 s.f.</u>  | 1 |
|  | <i>2300 s.f.</i> |   |
| Crematorium                            |                  |   |
| Lobby                                  | 540 s.f.         | 1 |
| Incinerator Space                      | 1500 s.f.        | 1 |
| Preparation Room                       | 300 s.f.         | 1 |
| Viewing Room                           | 360 s.f.         | 1 |
| Admin./Office                          | 150 s.f.         | 2 |
| Mechanical Room                        | <u>680 s.f.</u>  | 1 |
|  | <i>3680 s.f.</i> |   |



## Funeral Home

|                               |                   |   |
|-------------------------------|-------------------|---|
| Lobby                         | 700 s.f.          | 1 |
| Gathering Hall                | 3000 s.f.         | 1 |
| Display Room                  | 600 s.f.          | 1 |
| Accessories Room              | 150 s.f.          | 1 |
| Contract Office               | 200 s.f.          | 2 |
| Administration Office         | 500 s.f.          | 1 |
| Private Offices               | 150 s.f.          | 6 |
| Conference Room               | 500 s.f.          | 1 |
| Private Family Room with W.C. | 480 s.f.          | 4 |
| Private Viewing Room          | 135 s.f.          | 4 |
| Men's and Women's Restroom    | 200 s.f.          | 2 |
| Morgue                        | 350 s.f.          | 1 |
| Preparation Room              | 350 s.f.          | 1 |
| Supplies and Storage          | 225 s.f.          | 2 |
| Hazard Storage                | 230 s.f.          | 1 |
| Service Offices               | 90 s.f.           | 3 |
| Break Room                    | 330 s.f.          | 1 |
| Mechanical Room               | 1000 s.f.         | 1 |
| Garage                        | 1900 s.f.         | 1 |
|                               | <u>14490 s.f.</u> |   |

GRAND TOTAL Net Square Footage:  
Courtyard/Exterior Space:

45,721 s.f.  
7,700+ s.f.



identity time memory

programmatic information

## Existing Forensics (OCME) Laboratory

The University of Connecticut Health Center, located in Farmington, CT. was constructed in 1966 with originally 1.2 million square feet, seven miles of corridors, and two thousands rooms. With a responsive program comprising of education and laboratories, a School of Medicine, School of Dental Medicine, John Dempsey Hospital, the UConn Medical Group, UConn Health Partners and University Dentists, the Uconn Health Center promotes a mission of excellence in health care research, public service, and an admirable patient care facility.

Office of the Chief Medical Examiner

University of Conn. Health Center



Existing OCME.

The office of the Chief Medical Examiner (OCME), established in 1970 is located in an adjacent structure from the main health care structure. There are sixty full time and eleven part time employees within an organizational structure of three sections: pathology, laboratory, and management services. As a hub for investigation, the office's mission is:

"to provide accurate certification of the cause of death and to identify, document and interpret relevant forensic scientific information for use in criminal and civil legal proceedings necessary in the investigation of violent, suspicious and sudden unexpected deaths, by properly trained physicians. Providing such information may prevent unnecessary litigation, protect those who may have been falsely accused, and lead to proper adjudication in criminal matters. Medicolegal investigations also protect the public health: by diagnosing previously unsuspected contagious disease; by identifying hazardous environmental conditions in the workplace, in the home, and elsewhere; by identifying trends such as changes in numbers of homicides, traffic fatalities, and drug and alcohol related deaths; and by identifying new types and forms of drugs appearing in the state, or existing drugs/substances becoming new subjects of abuse."

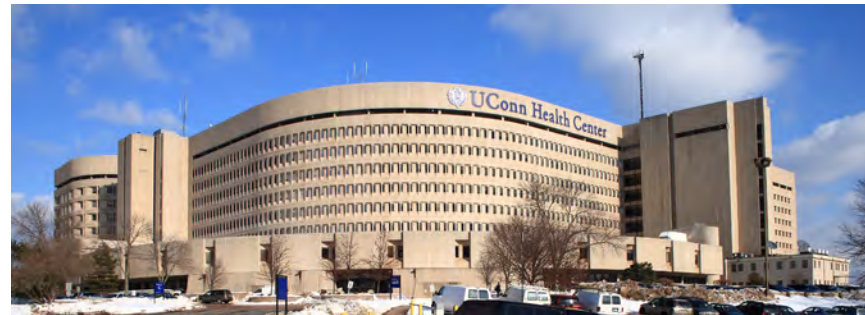


The state medical examiner's office reported that, "Connecticut has one of the largest databases of accumulated death investigation data in the country (267,641). The OCME produced substantial computerized statistical reports during the year. Recipients include state's attorneys, public defenders, hospital quality control departments, researchers and the media. In the toxicology and histology laboratories, we continue to invest in technological advances to more efficiently and effectively perform increasingly complex post mortem testing of tissue and fluids."

Recently the health center's organization has been in high demand for more space and due to the out of date structure there has been mention to relocate. In order to defray the cost of a new building, UConn Medical would join with existing hospitals in the surrounding areas.



Main entrance to the Office of the Chief Medical Examiner.



University of Connecticut Health Center, Farmington, CT.





Daily operations at the state medical examiner's office consists of gathering and processing data, whether the information is physical and/or digitally based. When the deceased arrives from the scene to the building a case number is assigned and imputed into an "in-house" web-based program. Body transfer from the garage to cold storage is done immediately. Typical vehicles entering the garage are the medical examiner's vans and pickup trucks as well as funeral director's hearses. A security room is adjacent to the garage for visual safety and for processing deliveries.



Rhode Island Office of the Chief Medical Examiner (Garage/Loading Zone).



Connecticut Office of the Chief Medical Examiner (Garage: Body Transfer from vehicle to gurney).

Due to the difficulty of moving the deceased within the building, all processes which are associated with the physical body are typically held to one floor. At the existing Connecticut office there is a six inch step for allowing the vehicle to backup to a loading zone. Once the deceased is out of the vehicle a steel gurney is rolled down a ramp and placed at the vehicle level for the body transfer.





Once a case has been assigned to the OCME, the staff of medical pathologists and deaners meet in a conference room to introduce and discuss the active cases. This pre-examination meeting is lecture based with dialogue and visual material. With the information addressed to the team, they then prepare to perform a physical examination/autopsy of the victim. Locker rooms, adjacent to the autopsy room, allow for the staff to properly suit-up and cleanup before and after examinations.



Image Source: Google Images.

When the body is pulled out of cold storage a scale in the autopsy room will weigh the body and does not calculate the gurney. The body is then moved against a neutral grey color wall with the assigned case number and photographed for further documentation. After photographs are taken the body is then transferred to the autopsy table. There are different types of autopsy stations, either a stationary system is used or a gurney is placed against a wall-mounted system. The necessary surgical/examination tools and formaldehyde are stored on/in stainless steel cabinets.



The samples of tissue extracted from the examination are stored in formaldehyde under dry conditions. This biohazard chemical is separately stored from other supplies (scrubs, towels, ect.). In the laboratories the specimen and/or fluid is tested and analyzed. Specimens are sealed and embedded in a wax-like mould and thinly sliced for further study under the microscope. The Histology laboratory is responsible for preparing the tissue and making the moulded slides of the tissue for the pathologist to read and identify diseased tissue.

Toxicology laboratories process fluids and liquids from the examination. Chemists working in this laboratory determine dosage and toxicity levels. There are safety stations within each laboratory which consist of a full body wash area. Biohazardous waste is collected on-site and later picked-up to be destroyed.



Connecticut Office of the Chief Medical Examiner (Histology Laboratory).



Connecticut Office of the Chief Medical Examiner (Histology Laboratory: Acid/Bases Hoods).



The Medical Examiner's Senior Investigator and his or her team of agents are provided an open work environment which is essential for communication. Sometimes these investigators need to be on call for twenty-four hour periods; some choose to stay at home or there can be a small living area within the program. Attorneys and law enforcement officials have to meet at this office as well to review cases which will later assist with legal proceedings. Doctor's offices and their secretaries are also in close vicinity to each other for exchanging information. The business department has a private in-house network for employee/case information and a state-wide business network. There are server rooms for this web-based use. Personal and medical records are stored electronically and physically filed.

Separate ventilation is used for the different work spaces. The Connecticut Office of the State Medical Examiner unfortunately utilized two systems, half air-chilled and half water-chilled. The autopsy rooms (main room and a smaller specialized room) are run on separate ventilation. Storage of the larger specimens in formaldehyde and other medical equipment ventilated separately. A roof penthouse allowed for the systems to be managed.



Connecticut Office of the Chief Medical Examiner (Roof: Formaldehyde Ventilation RTU in rear).



(Roof Penthouse: Filter).



Site Information



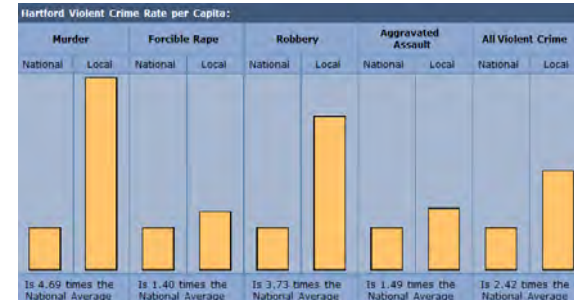
## Site Statistics

The city of Hartford, Connecticut has reported an increase in homicides since 2004 and the area has been categorized as having one of the highest crime rates in the country.

| YEAR END REPORT |           | CITY-WIDE |        |        | Reporting Period: January 1st - December 31st |       |                           |                           |                                |
|-----------------|-----------|-----------|--------|--------|---|-------|---------------------------|---------------------------|--------------------------------|
|                 | 5 yr. avg | 2004      | 2005   | 2006   | 2007  | 2008  | Per Cent Change from 2007 | Per Cent Change from 2006 | Per Cent Change from 5 yr. avg |
| MURDER          | 29        | 17        | 27     | 24     | 33  | 32    | -3.0%                     | +33.3%                    | +10.3%                         |
| RAPE            | 70        | 71        | 68     | 66     | 74  | 70    | -5.4%                     | +6.1%                     | +0.3%                          |
| ROBBERY         | 725       | 890       | 688    | 760    | 654   | 631   | -3.5%                     | -17.0%                    | -12.9%                         |
| AGG ASSAULT     | 694       | 580       | 685    | 705    | 704   | 794   | +12.8%                    | +12.6%                    | +14.5%                         |
| BURGLARY        | 1,307     | 1,735     | 1,404  | 1,173  | 1,205   | 1,016 | -15.7%                    | -13.4%                    | -22.2%                         |
| LARCENY         | 5,524     | 6,588     | 6,261  | 6,021  | 4,589   | 4,159 | -9.4%                     | -30.9%                    | -24.7%                         |
| AUTO THEFT      | 1,839     | 2,636     | 1,869  | 1,718  | 1,635   | 1,339 | -18.1%                    | -22.1%                    | -27.2%                         |
| TOTALS          | 10,184    | 12,517    | 11,002 | 10,467 | 8,894   | 8,041 | -9.6%                     | -23.2%                    | -21.0%                         |

*\*Crime statistics are from January 1st - December 31st for the year indicated.*

|                    |     |     |     |     |     |     |        |       |       |
|--------------------|-----|-----|-----|-----|-----|-----|--------|-------|-------|
| Shooting Incidents | 159 | 150 | 160 | 164 | 159 | 163 | +2.5%  | -0.6% | +2.4% |
| Shooting Victims   | 187 | 174 | 179 | 198 | 178 | 205 | +15.2% | +3.5% | +9.7% |



Hartford Crime Scene Detectives.



1975 Crime Laboratory within the Department of CT State Police

There are eight units: Fingerprints, Firearms/Toolmarks, Polygraph, Voiceprints, Documents, Serology, Trace Evidence, and Photography.



The Crime Laboratory is responsible for physical evidence examination, it's safe custody, and written reports.

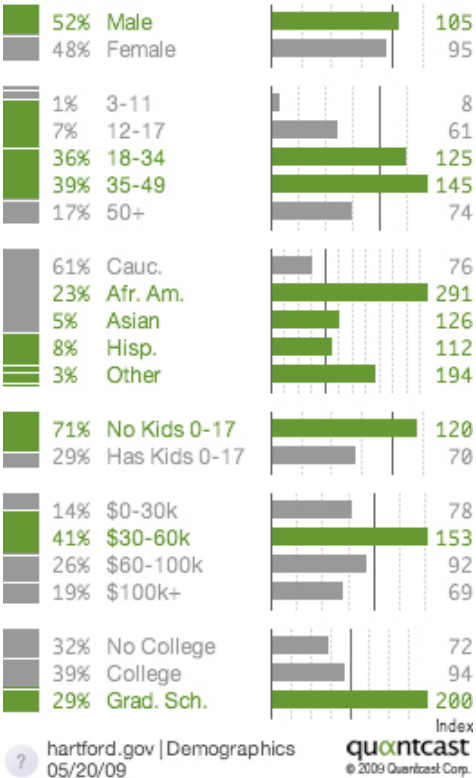
Criminalistics include: Trace evidence, Forensic Biology, Imprints/Prints, Documents, and Firearms.



identity time memory

site information

There has been a steady increase in population since 2000 and the city of Hartford has begun expanding with various projects. This new outlook for the city has been stimulating for urban activity.



| Demographics        |         |         |           |
|---------------------|---------|---------|-----------|
| Population (2007)   | Town    | County  | State     |
| 1990                | 139,739 | 851,783 | 3,287,116 |
| 2000                | 121,578 | 857,183 | 3,405,565 |
| 2007                | 124,554 | 884,968 | 3,549,606 |
| 2012                | 126,706 | 904,858 | 3,647,526 |
| '07-'12 Growth / Yr | 0.3%    | 0.4%    | 0.5%      |



Connecticut Center for Science & Exploration, Architect: Cesar Pelli 2009.



Hartford 21., Architect: CBT/Childs Bertman Tsekares Inc 2006.



identity time memory

site information



## City History

Settled in 1623 as a Dutch Trading post Hartford, Connecticut was originally named, House of Hope. In 1636 Reverend Thomas Hooker left Massachusetts and formed a colony upon making peace with the local Algonquin Indians. Hartford became a significant contributor to the establishment of a new government. The Fundamental Orders of 1639 was the first document in America's history to formulate a democratic government with the people's consent, furthering the support and approval for the United States Constitution.

The town developed agriculturally and into an important trading center on the Connecticut River. Insurance corporations were founded on this basis for trade between merchants. Social and economic forces allowed for city growth in industry and manufacturing, while in parallel, a cultural diversity was forming. In 1844 the nation's oldest public art museum, the Wadsworth Athenaeum, was established and provided a basis of recognition to individuals such as J.P. Morgan, Mark Twain and Harriet Beecher Stowe. Although in the 1950s there was suburban sprawl, the capital city declined from infrastructure developments. The city since then has experienced highs and lows in economy; however, more recently downtown's commercial and residential developments have increased. Source: (<http://www.hartford.gov/history/default.htm>)



1877 Map of Hartford, Connecticut.



1872 State Capitol Building Architect: Richard M. Upjohn  
photo taken 1909.





Old State House 1796.



Mark Twain House.



Wadsworth Atheneum.



Trinity College.



Bushnell Park.



1963, the Phoenix Mutual Life Insurance Company.



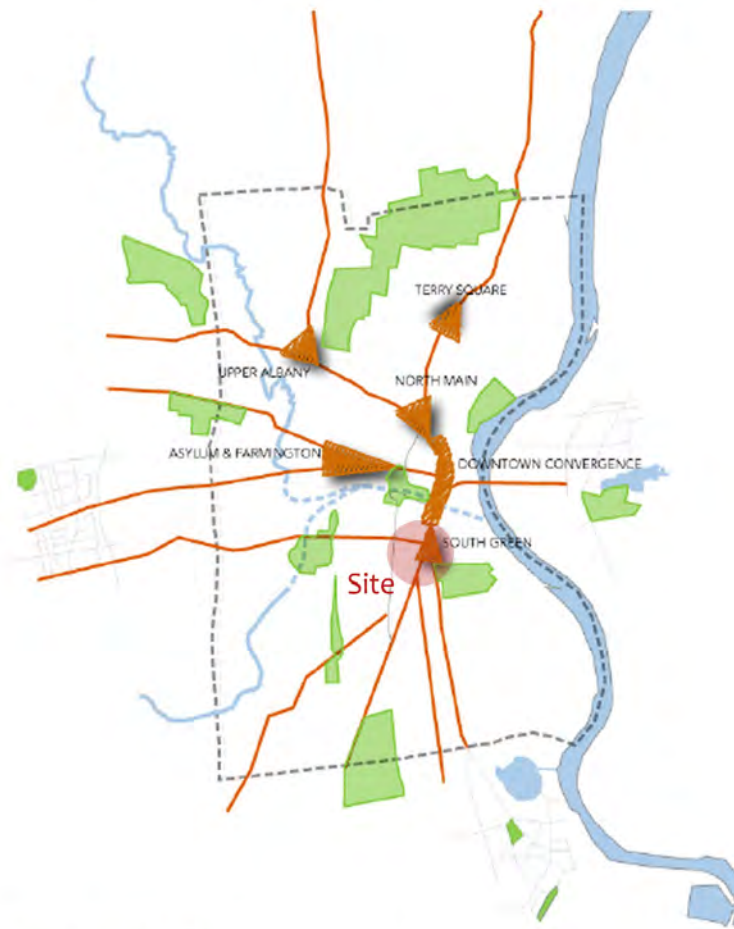


# Hartford 2010 City Plan



The Hartford 2010 plan proposed Main Street as functioning as the “address for the downtown.” Future development plans along this axis, have the potential for a revitalized district that will have the ability to bring in and attract a diversity of people and in turn will energize the economy, thus allowing for an awareness of the surroundings due to the increased density.





Historic Hartford streets



The arteries which converge from the surrounding region allow “gateways” into the downtown district of Hartford and connections along Main Street. These connections network the downtown district to the surrounding region. At the intersection of three southern arteries, the site offers a transitional phase into the Downtown district.



## 02 THE TRIDENTS DOWNTOWN CONVERGENCE

A historic Main Street that looks and functions as the central “address” for Downtown, spurring further high-value development throughout the center city. This involves amplifying the physical hospitality of Main Street and environs to invite more shopping, dining, tourism, and center city living. Potentially, over 2,100 jobs will be created and the trident will attract approximately 550 new residents.



North of the site, the downtown core, will be accessed by the thoroughfare Main Street. Plan 2010 will manage physical improvements to this district and provide a significant cultural enrichment.

## 02 THE TRIDENTS DOWNTOWN CONVERGENCE



### 1 Target Key Sites, Including:

- Signature mixed-use development at Asylum/Main
- Signature cultural building on I-84
- Opportunities for re-use of existing Civic Center site
- Continuous retail on the key cross streets



### 2 Examine the Re-design of Main Street, Including:

- Signal timing
- Rationalize lane widths. Add bump outs at crossings
- Opportunities for short-term, on-street parking
- Alternatives to reduce the use of Main Street for bus staging
- Provide higher-amenity bus stops
- Further upgrade way-finding signage



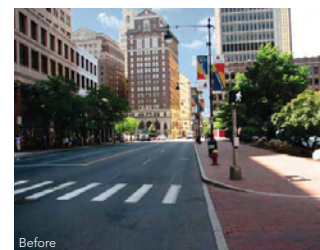
### 3 Propose Streetscape Improvements, Including:

- Lighting, landscaping, and other design elements for the length of Main, Asylum and cross streets
- Programming and public art



### Action Agenda for Economic Development

- Potential development of 1.8 million square feet of residential, office, retail and hotel space
- Modern home furnishing store
- Apparel store
- Book, music, entertainment superstore retailer
- Attract a large-scale developer, with experience in high-profile, mixed-use, entertainment and hospitality-centered developments in high density environments



[HARTFORD 2010] 15



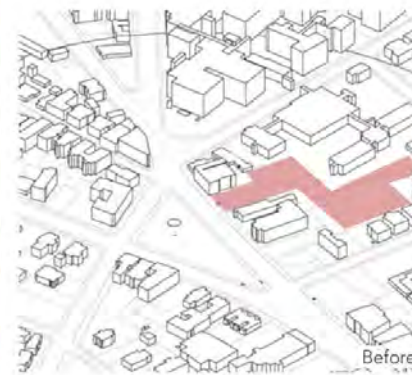
identity time memory

site information



## 02 THE TRIDENTS SOUTH GREEN

A high-image, multi-ethnic meeting place, to spur and link further investment on Park Street, in south Downtown, at Colt Gateway, for Hartford Hospital, and more. Potentially, over 550 jobs will be created and the trident will attract approximately 130 new residents.



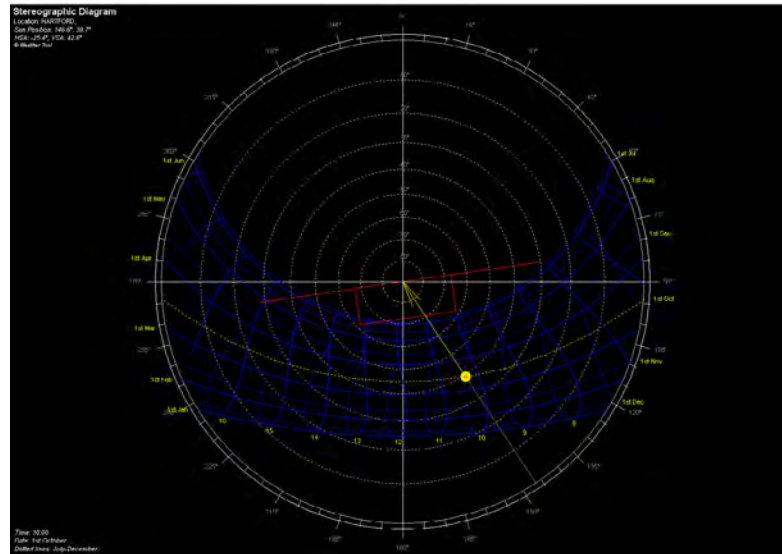
The site, located at 1a and 2, will allow for an integration and stronger approach to connect Hartford Hospital, the medical realm, and the "Learning Corridor" which ultimately extends to Trinity College. There is a progression to Trinity College from Downtown with the site being an element for this connection. With the retail district planned for 2010 on Park Street, the site for the forensics laboratory and research institute will provide a transitional point between the hospital and commercial districts.



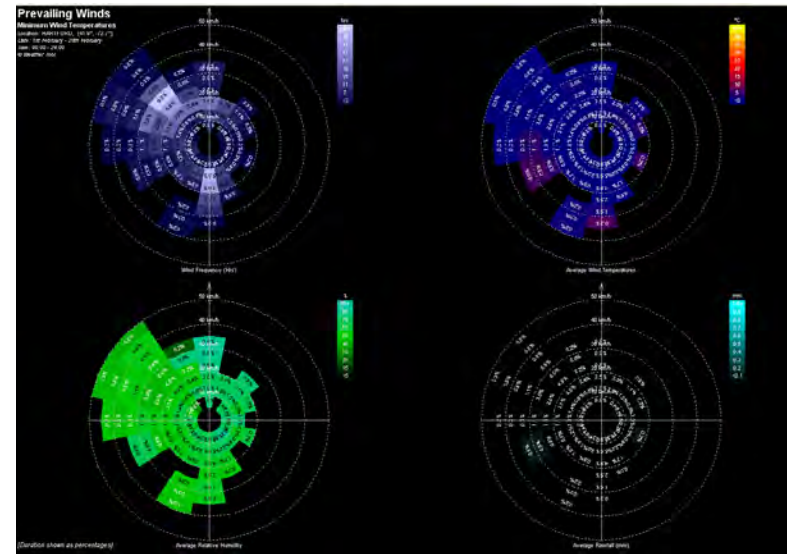
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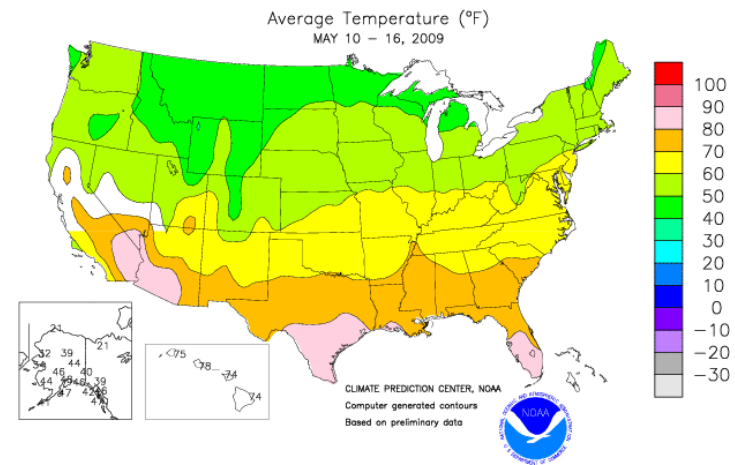
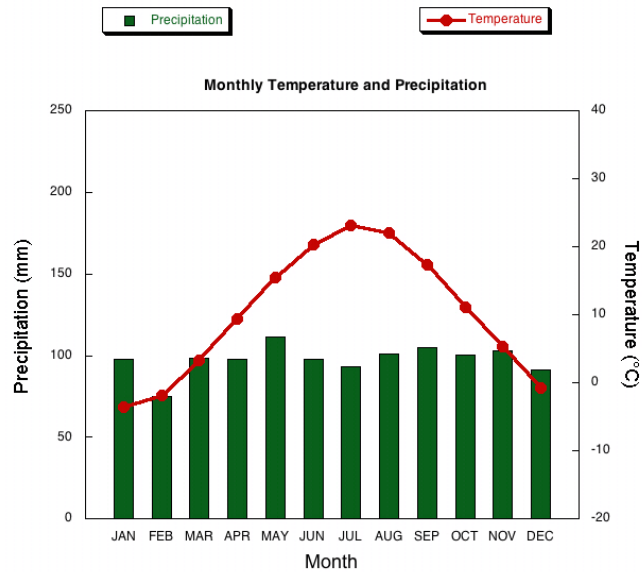
# Climatic Conditions



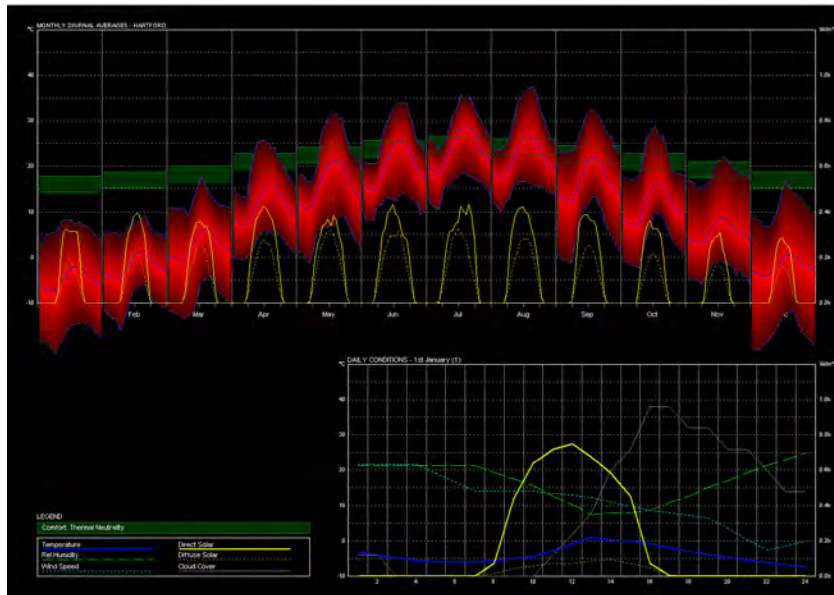
Stereographic Diagram - red box indicates optimum building orientation.



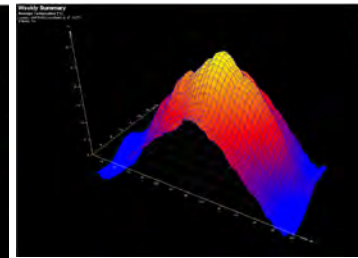
Wind Frequency (upper left: Prevailing out of North-West), Average Wind Temperatures (upper right: About 37 degrees Fahrenheit/ 3 degrees Celsius for February), Average Relative Humidity (lower left: About 45%-50% for February), Average Rainfall (lower right: Around .1mm).



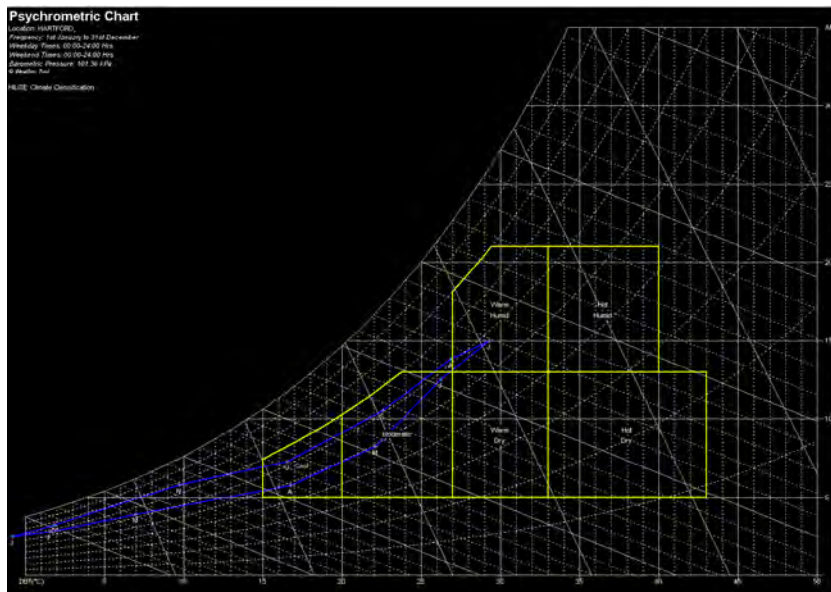
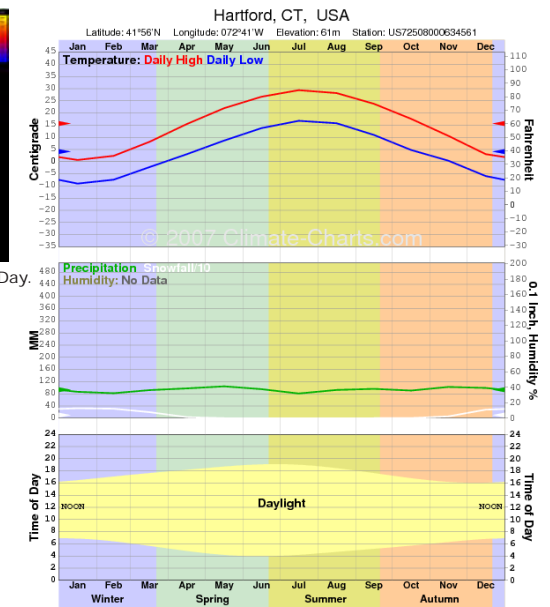




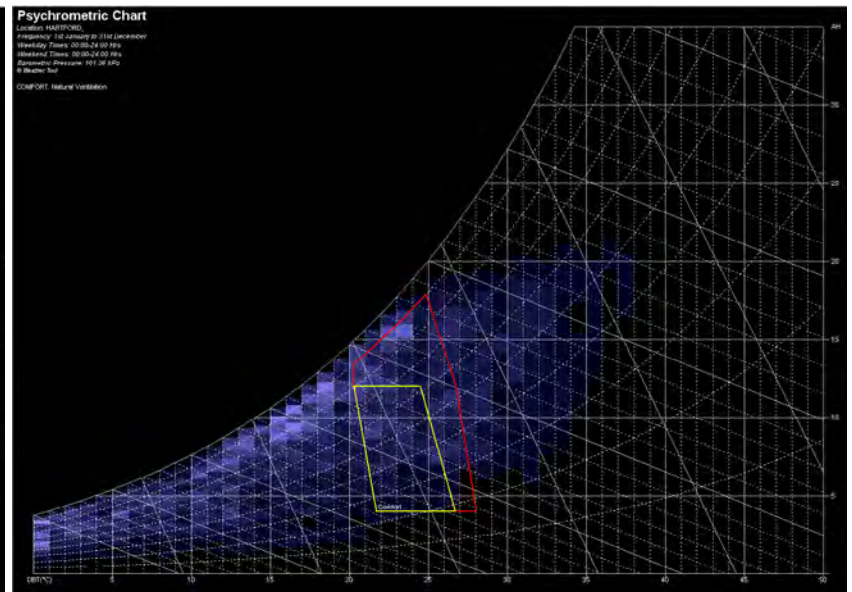
Average Monthly Temperature: Summer months comfort zone is interrupted.



Yearly Temperature in Weeks by Hours in a Day.



Climate Classification.



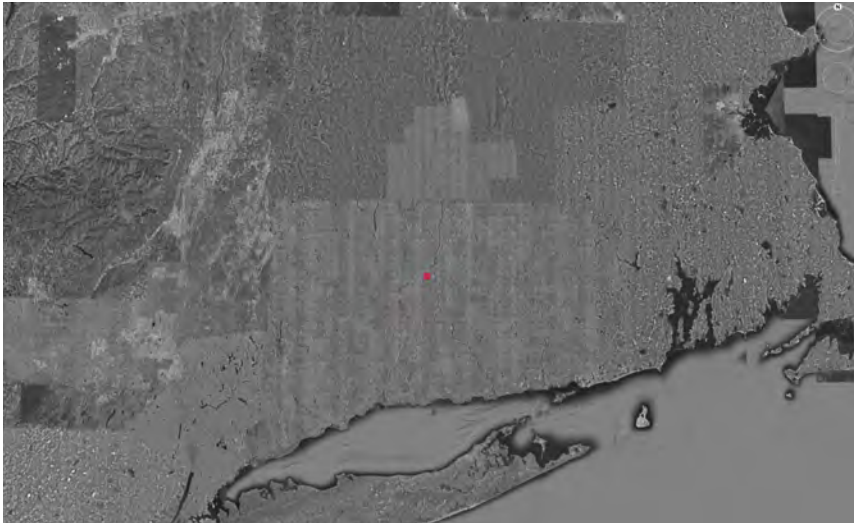
Natural Ventilation Comfort Zone (yellow) at a light activity level and Air Speed (red) at a pleasant level.



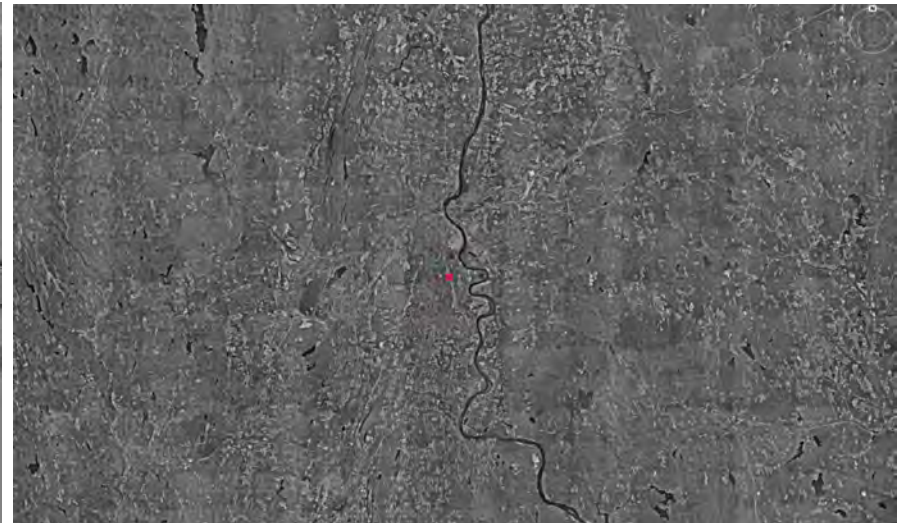
identity time memory

site information

# Proposed Site



Aerial of Southern New England.



Aerial of Connecticut River and landscape.



Aerial view of Hartford County.



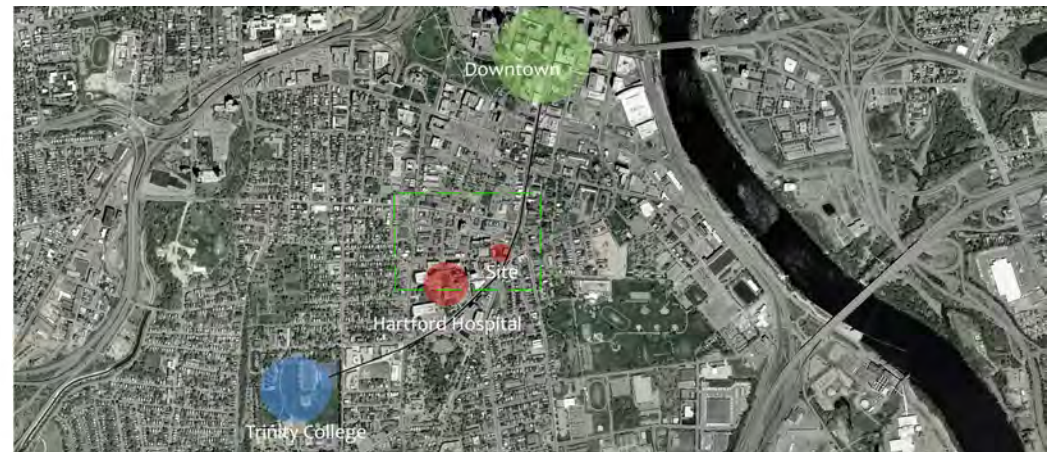
Aerial view of site location (red) and Barnard Park (green).







Site Location: South Green Neighborhood.



Downtown Hartford Connection.



Site Dimensions - Total Site Approximately 91,663 s.f.



Site (red) in vicinity to Hartford Hospital.

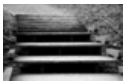
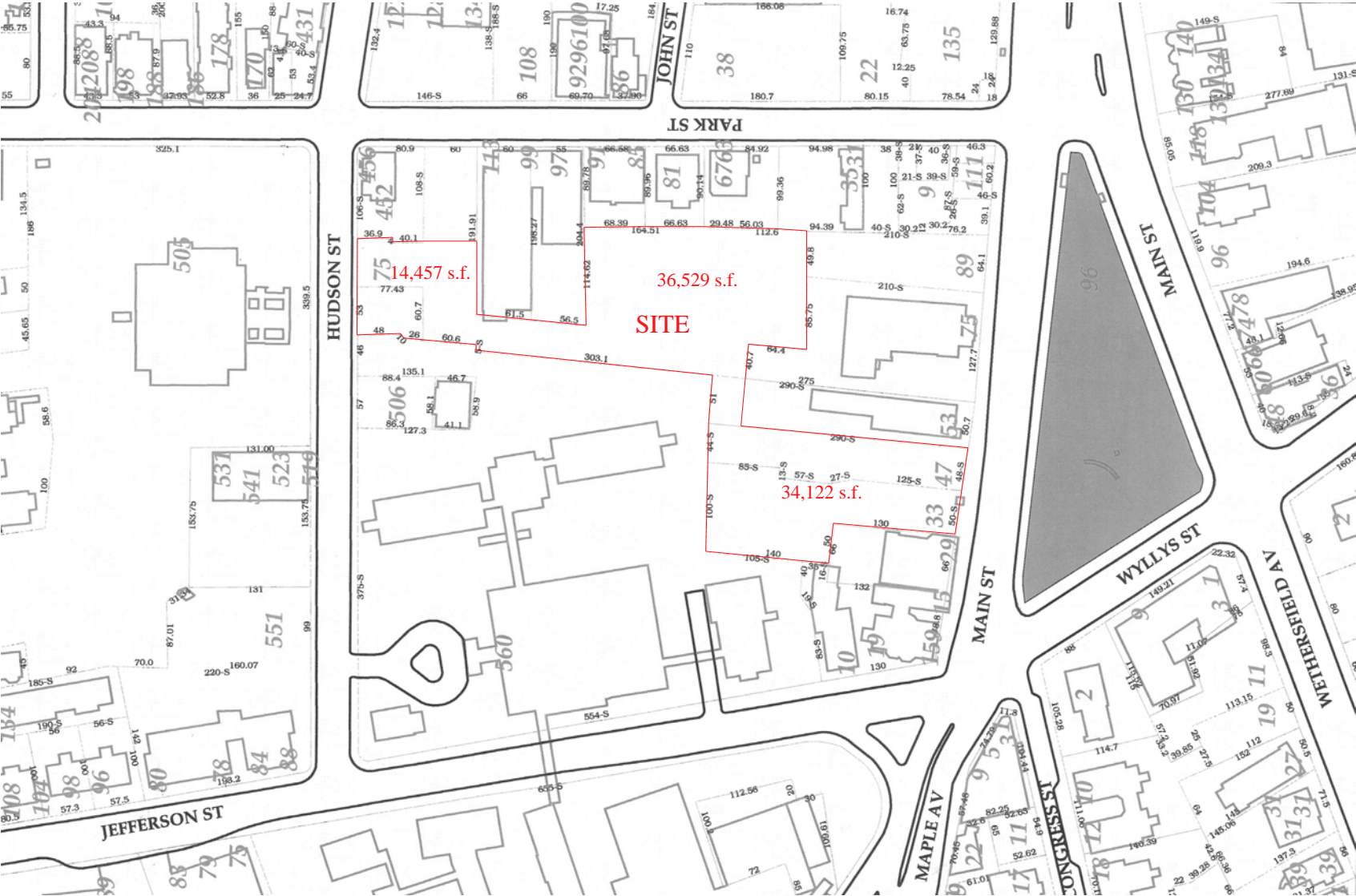


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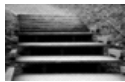
Site Area and Boundaries



# Building Types



- Business
- Hartford Hospital
- Business/Residential
- Religious/Shelter
- Residential



identity time memory

site information



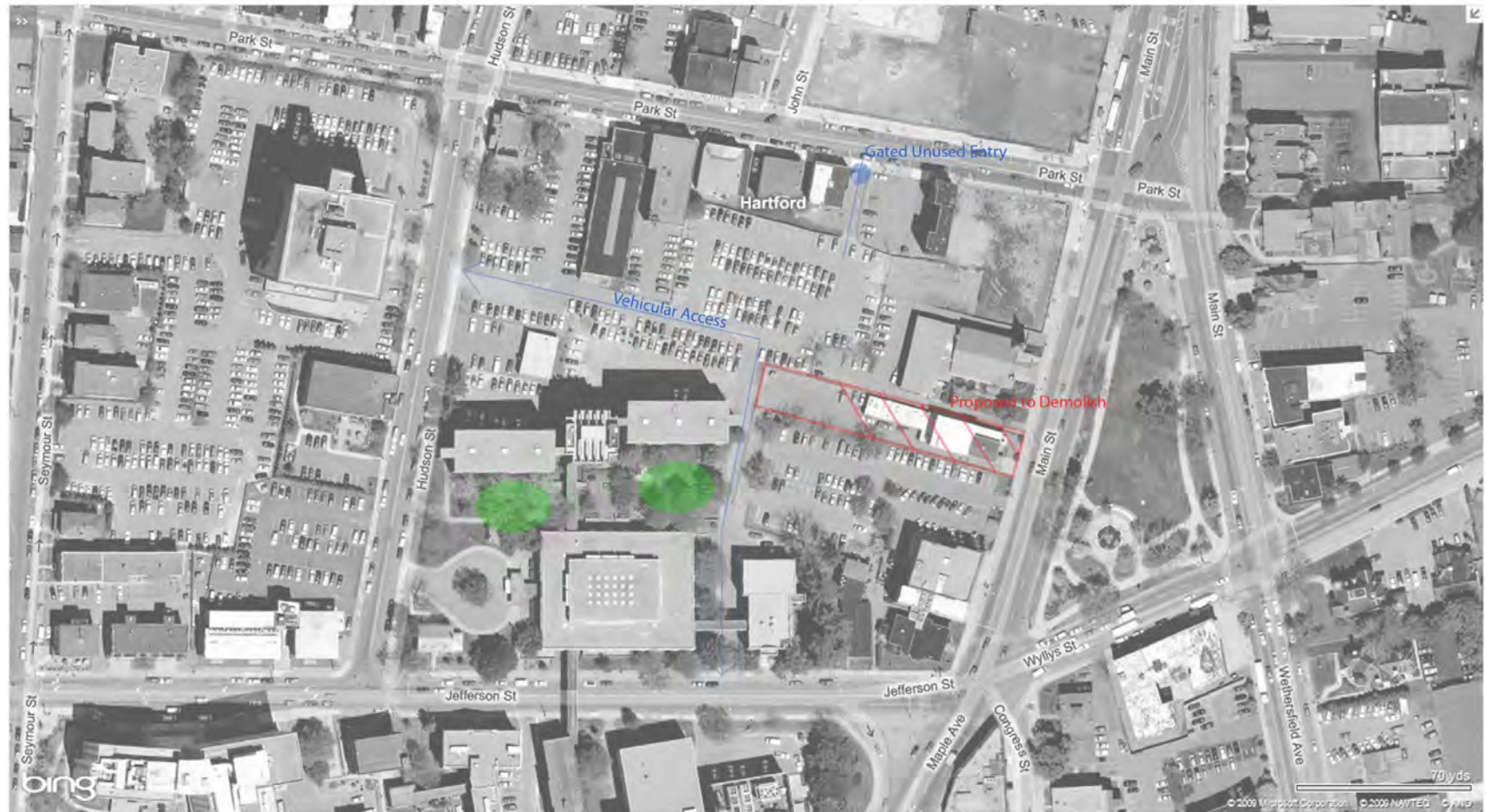
## Site Perimeter Movement

Public gathering spaces (GREEN) which are in proximity to the site include Barnard Park, the two bus stop stations on Main Street, and the streetscape along Park Street. High traffic (BLUE) is on Main Street and secondary traffic flow is on Jefferson Street. Minimal traffic occurs on Hudson Street.



## Site Internal Features

The site is divided internally between the large parking lot for Hartford Hospital employees and a vehicular access way which connects Hudson Street and Jefferson Street. There is an unused gated entry to the North of the site that will be removed. In addition, the proposed plan is to demolish a small existing building which is currently *for sale*. Small intimate green areas are integrated with Hartford Hospital's Education and Resource Center.





## Site Photos (existing conditions)



Barnard Park: Corner of Wyllys Street and Wethersfield Avenue.



Barnard Park: Looking North-West.



Barnard Park: Looking North at Downtown District.



Barnard Park: Looking South-West at the site on Main Street.







Barnard Park: Looking North-West at site on Main Street with Downtown in the background.



Looking South-West: Main Street entrance to the site.



Looking South-East: Hudson Street entrance to the site.



Looking East: Hudson Street entry onto the site.







Looking East: The site is currently parking for Hartford Hospital.



Looking North: Barnard Park is located to the East beyond the Main Street parking lot.



Looking South: This alleyway provides access to Jefferson Street and Hartford Hospital.



Looking East: Main Street Parking Lot from the alley way.



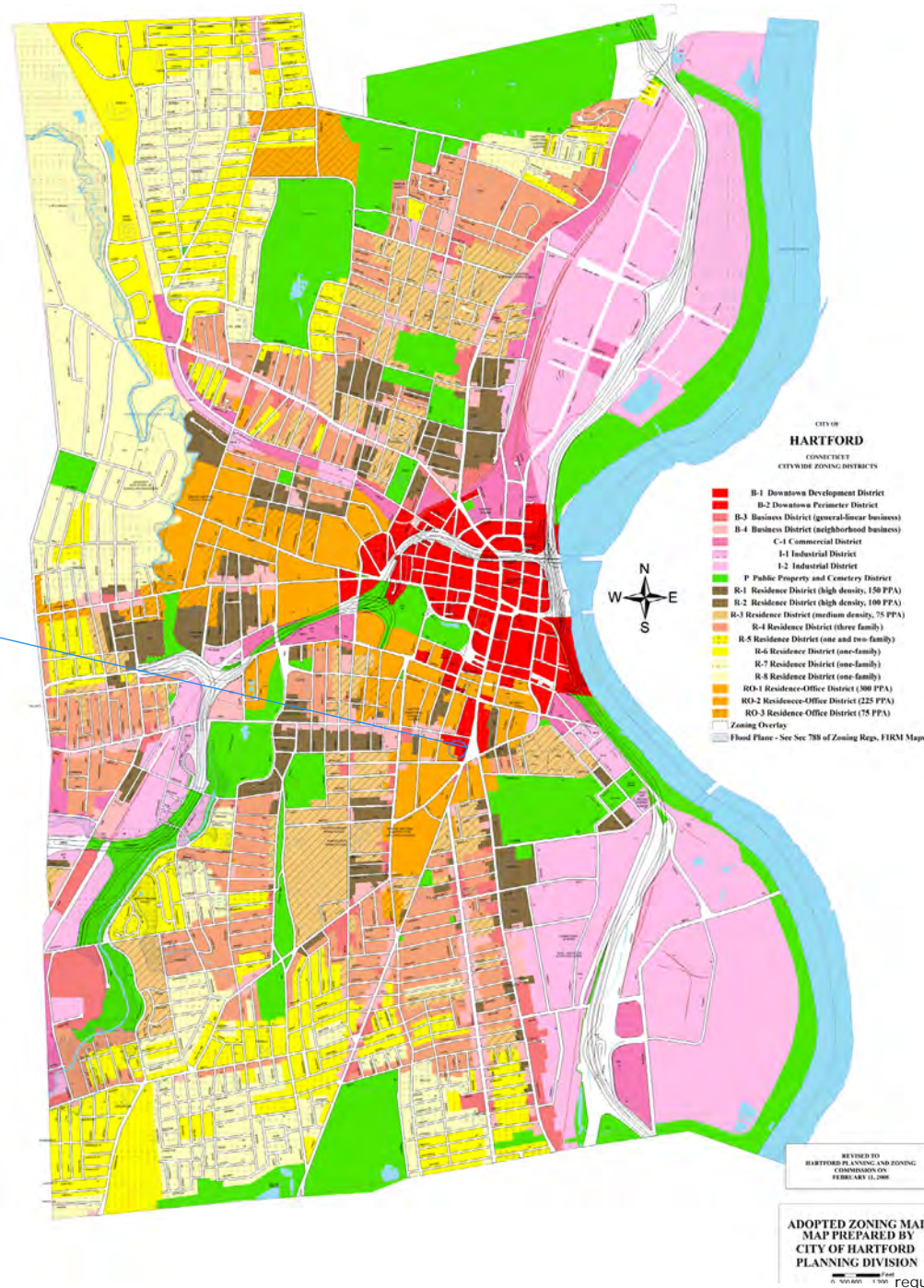
Regulatory Controls



# Regulatory Environment Report

Site

B-2 Downtown Perimeter District



identity time memory

regulatory controls report

## ARTICLE I. IN GENERAL

### Sec. 35-1. Purpose; general plan of development.

(a) A primary purpose of the revised zoning ordinance, prepared after an intensive study of more than two (2) years, is the implementation of the newly prepared general plan of development for the city. This general plan of development which has required as much intensive work on the part of leading planning consultants and the staff of the commission on the city plan, establishes goals for the development of the city as part of a larger metropolitan area. In the preparation of the general plan of development, metropolitan trends and plans have been taken into account.

(b) The achievement of goals by a community requires that many acts be undertaken. Some of these will come about through an urban renewal program, others will result from capital improvements. Policies with respect to taxation will become a force in the achievement of goals. The zoning ordinance becomes one (1) of the major instruments in helping to achieve a general plan of development for the community. The recently completed community renewal program which required three (3) years of detailed study of the city, will also serve as one (1) of the instruments for achieving community goals and development.  
(Code 1977, § 35)

### Sec. 35-14. Lot limitations.

In all residential districts only one (1) principal structure shall be placed on a zoning lot or lot of record, with the exception of parcels of record or excepted parcels which may be so arranged or subdivided as to provide for one (1) or more principal structures when the land areas allocated to each structure are equal to or greater than the lot area required for the district and the structure and land complies with all other requirements of the district in which it is located. This requirement shall not apply to group dwelling developments, planned area developments or planned residential developments, or in the case of an individual lot associated with an individual attached or semidetached single-family dwelling as provided for in the definition of “lot” in section 35-2.

(Code 1977, § 35-3.12)

### Sec. 35-15. Lot and building frontage.

(a) Every lot or zoning lot shall front upon a public or private street for the full width of the lot, except as provided in section 35-890 and article VIII of this chapter and except in the case of an individual lot associated with an individual attached or



semidetached single-family dwelling as provided for in the definition of “lot” in section 35-2.  
(Code 1977, § 35-3.13; Ord. No. 10-91, 3-25-91; Ord. No. 27-93, 8-9-93)

### ARTICLE III. DISTRICTS

#### DIVISION 1. GENERALLY

Sec. 35-181. City divided into districts; number; map adopted; exceptions.

(a) For the purposes of promoting the health, safety, morals and general welfare of the community; lessening congestion in the streets; securing safety from fire, panic and other dangers; providing adequate light and air; preventing the overcrowding of land and avoiding undue concentration of population; facilitating adequate provision for transportation, water, sewerage, schools, parks and other public requirements; conserving the value of buildings and encouraging the most appropriate use of land throughout the city; providing for the public health, comfort and general welfare in living and working conditions; regulating and restricting the location of trades and industries and the location of buildings designed for specified uses; regulating and limiting the height and bulk of buildings erected; and regulating and determining the area of yards, courts and other open spaces for buildings erected, the city is divided into twenty-one (21) classes of districts as follows:

#### TABLE INSET:

|      |   |
|------|---|
| I-1  | Industrial district                         |
| I-2  | Industrial district                         |
| C-1  | Commercial district                         |
| B-1  | Downtown development district               |
| B-2  | Downtown development perimeter district     |
| B-3  | Business district (general-linear business) |
| B-4  | Business district (neighborhood business)   |
| RO-1 | Residence-office district                   |
| RO-2 | Residence-office district                   |
| RO-3 | Residence-office district                   |
| R-1  | Residence district (high density)           |
| R-2  | Residence district (medium density)         |
| R-3  | Residence district (medium density)         |
| R-4  | Residence district (three-family)           |
| R-5  | Residence district (one- and two-family)    |
| R-6  | Residence district (one-family)             |
| R-7  | Residence district (one-family)             |



**Sec. 35-182. Summary schedule.**

(a) The summary schedule is as follows:

*Summary schedule.* In all instances reference shall be made to the specific provisions of this chapter.

TABLE INSET:

| Zoning District | Maximum Permitted Residential Density | Maximum Permitted Floor Area Ratio | Minimum Required Lot Area (square feet) | Maximum Permitted Lot Occupancy (percent) | Minimum Required Lot Width (feet) | Minimum Required Yards Principal Building (feet) |         |              | Maximum Permitted Height | Minimum Required Usable Open Space (sq.ft./ person) |
|-----------------|---------------------------------------|------------------------------------|---|---|-----------------------------------|--|---------|--------------|--------------------------|---|
| I-1             | N.A.                                  | N.A.                               | 6,000                                   | 40(80) 1                                  | 60                                | B.L.   | N.R. 2  | N.R. 2       | N.R.                     | N.A.  |
| I-2             | N.A.                                  | N.A.                               | 15,000                                  | 50(70) 1                                  | 100                               | B.L.   | N.R. 2  | N.R. 2       | N.R.                     | N.A.  |
| C-1             | N.A.                                  | N.A.                               | 10,000                                  | 60  | 60                                | B.L.   | N.R. 2  | N.R. 2       | N.R.                     | N.A.  |
| B-1 Non-Res. 2  | N.A.                                  |                                    | N.R.                                    | N.R.                                      | N.R.                              | B.L.   | N.R.    | N.R.         | N.R.                     | N.A.  |
| Res. 3          |                                       | N.A. 14                            | N.R.                                    | N.R.                                      | N.R.                              | B.L.   | N.R.    |              | N.R.                     |   |
| B-2 Non-Res. 3  | N.A.                                  | 7 15                               | N.R.                                    | N.R.                                      | N.R.                              | B.L.   | N.R.    | N.R.         | N.R.                     | N.A.  |
| Res. 3          | N.R.                                  |                                    | N.R.                                    | N.R.                                      | N.R.                              | B.L.   | N.R.    | [30 4 ] N.R. | N.R.                     | 40 6  |
| B-3 Non-Res. 3  | N.A.                                  | 2 5                                | 6,000 18                                | 50  | 50                                | B.L.   | N.R. 10 | 20           | 4 stories 18             | N.A.  |

**DIVISION 6. B-2 DOWNTOWN  
DEVELOPMENT PERIMETER  
DISTRICT**

Sec. 35-323. Uses permitted.

B-2 land and water areas shall be used and buildings shall be erected, altered, enlarged or used only for one (1) or more of the uses permitted in the B-2 district by the table of permitted uses in article IV, division 1, of this chapter, subject to those



standards and special requirements listed in the table of permitted uses and by article IV, division 2. Residential uses shall be mandated within the B-2 district in accordance with the provisions of sections 35-181 and 35-816.

(Code 1977, § 35-5.59; Ord. No. 15-87, 6-8-87)

Sec. 35-327. Areas with no requirements.

There shall be no requirements in the following B-2 areas:

- (1) Limitations on persons per acre;
- (2) Permitted lot occupancy;
- (3) Required lot area;
- (4) Lot width;
- (5) Side yards;
- (6) Rear yard.

(Code 1977, §§ 35-5.63, 35-5.64, 35-5.66, 35-5.67, 35-5.69, 35-5.70; Ord. No. 15-87, 6-8-87)

Sec. 35-329. Front yard.

There shall be a front yard for all B-2 principal buildings in conformance with the existing building and veranda lines.

(Code 1977, § 35-5.68; Ord. No. 15-87, 6-8-87)

Sec. 35-330. Maximum height limit.

No portion of a B-2 structure which is located on land which fronts on a street bounded by a public park containing in excess of one (1) acre shall exceed a height of ninety (90) feet for a depth of sixty (60) feet from the front street line, except that certain architectural features such as church spires, roof structures for the housing of elevators, stairways, fans or similar equipment required to operate or maintain the building and fire or parapet walls, skylights, steeples, flagpoles and chimneys or similar structures are permitted beyond the ninety-foot height limit. Residential portions of a building or structure may be increased beyond ninety (90) feet if a setback from the building line at a ratio of one (1) foot for each two (2) feet of increased building height is provided.

(Code 1977, § 35-5.71; Ord. No. 15-87, 6-8-87)



Sec. 35-854. Table of permitted uses.

The following is the table of permitted uses for the city.

HARTFORD, CONNECTICUT ZONING ORDINANCE  
ZONING DISTRICTS PERMITTED USES

TABLE INSET:

| Permitted Uses  | I-1 | I-2 | C-1 | B-1 | B-2 | B-3 | B-4 | RO-1 | RO-2 | RO-3 | R-1 | R-2 | R-3 | R-4 | R-5 | R-6 | R-7 | R-8 | P | FP | RC  | PKG  |
|---|-----|-----|-----|-----|-----|-----|-----|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|---|----|-----|------|
| community health centers  |     | P   | P   | P   | P   | P   | P   | P    | P    |      |     |     |     |     |     |     |     |     |   |    |     |      |
| hospital services   |     |     |     |     |     |     |     | C    | C    |      |     |     |     |     |     |     |     |     |   |    | 893 | (3)  |
| medical clinics--outpatient services                                    |     |     | C   | C   | C   | C   | C   | C    | C    |      |     |     |     |     |     |     |     |     |   |    |     | (8)  |
| medical laboratory services   |     | P   | P   | P   | P   | P   | C   |      |      |      |     |     |     |     |     |     |     |     |   |    | 930 | (8)  |
| physicians' and surgeons' services                                      |     | P   | P   | P   | P   | P   | P   | P    | P    | P    |     |     |     |     |     |     |     |     |   |    |     | (7)  |
| <b>Repair Services</b>  |     |     |     |     |     |     |     |      |      |      |     |     |     |     |     |     |     |     |   |    |     |      |
| Automobile repair and services  |     |     |     |     |     |     |     |      |      |      |     |     |     |     |     |     |     |     |   |    |     |      |
| automobile laundry  |     | P   | P   |     |     | P   |     |      |      |      |     |     |     |     |     |     |     |     |   |    |     | (8)  |
| general repair and service  |     | P   | P   |     |     |     |     |      |      |      |     |     |     |     |     |     |     |     |   |    |     | (8)  |
| limited repair and service  |     | P   | P   |     | P   | P   |     |      |      |      |     |     |     |     |     |     |     |     |   |    |     | (8)  |
| wash, self-service  |     | C   | C   |     |     | C   |     |      |      |      |     |     |     |     |     |     |     |     |   |    | 879 | (8)  |
| Other repair services   |     | P   | P   |     | P   | P   | P   |      |      |      |     |     |     |     |     |     |     |     |   |    |     | (8)  |
| <b>Miscellaneous Services</b>   |     |     |     |     |     |     |     |      |      |      |     |     |     |     |     |     |     |     |   |    |     |      |
| Ambulance service   |     | P   | P   |     |     | P   | P   |      |      |      |     |     |     |     |     |     |     |     |   |    |     | (1)  |
| Business associations   |     | P   | P   | P   | P   | P   | P   | C    | C    | C    |     |     |     |     |     |     |     |     |   |    | 886 | (7)  |
| Civic, social, private, religious and fraternal associations, nonprofit |     |     |     | P   | P   | P   | P   | C    | C    | C    |     |     |     |     |     |     |     |     |   |    | 886 | (11) |

Sheet No. 22

ARTICLE V. OFF-STREET PARKING AND OFF-STREET LOADING PROVISIONS

Sec. 35-956. Application of off-street parking standards.

(a) The off-street parking requirement for structures or uses shall be determined by applying one (1) or a number of the standards under this section to each use as indicated by the numbers in the "PKG" column of the table of permitted uses. The number found in the "PKG" column across from a listed use indicates which of the following parking requirements shall apply to such listed use. In the case of mixed occupancies or uses, the zoning administrator shall compute separately the requirements for each occupancy or use, and then shall add the requirements of the individual occupancies or uses to obtain the total parking requirement.





STATE BUILDING CODE–  
2005 CONNECTICUT SUPPLEMENT  
2009 AMENDMENT

Sec. 29-252-1d. State Building Code – 2009 Amendment to the 2005 Connecticut Supplement

The 2003 International Building Code, 2003 International Existing Building Code, 2003 International Plumbing Code, 2003 International Mechanical Code, 2006 International Energy Conservation Code and 2003 International Residential Code of the International Code Council, Inc. and the 2005 NFPA 70 National Electrical Code of the National Fire Protection Association Inc., except as amended, altered or deleted by this Connecticut Supplement, are hereby adopted by reference as the 2005 State Building Code. The requirements of the 2009 Amendment to the 2005 State Building Code shall apply to all work for which a permit application was made on or after the date of adoption.

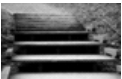
Copies of the International Codes may be obtained from the International Code Council, Inc., 4051 W. Flossmoor Rd., Country Club Hills, IL 60478 (website: [www.iccsafe.org](http://www.iccsafe.org)). Copies of the 2005 NFPA 70 National Electrical Code may be obtained from the National Fire Protection Association Inc., 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101 (website: [www.nfpa.org](http://www.nfpa.org)). Copies of the 2005 Connecticut Supplement and the 2009 Amendment may be downloaded from [www.ct.gov/dps](http://www.ct.gov/dps).

2009 AMENDMENT TO THE 2005 CONNECTICUT SUPPLEMENT

Add: A section or subsection in the Connecticut Supplement preceded by (Add) indicates the addition of this section or subsection to the adopted referenced standard.

Amd: A section or subsection in the Connecticut Supplement preceded by (Amd) indicates the substitution of this section or subsection in the adopted referenced standard.

Del: A section or subsection in the Connecticut Supplement preceded by (Del) indicates the deletion of this section or subsection from the adopted referenced standard.



## CHAPTER 3 – USE AND OCCUPANCY CLASSIFICATION

(Amd) 304.1 Business Group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

Airport traffic control towers;  
Animal hospitals, kennels and pounds;  
Banks;  
Barber and beauty shops;  
Buildings or tenant spaces used for assembly purposes by fewer than 50 persons when they are not accessory to other occupancies;  
Car wash;  
Civic administration;  
Clinic – outpatient;  
Dry cleaning and laundries; pick-up and delivery stations and self-service;  
Educational occupancies for students above the 12th grade;  
Electronic data processing;  
**Laboratories; testing and research;**  
Motor vehicle showrooms;  
Post offices;  
Print shops;  
Professional services (architects, attorneys, dentists, physicians, engineers, etc.);  
Radio and television stations;  
Telephone exchanges;  
Training and skill development not within a school or academic program.





### 304.2 Group B medical occupancies.

In addition to the requirements of this code for Group B occupancies, the provisions of Section 420 shall apply to Group B medical and dental occupancies that provide services or treatment for four or more patients who may simultaneously be rendered incapable of taking action for self-preservation under emergency conditions. This occupancy shall include, but not be limited to, the following:

- Outpatient clinics with general anesthesia or life-support equipment;
- Dental centers providing treatment under general anesthesia;
- One-day surgical centers;
- Physician's offices providing treatment under general anesthesia.

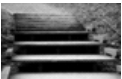
Facilities such as the above that do not provide general anesthesia or life-support equipment simultaneously to four or more patients shall be classified as Group B occupancies and shall not be subject to the special provisions of Section 420.

407.11 Medical Gas. Medical gas storage and administration areas shall be protected in accordance with NFPA 99-2002.

## SECTION 420 – GROUP B MEDICAL OCCUPANCIES

(Add) 420.1 Scope. The provisions of this section shall apply to Group B medical occupancies that provide services or treatment for four or more patients who may simultaneously be rendered incapable of taking action for self-preservation under emergency conditions, such as outpatient clinics and one-day surgical centers (see Section 304.2).

(Add) 420.2 Construction type. Group B medical occupancies shall be permitted in one-story buildings of any approved construction. Group B medical occupancies shall not be permitted in two-story or higher buildings of construction types IIB, IIIB or VB, unless located at the level of exit discharge and separated from occupancies above in accordance with Table 302.3.2, or unless the building is protected throughout by an automatic sprinkler system in accordance with Section 903.3.1.1.



(Add) 420.3 Separation requirements. Group B medical occupancies shall be separated from other occupancies or tenants in accordance with Sections 420.3.1 and 420.3.2.

(Add) 420.3.1 Stories below the level of exit discharge. Any story below the level of exit discharge shall be separated from the level of exit discharge by a floor assembly in accordance with Section 711. Such floor assembly shall be a minimum of 1-hour fire-resistance-rated construction.

(Add) 420.3.2 Tenant and occupancy separation. In addition to other requirements of this code, Group B medical occupancies shall be separated from other occupancies and other tenant spaces by a minimum of 1-hour fire-resistance-rated construction.

(Add) 420.4 Smoke compartments. Every Group B medical occupancy shall be divided into not less than two smoke compartments by means of smoke barriers conforming to Section 709.

Exceptions:

1. Group B medical occupancies of less than 5,000 square feet that are protected by an automatic smoke detection system.
2. Group B medical occupancies of less than 10,000 square feet that are protected throughout by an automatic sprinkler system in accordance with Section 903.3.1.1.
3. Group B medical occupancies of less than 22,500 square feet shall be permitted to utilize an area in an adjoining occupancy to serve as a smoke compartment if the adjoining occupancy is separated by a 1-hour fire-resistance-rated assembly and access to the adjoining occupancy is unrestricted.

(Add) 420.5 Means of egress. In addition to other requirements of this code, Group B medical occupancies shall comply with Sections 420.5.1 through 420.5.3.

(Add) 420.5.1 Corridor or passageway width. The clear width of any corridor or passageway in a Group B medical occupancy shall be 44 inches.

(Add) 420.5.2 Number of exits. Each story or fire area with a Group B medical occupancy shall have a minimum of two exits, remotely located. Any room or any suite of rooms exceeding 2,500 square feet in area shall have a minimum of two exit access doors remotely located.



(Add) 420.5.3 Travel distance. Travel distances within a Group B medical occupancy shall be as follows:

1. Travel distance to an exit from any room door required as exit access shall not exceed 100 feet.
2. Travel distance to an exit from any point in a Group B medical occupancy shall not exceed 150 feet in a building without an automatic sprinkler system and shall not exceed 200 feet in a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

(Add) 420.8 Laboratories. In addition to other requirements of this code, laboratories employing quantities of flammable, combustible or hazardous materials that exceed exempt amounts shall be protected in accordance with NFPA 99-2002.

## CHAPTER 5 – EXHAUST SYSTEMS

(Add) 510.1.1 Laboratories. For the purposes of the provisions of Section 510, a laboratory shall be defined as a facility where the use of chemicals is related to testing, analysis, teaching, research or developmental activities where chemicals are used or synthesized on a non-production basis, rather than in a manufacturing process.



Precedents



## Precedent Study List

The Netherlands Forensics Institute  
Architect: Claus en Kaan  
Location: Ypenburg The Hague, Netherlands  
Date: 1999-2004



Nelson-Atkins Museum of Art Bloch Building  
Architect: Steven Holl  
Location: Kansas City, Missouri  
Date: 2007



Salk Institute for Biological Studies  
Architect: Louis Kahn  
Location: La Jolla, California  
Date: 1959-1966



Tanatorio Municipal de Leon/BAAS  
Architect: Jordi Badia/ Josep Val  
Location: Leon, Spain  
Date: 2000



Kunstmuseum Liechtenstein  
Architect: Meinrad Morger/ Heinrich Degelo,  
along with Christian Kerez.  
Location: Vaduz, Liechtenstein  
Date: 2000



Palacio de Congresos Y Exposiciones de Merida  
Architect: Fuensanta Nieto/ Enrique Sobejano  
Location: Badajoz, Spain  
Date: 1999-2004



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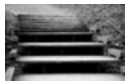
precedents





## The Netherlands Forensics Institute

- Serves advising with securing of evidence, examination of complex crime scenes, and a witness in court cases
- Located on the outskirts of Ypenburg in Hague, on the edge of a residential district
- Site allows for future expansion
- Four Floors (one underground)
- Concept: Glass volume encased in an openwork steel box that provides solar shading. This shading ensures satisfactory solar gain by slightly dis-aligning the steel and glass boxes.
- Depth of the steel bands around the building varies
- Entry is located adjacent to the auditorium, library, and conference center. Behind the entry is a 70 x 7 x 7 meter hall, the spinal void
- Flanked to the left and right of the hall are three patio/exterior courtyards lined by cellular offices
- Laboratories are located on the outmost layers at the perimeter, each separated by dividing walls
- Columnar structure concealed in these walls between labs and corridor. The corridor is space efficient with built in storage.
- Columns "disappear" between labs within thick walls
- Subtly of the walls give the illusion of a building which becomes progressively thinner from inside to outside
- Evaporative effect:
  - patios surrounded by heavy masonry walls punctured
  - innermost corridor is concrete
  - outermost corridor is frosted glass
  - external wall is clear glazing
- Interior materials and color express spatial experience



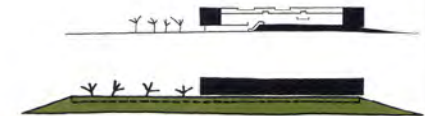
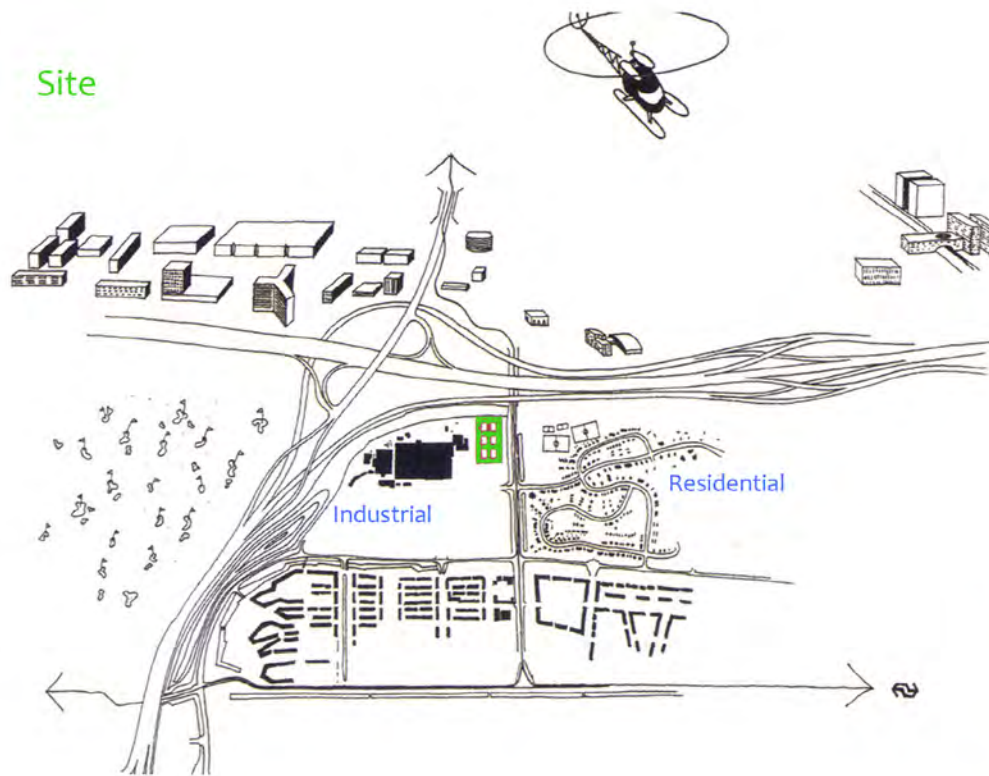
# Netherlands Forensic Institute [NFI]

Architect: Claus en Kaan

Location: Ypenburg The Hague, Netherlands

1999 - 2004





- The Hague - on the edge of a residential district
- Site chosen to allow for the NFI's future expansion



Netherlands Forensic Institute [NFI] Architect: Claus en Kaan Location: Ypenburg The Hague, Netherland 1999 - 2004

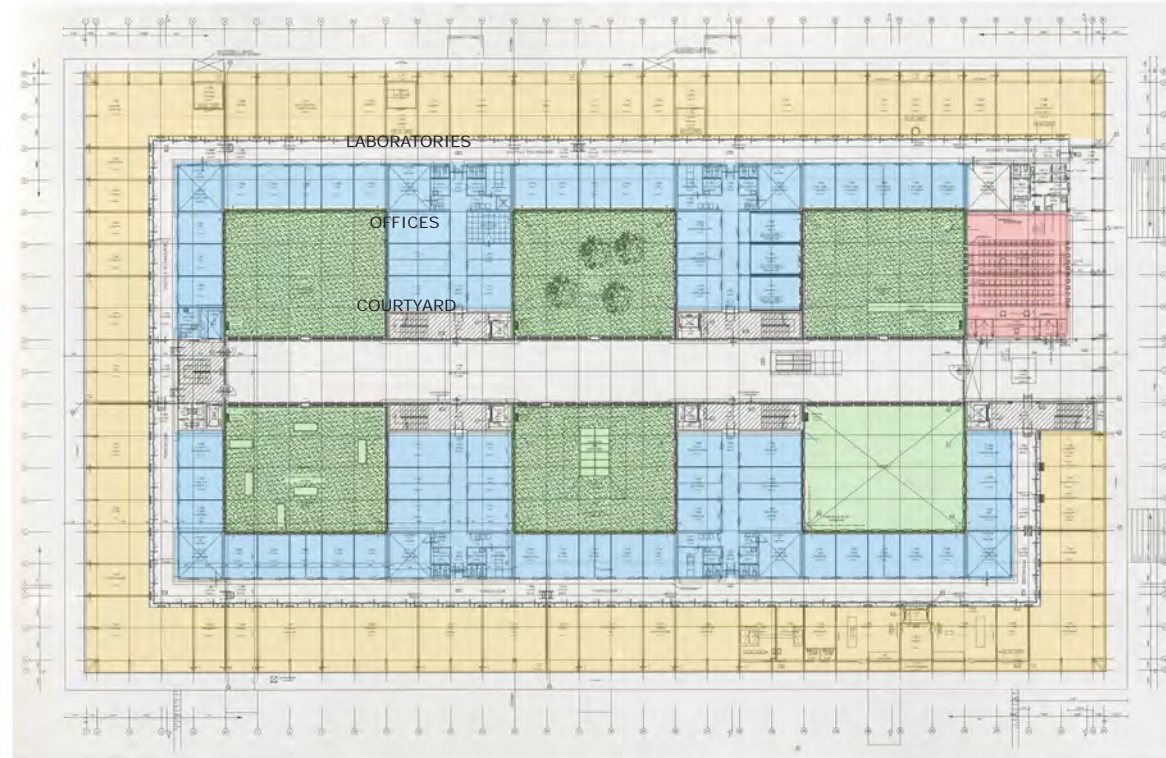


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## Program



Floor Plan



Netherlands Forensic Institute [NFI] Architect: Claus en Kaan Location: Ypenburg The Hague, Netherland 1999 - 2004

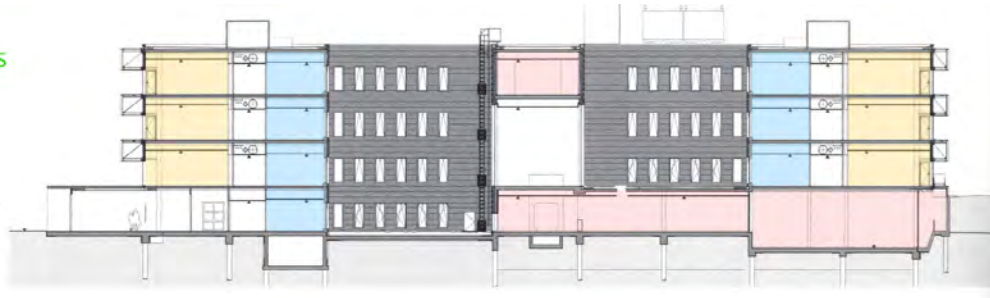


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## Sections

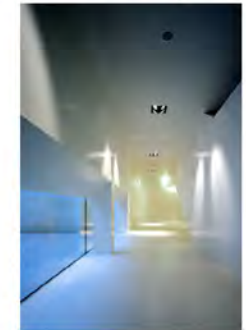
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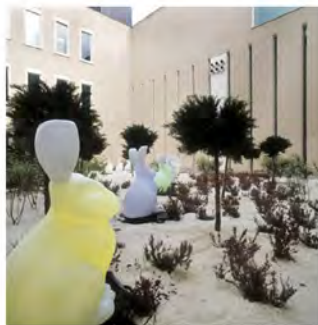
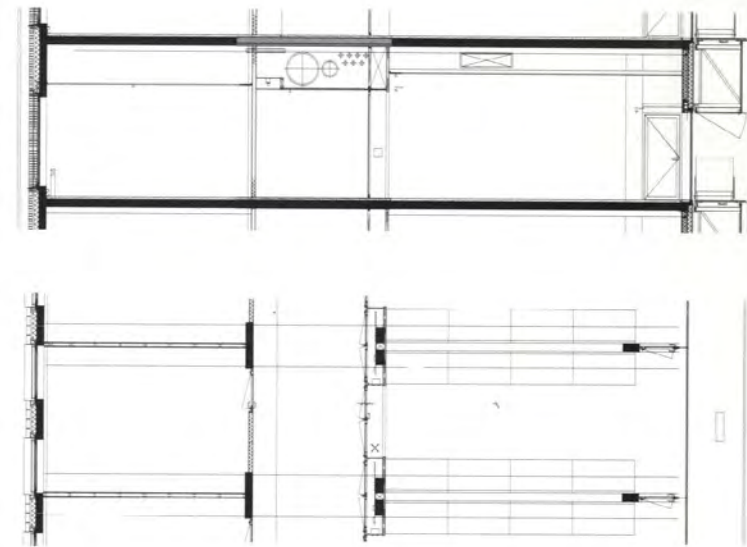
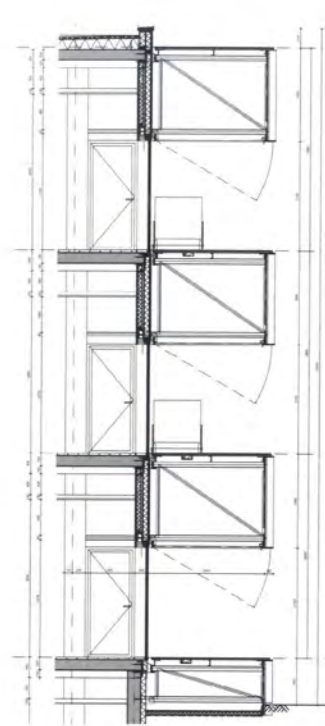
Netherlands Forensic Institute [NFI] Architect: Claus en Kaan Location: Ypenburg The Hague, Netherland 1999 - 2004



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Netherlands Forensic Institute [NFI] Architect: Claus en Kaan Location: Ypenburg The Hague, Netherland 1999 - 2004







## Nelson-Atkins Museum of Art Bloch Building

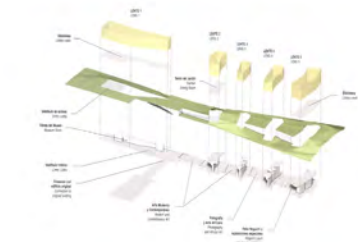
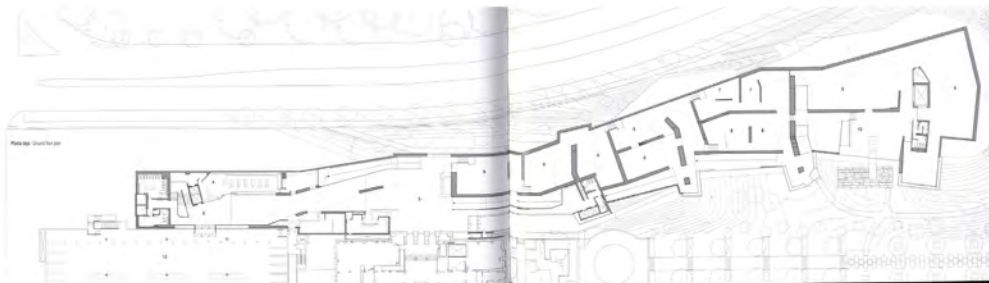
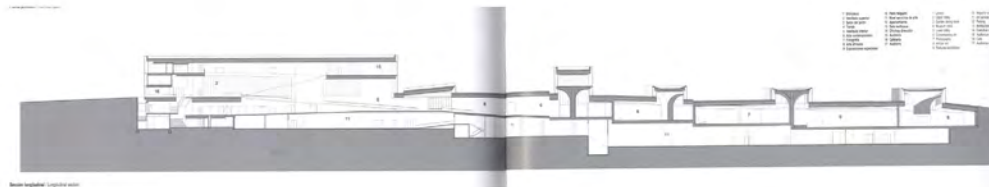
- This addition represents the founders' concepts for efficient expansion and offers a "strategic roadmap" for the transformation of the Nelson-Atkins Museum
- Adding to the existing 1933 neoclassical structure was problematic due to the building's vision of it's time and became a cultural icon for the Midwest.
- Holl's 21st century new addition was also to be of it's time, materially and spatially.
- Complementary contrasts between the original building and new building ("stone" existing, "feather", addition)
- The design unfolded, accessible green rooftops between the "lenses" provided the visitors with new vistas of the sculpture park and the existing museum
- These "lenses" broke the scale of the entire addition in order to not dominate/compete with the original building
- A "living structure" at night with use of translucent glass material and during the day, sunlight conditions change internally and externally through reflecting glass surfaces
- Comparison of the lenses have been noted to Japanese lanterns that are situated down the eastern edge of the lawn
- The 16 inch channel glass planks range from 8 to 18 feet in height. These panels are solar rolled and sandblasted for diffusion of light. Exterior walls were constructed using a U-shape connection for the channel glass panels
- The implementation of a reflecting pool to the north serves as a unifying element between the Bloch Building to the East and the existing museum
- There is an immediate clarity to the design that the building is an important, civic structure
- 840 foot long building is submerged underground
- A dramatic angled staircase provides entry into the program's lobby (where the past/existing and present/new meet intimately and unobtrusively)
- Interior space of lenses bend and fold
- Gallery spaces have canopies which draw the eye upward toward the natural light
- Holl's philosophy is of architecture and landscape merging, "interior oasis" offers observation across the lawn to the original museum, situated in the "simplicity of nature"
- "Porosity" is created with multiple entries and exits and encourages visitors to move freely
- Blending of exterior space/green space and building space created by paths and multi-level space.



# Nelson-Atkins Museum of Art Bloch Building

Architect: Steven Holl

Location: Kansas City, Missouri 2007



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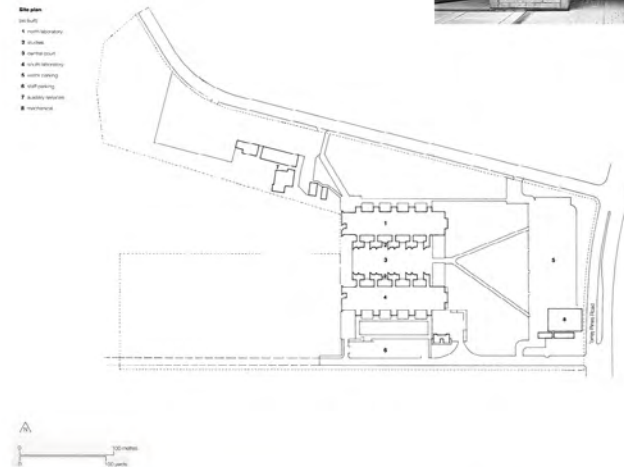
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## Salk Institute for Biological Studies

- The area is a 27 acre coastal site overlooking the Pacific
- Salk's core is an open-ended central courtyard which separates two wings, each lined by 5 free standing towers that face the inner courtyard
- The wings are laboratories; the towers, with arcade bases, consist of private studies
- A narrow central strip of water in the courtyard pulls the eye outward to the west which perspectively joins the surface of the courtyard with infinite space
- Jonas Salk's idea was to combine scientists and scholars to engage in research
- Salk to Kahn, "I would like to invite Picasso to the laboratory." This notion was for Salk to base his scientific institute on "broad, synthesizing, humanist principals."
- Scientist and Architect generated metaphors and allusions - "monastic seclusion and spirituality, peripatetic learning, the scientific and mystical body, new humanism, and the reconciliation of 'two cultures' of science and art. Salk, "merge intuition and reason."
- Kahn's three elements included flexible, column-free laboratories, each with a 10 foot high servant space and adjoining studies for scientists, village-like housing, and a meeting house (spiritual and philosophical purpose)
- Importance of "meeting" emphasized
- The laboratories served as a kind of middle term between the meeting house and residences.
- Arcaded bases to the study towers reflect the idea of a Roman basilica
- Kahn consolidated lab space in two identical six-story buildings astride a central garden
- Studies located on 2nd and 4th floors with mechanical floors too and labs on the same level as the porch and arcade, there is an alternation vertically
- Amplified perception of distance between labor and contemplation
- Sectional logic/vertical composition: "pipe space and lab space; lab space and studies; studies and central court"
- Interlocking volumes in both form and surface
- Kahn was focused with the design of the concrete connections
- The voids that formed from the concrete pour gave a similar effect to travertine
- Expressed method of construction with V-shaped protrusions and regulating lines of composition
- Focal point is the courtyard - a sense of healing is the given effect
- Kahn enjoyed mystical insights, he sought to translate these into a built form
- At the Salk, it is the condition of emptiness, not form, that activates the genius of Kahn's solution



**Salk Institute for Biological Studies**  
 Architect: Louis Kahn  
 Location: La Jolla, California  
 1959-1966



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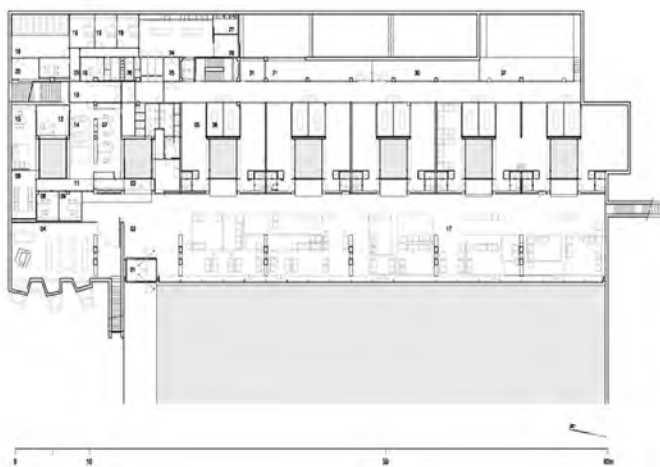
## Tanatorio Municipal de Leon/BAAS

- The building is conceived as a tomb of tombs.
- A completely buried construction, it eludes its volume and its signification in order to camouflage itself in the interstices of the adjacent residential area.
- The use of water on the roof constitutes the single facade, reflecting León's sky like an allegory of death.
- All that emerges from the water are mysterious fingers in search of light for prayer.
- The entrance, ritualized by a great ramp which slowly descends below the ground, terminates in an image of the sky which opens just far enough for entry.
- Past the threshold, the structural design of the main entrance conveys all the weight of a marble slab and the infinite thickness of its perimeter.
- A series of courtyards introduce space and light. From the viewing rooms, the only sight of the exterior is the sky.
- The building is constructed entirely of concrete, the only fitting material for a tomb. The choice of color reminds the visitor of the Boñar stone of which the whole city was built.
- Inside, a panel of iroko wood folds back on itself to separate the main entrance from the viewing rooms.
- Throughout the building there are inserts of black detailing, like the armband that signifies mourning and the sadness of visitors.

SOURCE: Archdaily.com <http://www.archdaily.com/3891/tanatorio-municipal-de-leon-baas/>

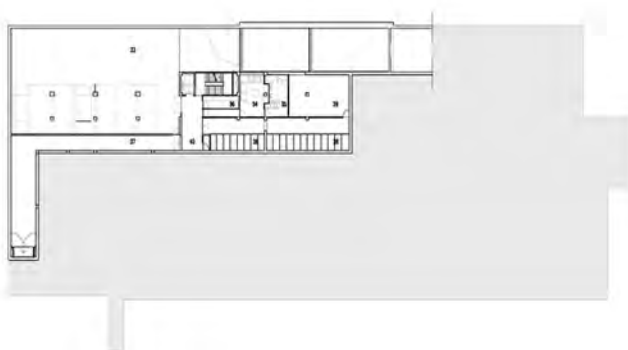
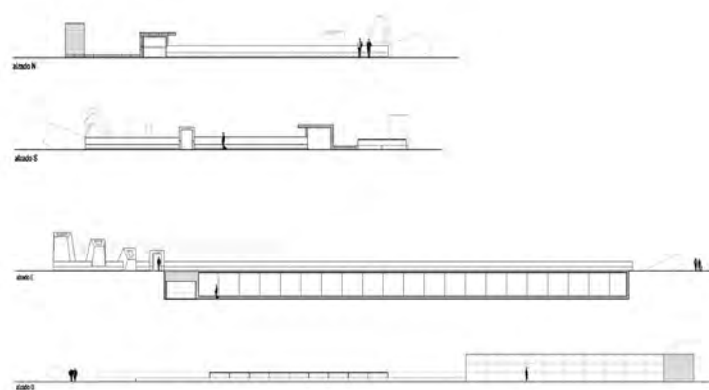






#### 004-3.5M

- 01 ENTRADA
- 02 HALL
- 03 RECEPTION
- 04 GYMNASIO
- 05 SALAS DE VISITA
- 06 TALLER
- 07 ADMINISTRACIÓN
- 08 DESPACHOS ASISTENTES
- 09 SALA REUNIONES
- 10 DESPACHO GERENCIA Y PRESIDENCIA
- 11 PASO ADMINISTRACIÓN
- 12 PASO PRESIDENCIA
- 13 ARCHIVO
- 14 SALA DE DESCANSO
- 15 SERVICIO MANEJO DE SERVICIOS Y CARRILES
- 16 PASO SALA DESCANSO
- 17 SALA DE ESPERA
- 18 SALA DE ESPERA
- 19 SALAS DE CONFERENCIA
- 20 DESPACHO DE ACCIONES
- 21 ALMACÉN INSTALACIONES
- 22 PASO A EXPOSICIÓN
- 23 SALA RECONSTRUCCIÓN
- 24 TALLERES
- 25 PASO TALLERES
- 26 VESTIBULOS
- 27 LABORATORIO
- 28 ALMACÉN SANITARIAS
- 29 PASO DE SERVICIOS
- 30 SALA DE INSTALACIONES
- 31 CUARTO DE LAMPARA
- 32 SALA DE MÁQUINAS



#### 004-4.5M

- 33 PARKING
- 34 SALA DE CONDUCTORES
- 35 VESTIBULOS
- 36 CUARTO GENERAL
- 37 PASO DE SERVICIO
- 38 ALMACÉN
- 39 SALA DE ADJUDICACIÓN
- 40 DISTRIBUIDOR



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## Kunstmuseum Liechtenstein

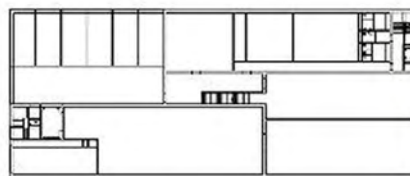
- The architects have created a museum building of great structural complexity and discreet simplicity.
- The closed form is a "*black box*" of tinted concrete and black basalt stone, is monolithic in character.
- River pebbles embedded in the building's exterior provide a subtle coloration, forming a link to the landscape of the Rhine Valley.
- The hand-carved surface of the facade invites touching, and reflects the surroundings. Long rows of windows, which are flush and frameless, open the black cube to both inside and outside.
- Choice of material reconciles the oversized dimensions of the building plan with the surroundings since the reflections dissolve the solid mass of the building among the smaller surrounding buildings of the city
- The exhibition rooms inside the black box are a perfect White Cube. Contrasting spaces emphasize movement and are dramatic to those experiencing the museum.
- Loadbearing walls constructed of dark concrete (cement dyed black, colored river gravel, and black basalt) which has been sanded and polished, inner structure is visible.
- The building is clearly structured with maximum space devoted to art.
- The visible exterior of the building corresponds almost exactly to the public exhibition spaces.
- There are six exhibition rooms arranged around two diametrically opposed staircases.
- The ground plan, reminiscent of a windmill's sails, enables diagonal views through the whole building.
- These exhibition rooms offer art the largest possible freedom through their clarity and precision.

SOURCE: <http://www.kunstmuseum.li/?page=2148&lan=en>

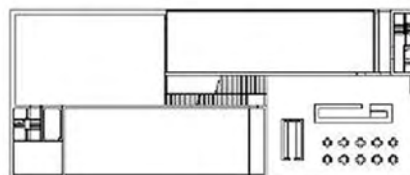




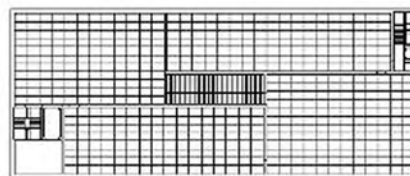
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OG



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## Palacio de Congresos Y Exposiciones de Merida

- This conference and exhibition center is powerful and symbolic for modern architecture in Merida
- Shapes new public zone through massive, unitary, and continuous surfaces defining interior spaces
- A raised terrace provides views to the city and (Guadiana) river
- This "platform" is the main node for gathering outside both auditoriums
- The main hall has an occupancy of 1,000
- Functionally these auditoriums can operate separate from the conference and exhibition areas located on the lower levels
- Concept is unitary but there is the opportunity to have areas used at different times
- Separate entrances exist for the auditorium halls and exhibition zone
- Acoustic ceiling independent from roof structure and is formed by zinc clad wooden panels
- Interesting relationship between interior and exterior space
- Spaces simply articulated with emphasis on a rectangular volume
- Interesting use of cantilever over public spaces

SOURCE: El Croquis Work Systems 2004







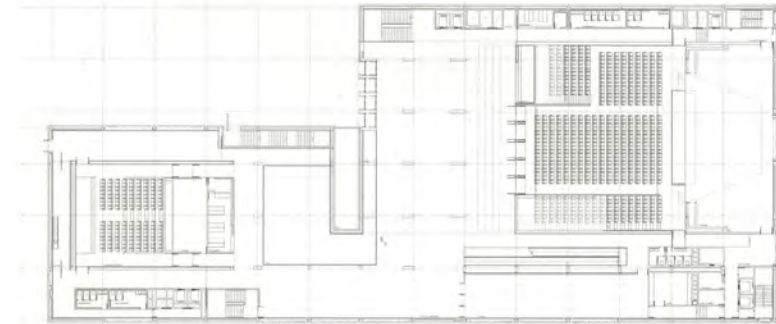
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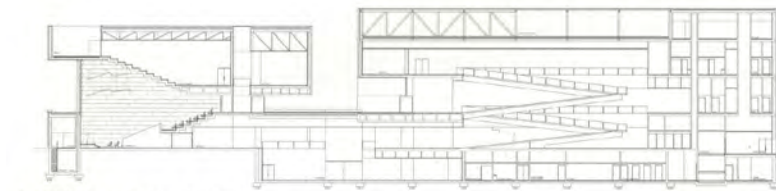


Sección transversal E-E por patio / Cross section E-E through patio

Sección transversal C-C por foyer / Cross section C-C through foyer



Planta baja / Ground floor plan



Sección longitudinal A-A por rampa / Longitudinal section A-A through ramp



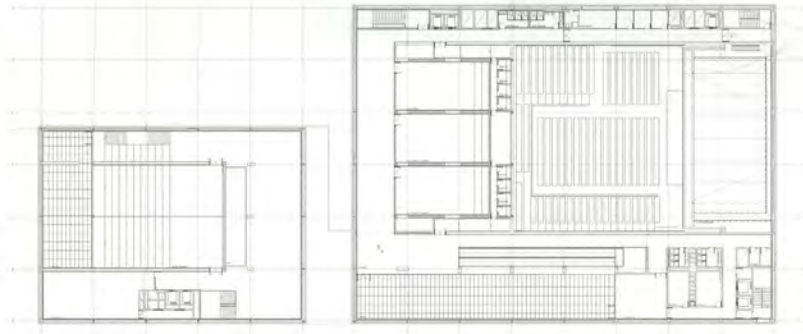
Planta sótano / Basement floor plan



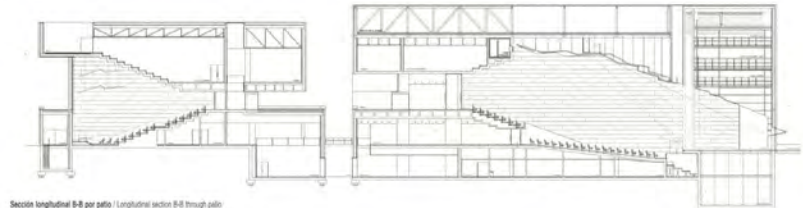
Sección transversal G-G por patio / Cross section G-G through patio

Sección transversal D-D / Cross section D-D

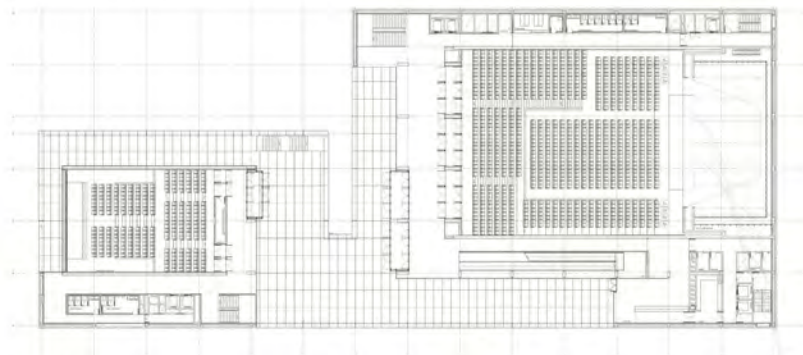
Sección transversal F-F / Cross section F-F



Planta segunda / Second floor plan



Sección longitudinal B-B por patio / Longitudinal section B-B through patio



Planta primera / First floor plan





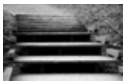




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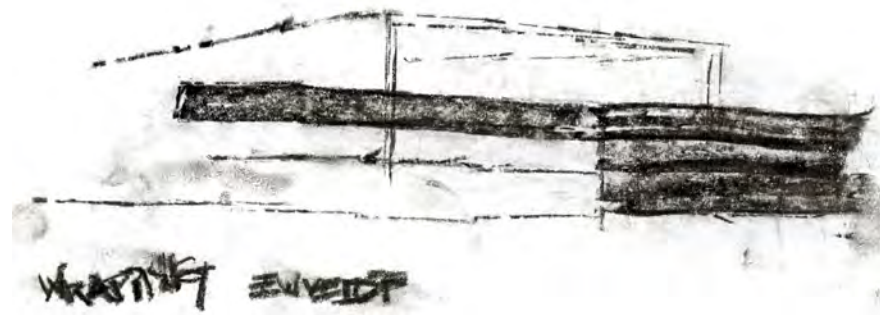
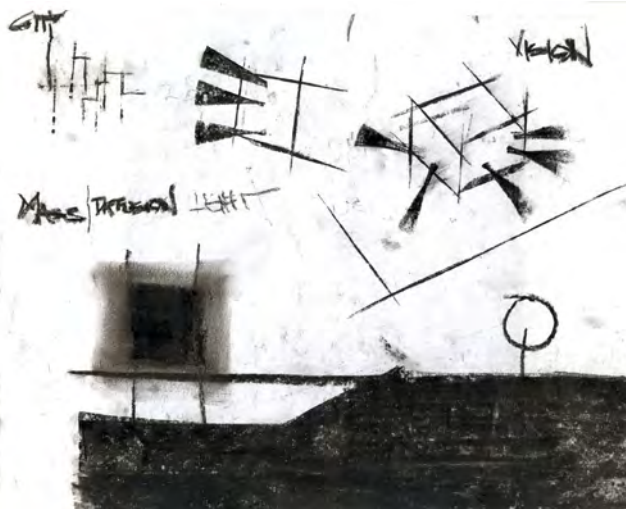
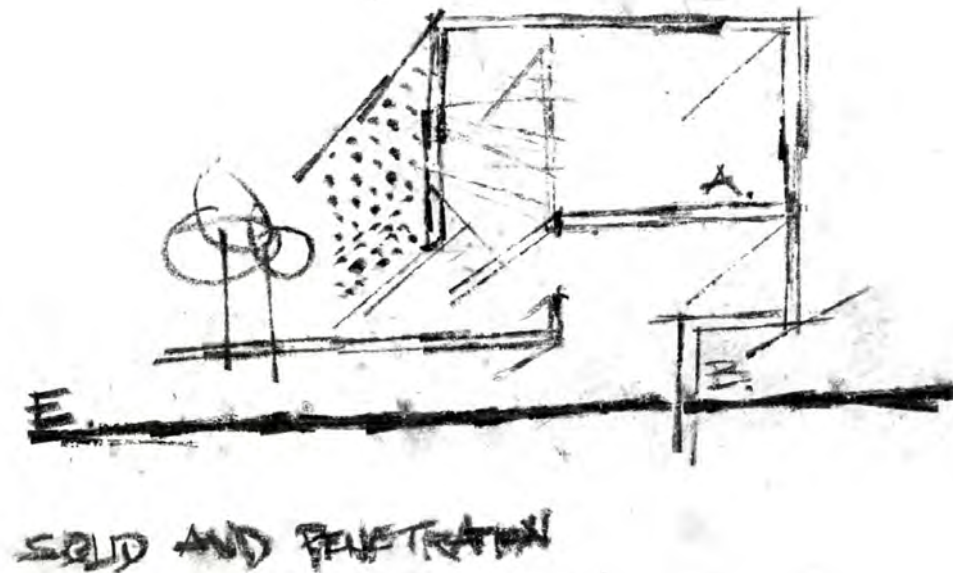
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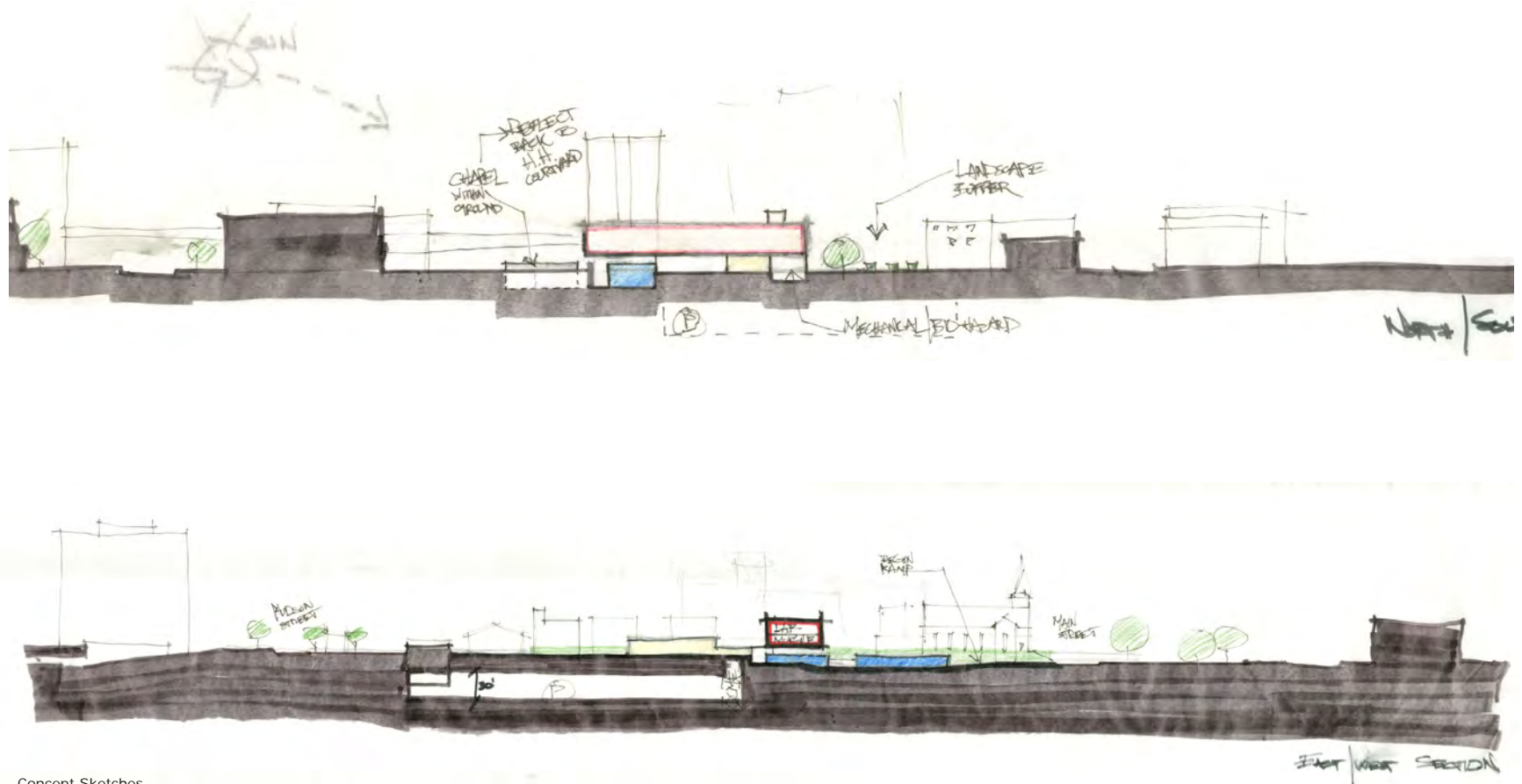
Project Process

Initial charcoal concept sketches of space.



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project process



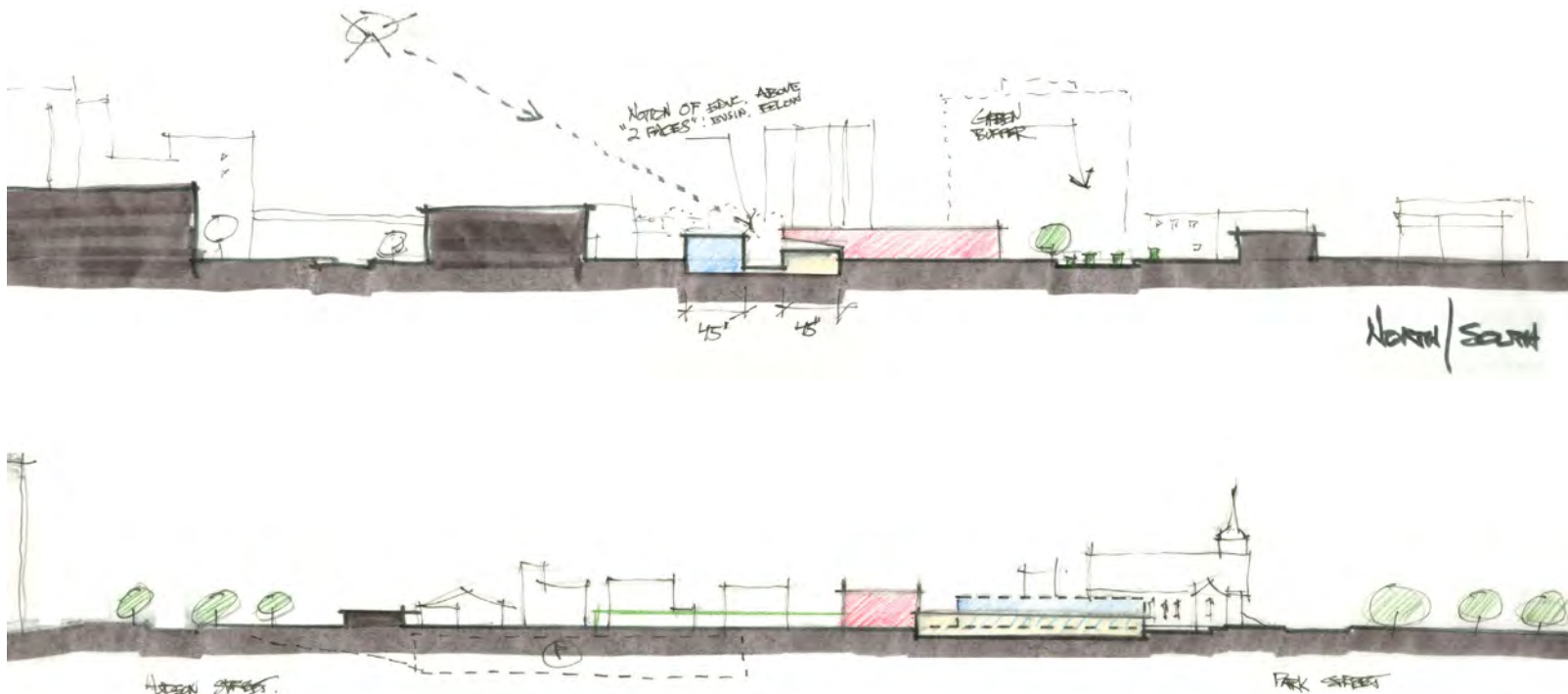
Concept Sketches.

The project began with two main programs: the Office of the Chief Medical Examiner and a Forensic Institute. The preliminary concept was to have a solid volume raised above ground level. Spaces for the medical examiner would be placed within this mass and the forensic educational program would be carved out of the site. A relationship between solid and void was formed.

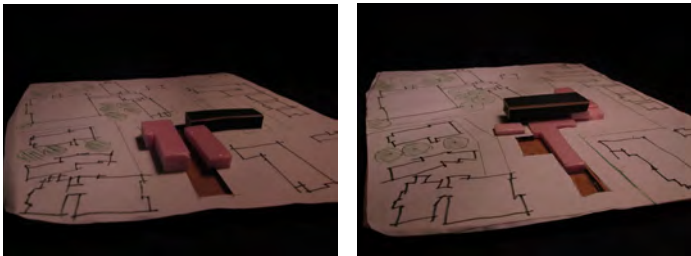


Concept model of large 'mass' hovering over the site.





Concept Sketches.

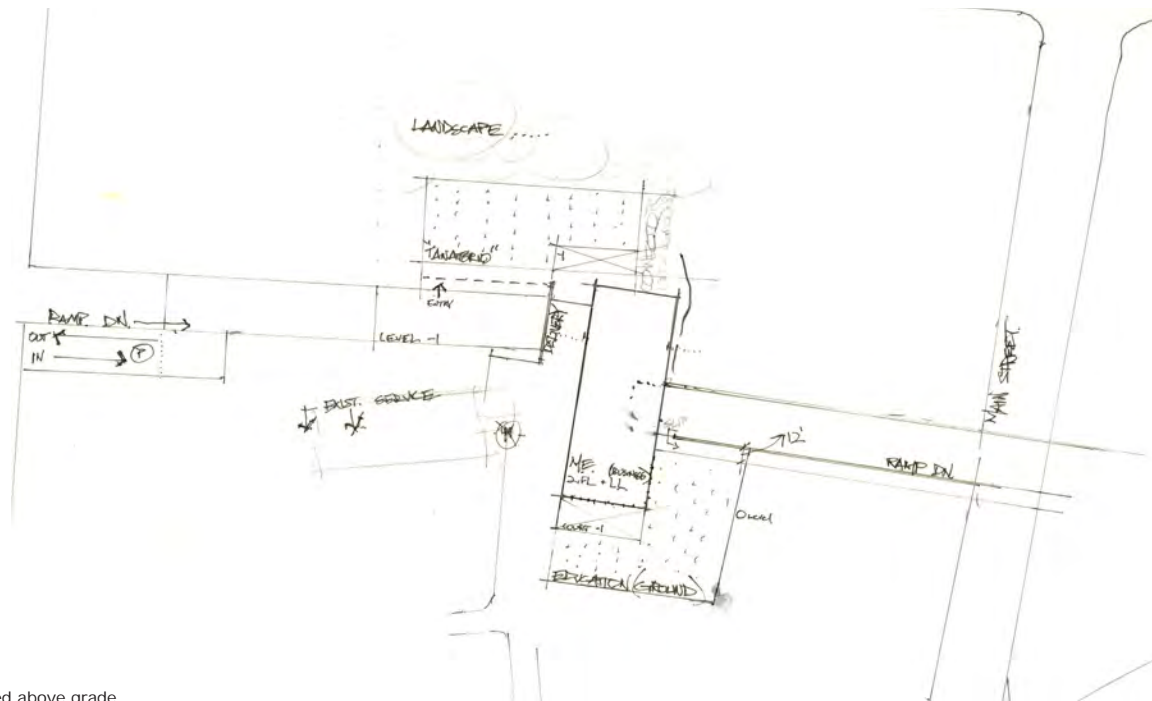


Concept models combining the Medical Examiner's Office (black) and the Forensic Education (pink).

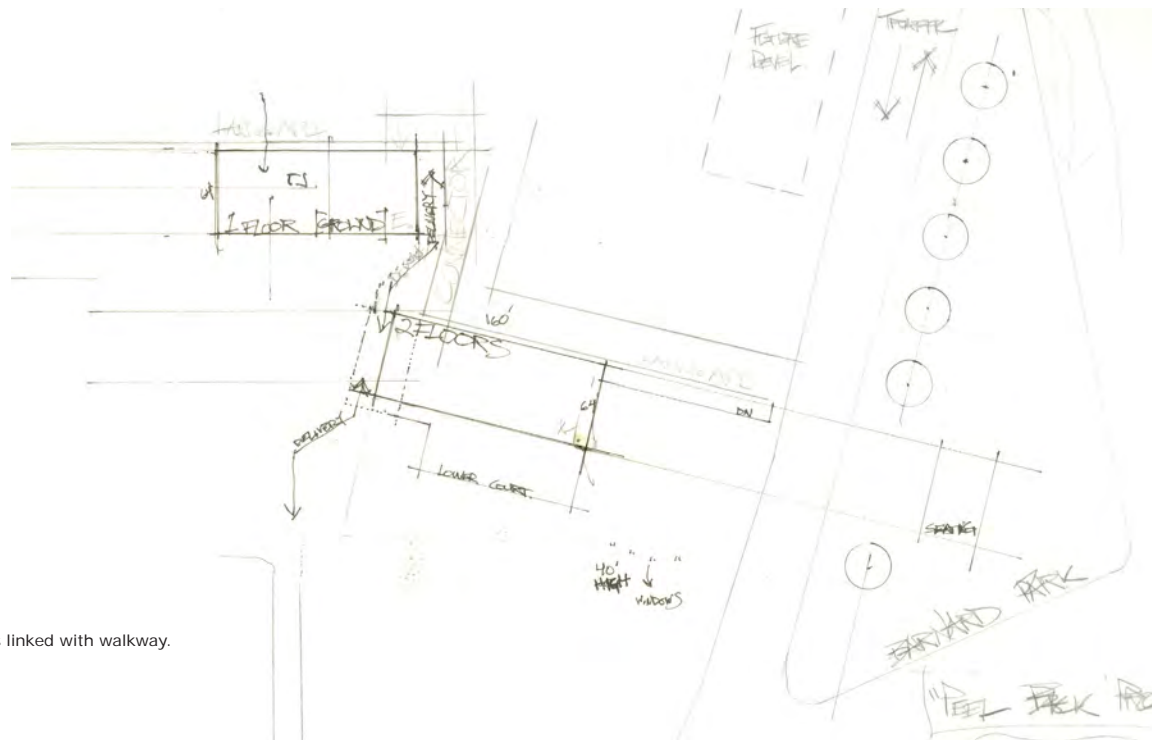
The two programs then shifted position, having the medical examiner spaces be within the ground and the educational be at ground level. A challenge with the design was to determine whether there should be one large building or separate buildings linked through outside space or walkways.







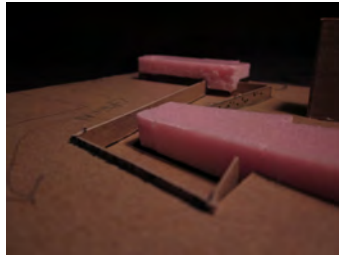
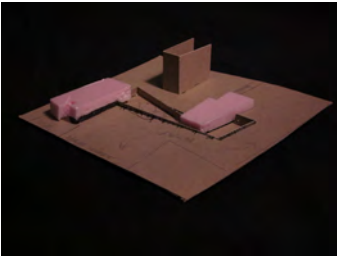
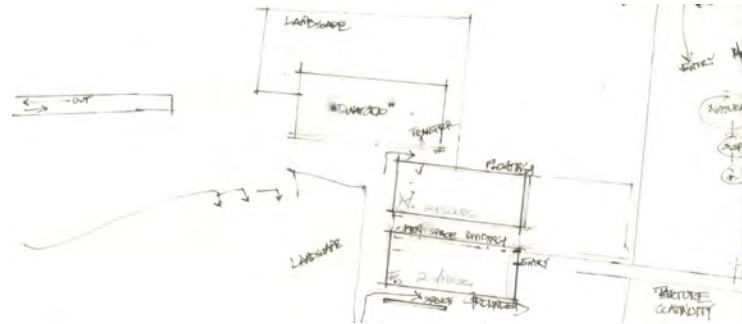
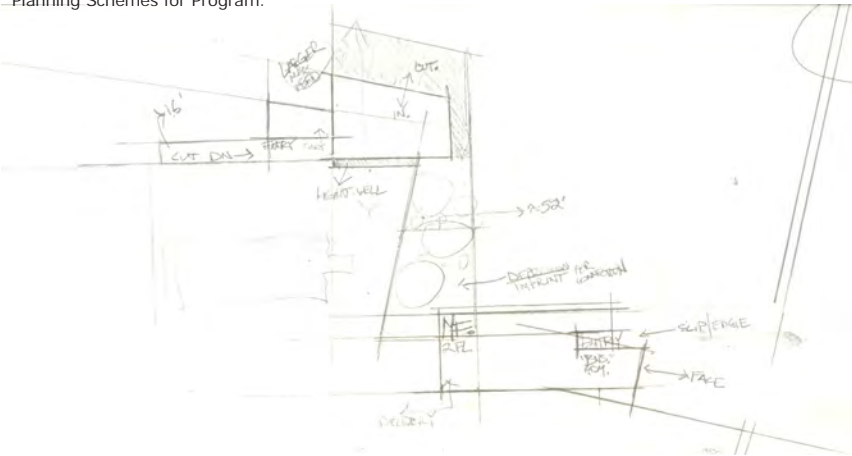
Scheme 1. Plan - building raised above grade.



Scheme 2. Plan - two buildings linked with walkway.

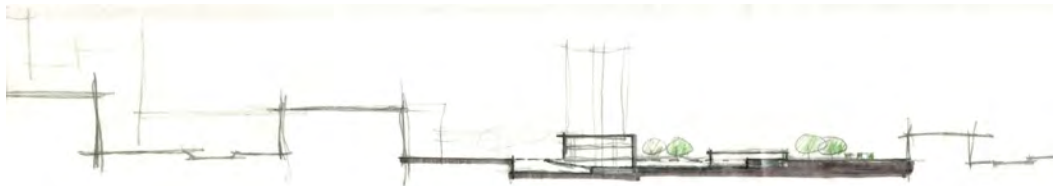
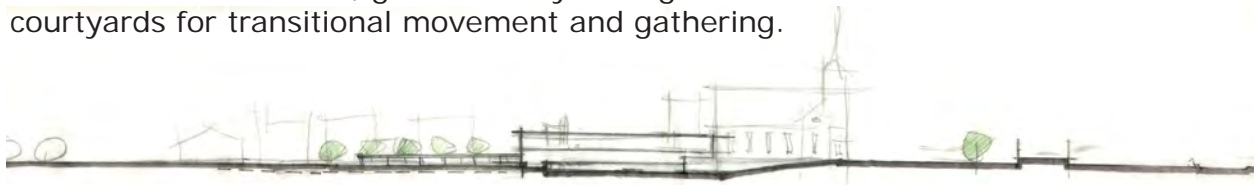


### Planning Schemes for Program.



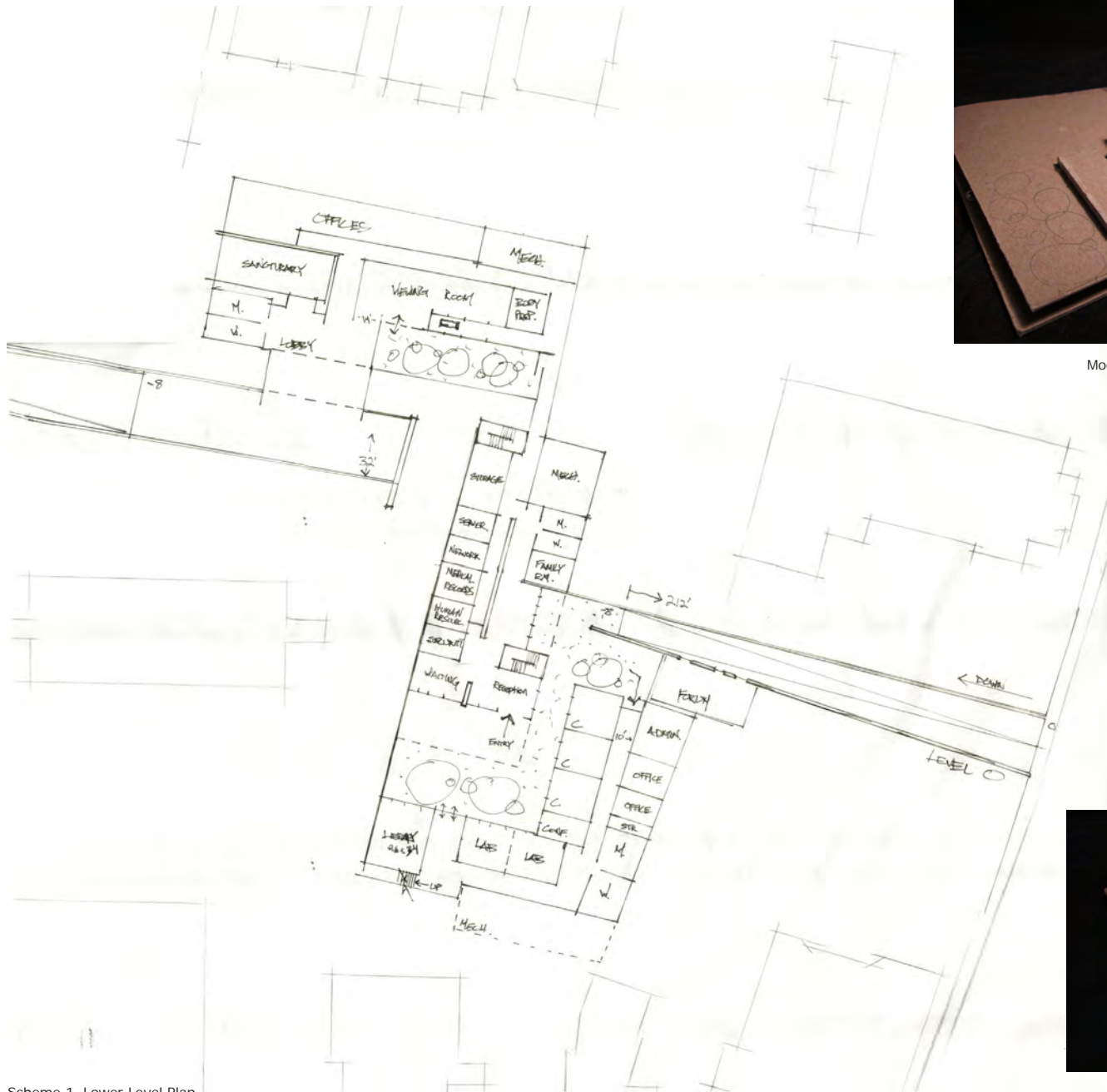
Concept model showing two separate buildings with a common lower level.

Each scheme for the design incorporated the idea of two masses on the site, geometrically arranged around courtyards for transitional movement and gathering.



identity      time      memory

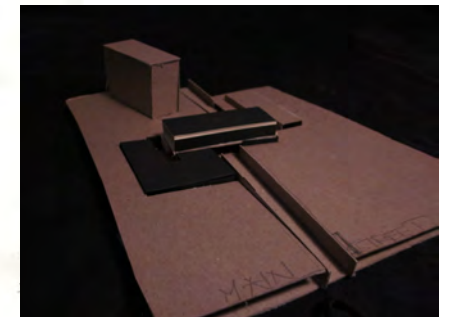
project process



Scheme 1. Lower Level Plan.

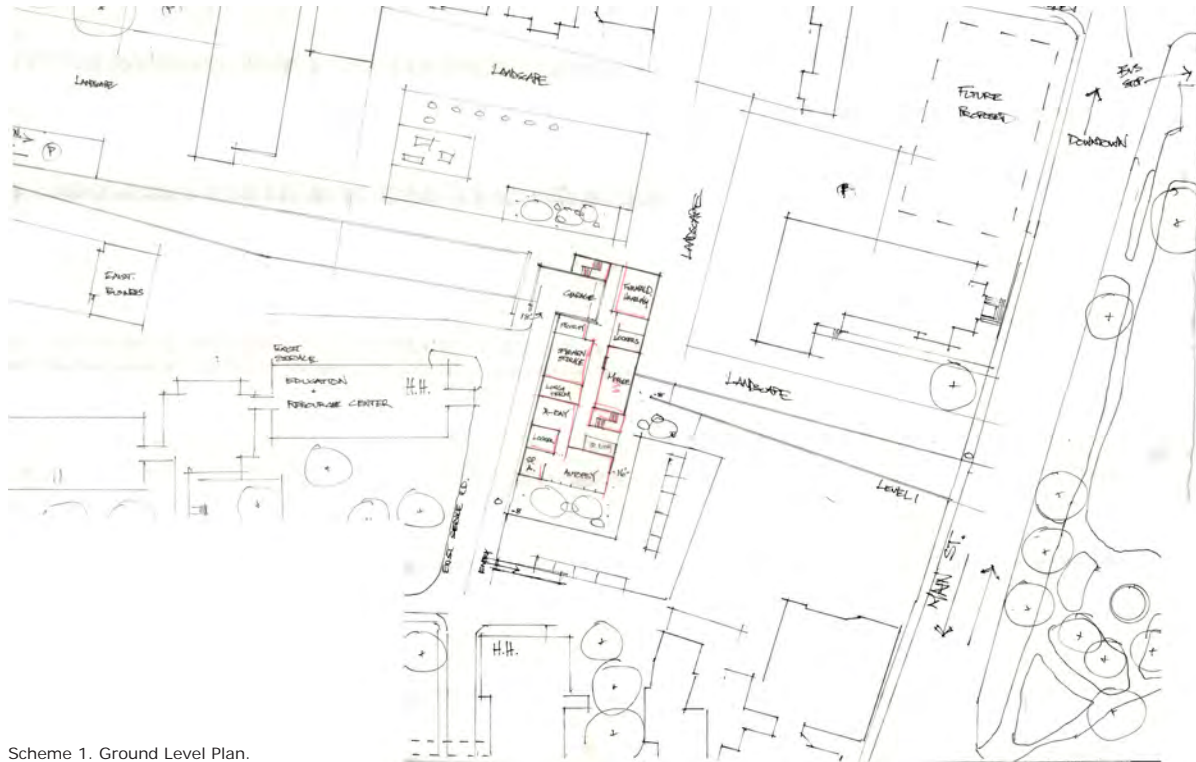


Model showing access ramp from Hudson Street.



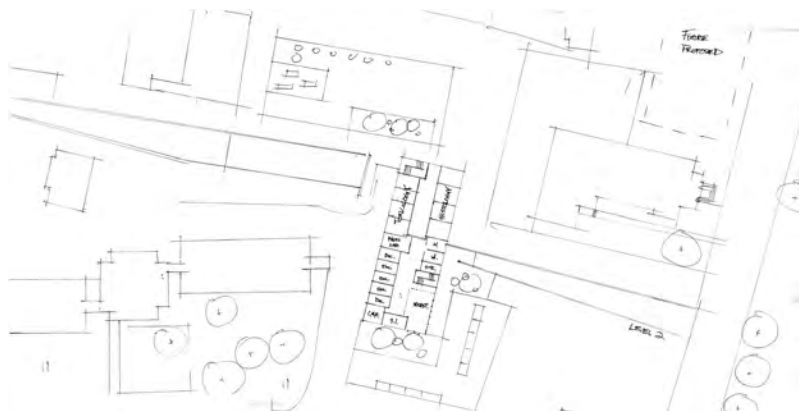
Model showing main entrance ramp.



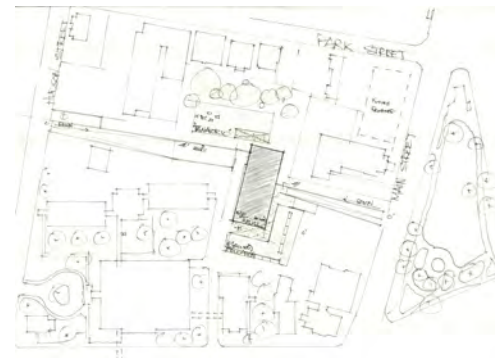


Scheme 1. Ground Level Plan.

Scheme One involves entering the building from street level and proceeding down a ramp. Both the entrance for the medical offices and the education are within a shared courtyard below grade level. The plan allowed for delivery to enter from Hudson Street due to lower levels of traffic.



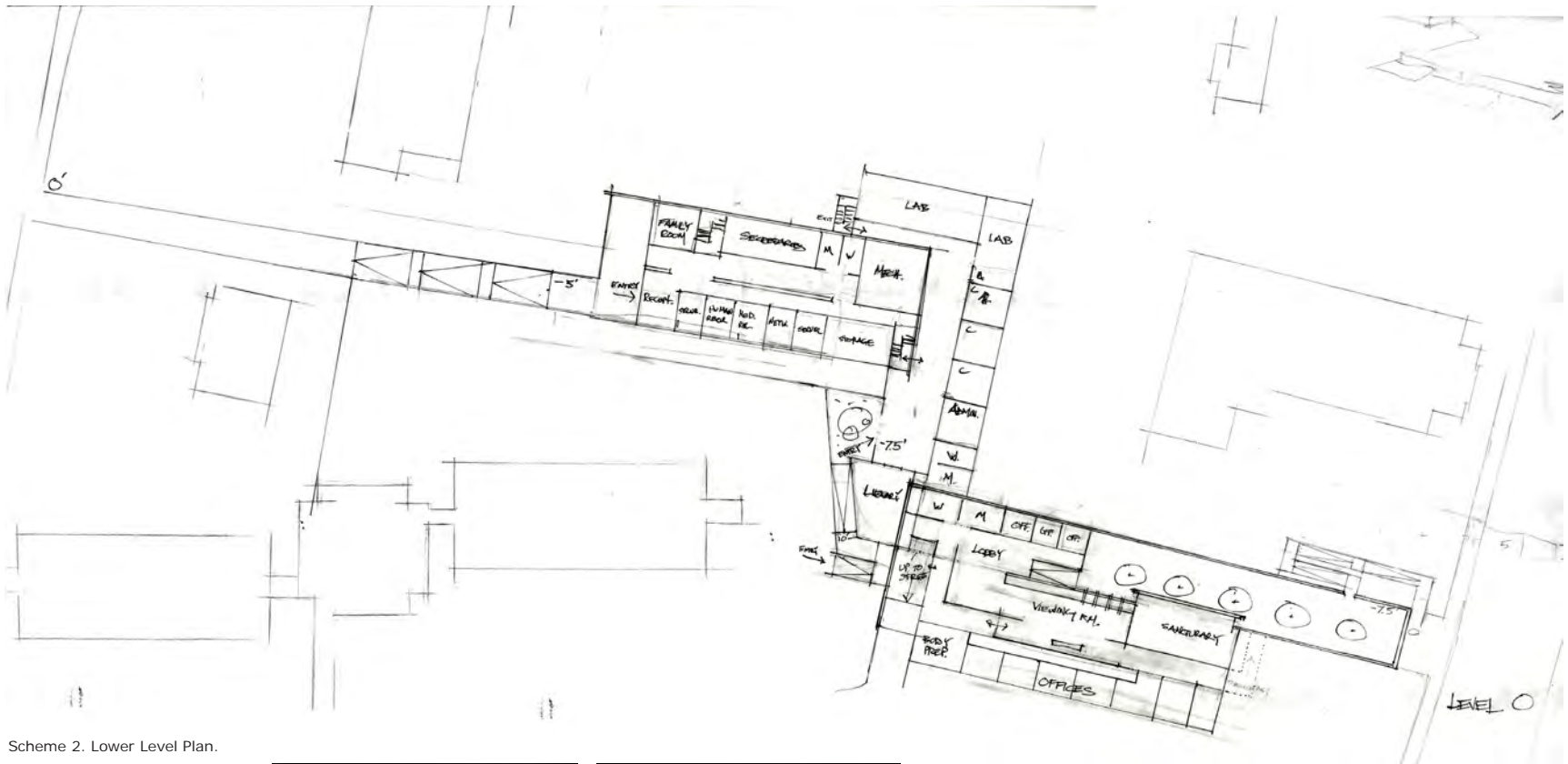
Scheme 1. Second Floor Plan.



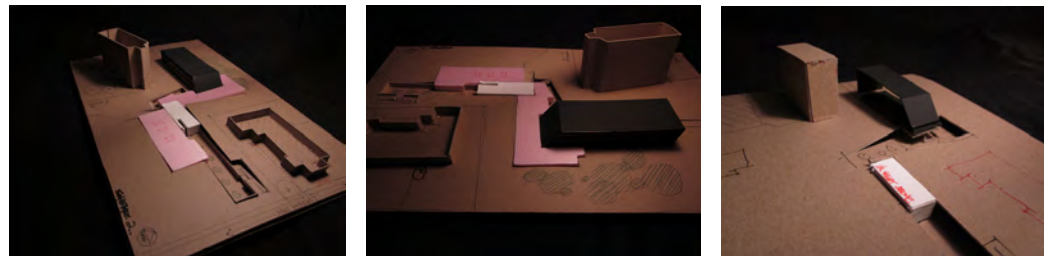
Scheme 1. Site Plan.







Scheme 2. Lower Level Plan.

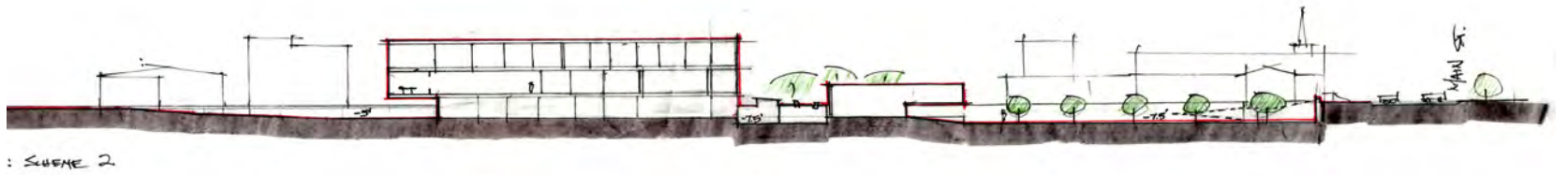
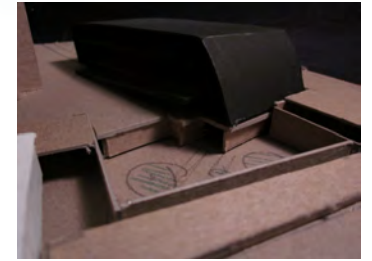
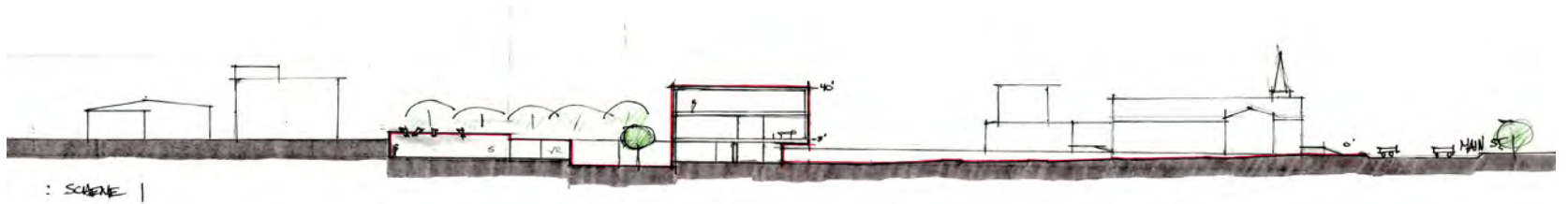


Process models studying the relationship between the two programs. A courtyard centrally located would be a place for all to gather.

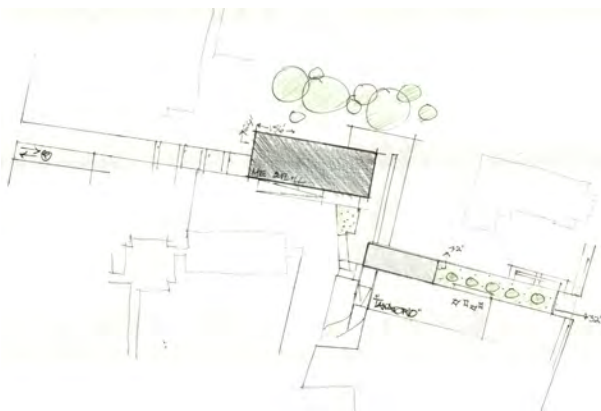
Scheme Two incorporated the program into a single building with an underground connection. The introduction of a funeral home to the medical examiner's office and forensic education program began at this stage. The connecting program for the medical offices and funerary program would be the forensic education. Placing the education below grade allowed for a secure institutional zone while at the same time expressing the two masses toward the public realm, both signifying natural and violent death.







Scheme 2. Sketch Sections.



Scheme 2. Site Plan.

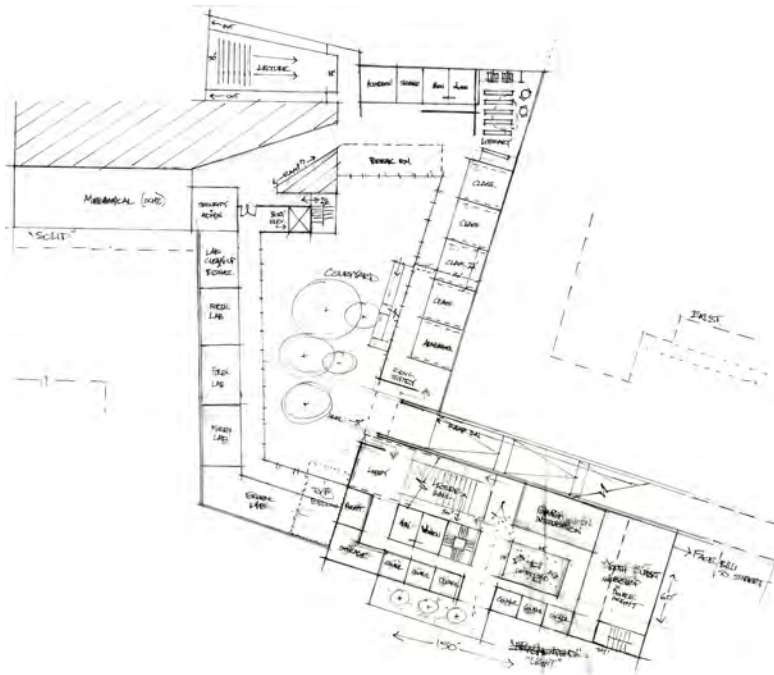


Model studying entry sequences.

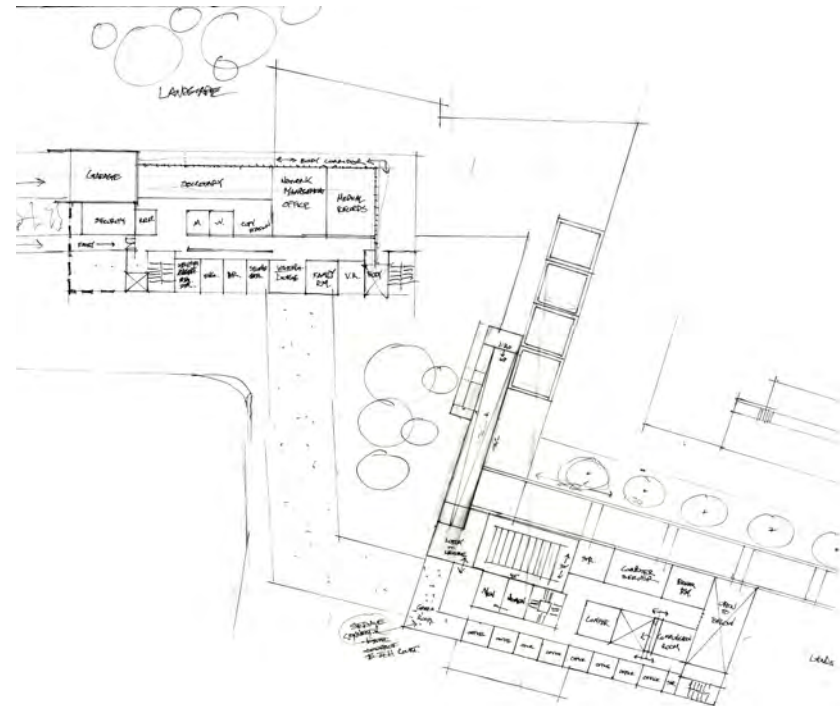


identity time memory

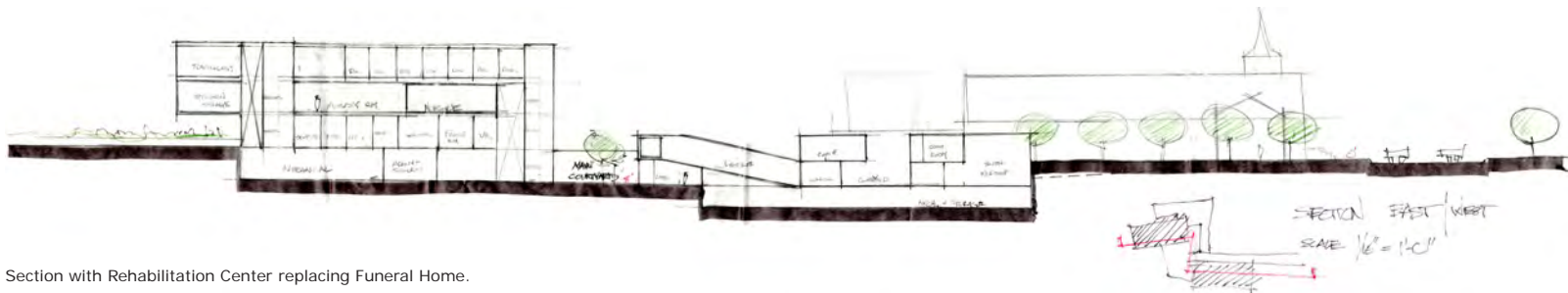
project process



Lower Level Plan with Rehabilitation Center replacing Funeral Home.



Ground Level Plan with Rehabilitation Center replacing Funeral Home.

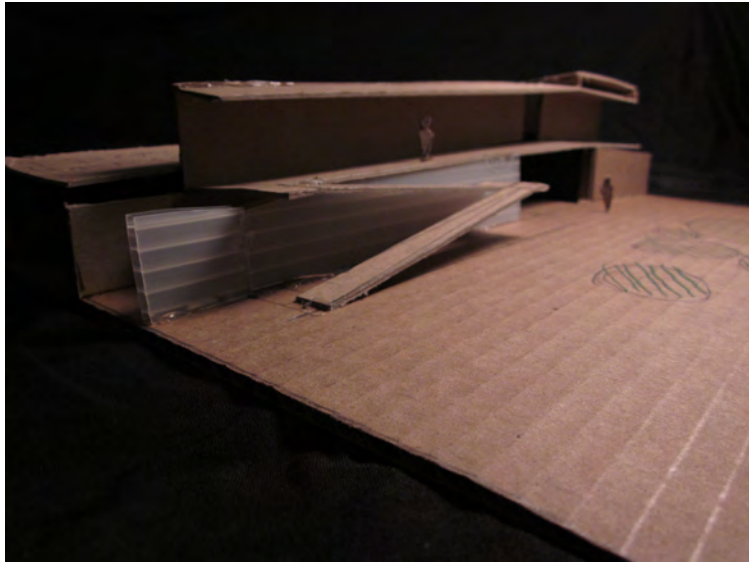


Section with Rehabilitation Center replacing Funeral Home.

A program change from the funeral home to an intervention space tested the design. This added program would assist those involved in city crime by transforming a negative event (violent crime leading to death) to a positive outlook on life. The criticism was that this change of program was too metaphoric and not powerful enough. A central courtyard seemed plausible for uniting all programs together. This proved the funeral home had a stronger relationship and connection with the forensic's program along with fitting into the site's context.



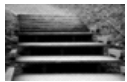




Model showing the entrance from the courtyard to the Rehabilitation Center.

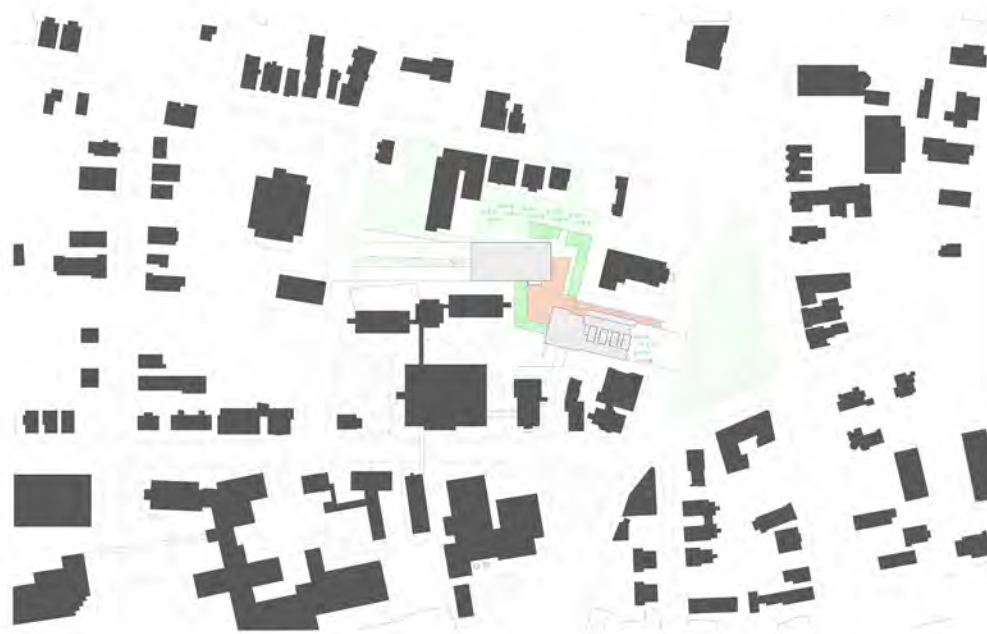


Process model of the Medical Examiner's Office entrance.



identity time memory

project process



SITE PLAN  
SCALE: 1/8" = 1'-0"

NORTH

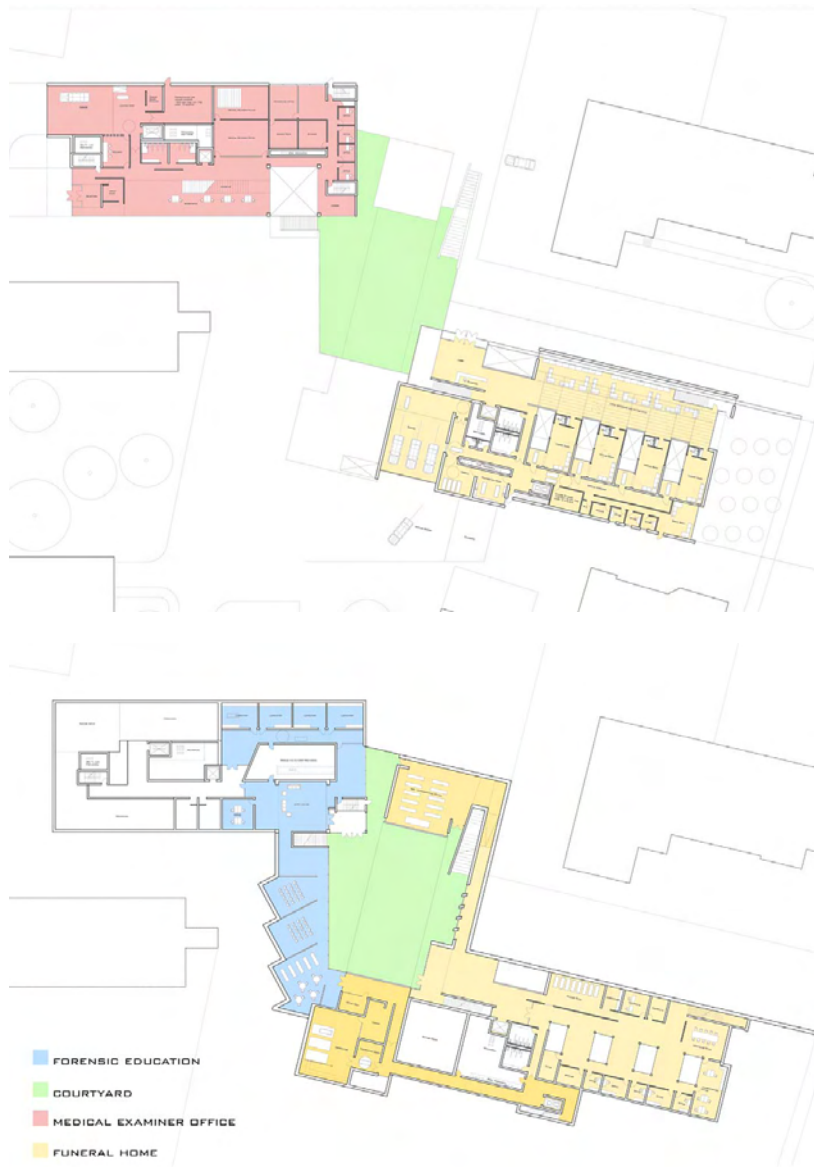


GROUND FLOOR PLAN  
SCALE: 1/8" = 1'-0"



Proportionally the two programs on the site at this phase were not working well with the existing structures. Spaces needed to be more efficient and the large ramp into the courtyard was too monumental for the programs. The ramp was not experiential and was left undefined. Copper metal was used as a material for the entry sequence and a green roof for the education.

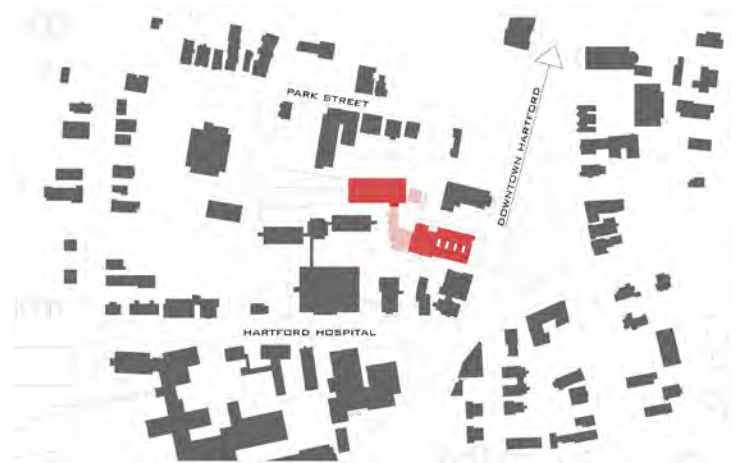




## PROGRAM ORGANIZATION



identity time memory

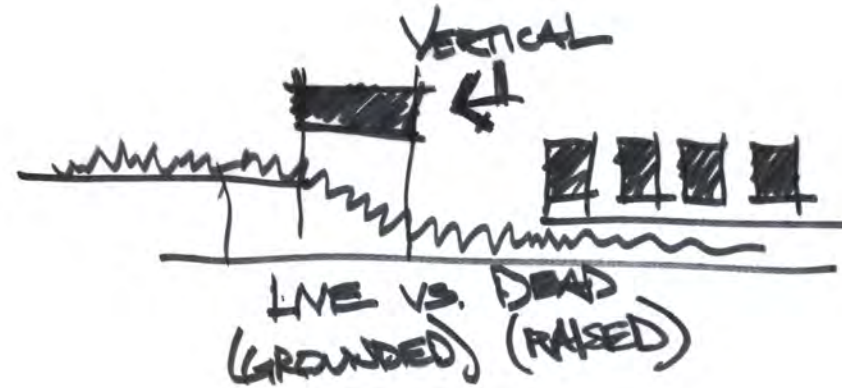
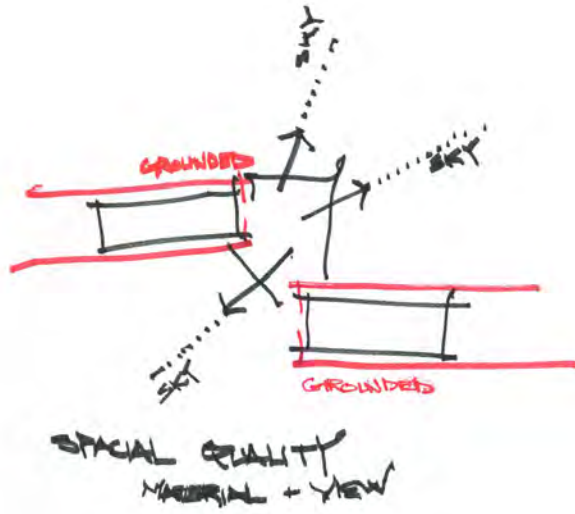


Additional program for the funerary building included a non-denominational chapel and crematorium. Body circulation/casket movement involved a 7'-6" turning radius. Proportions needed to be revised and re-design for the wrapping facade.

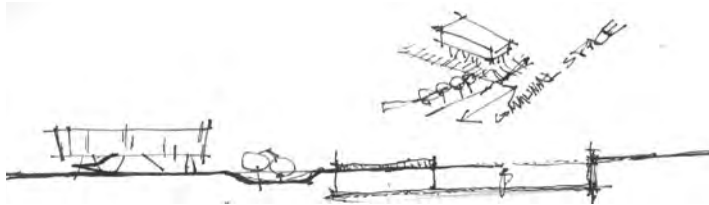




Final Project



The project's initial idea, which carried throughout the semester, was to have the building's program establish a relationship with the earth. More active spaces such as the forensic educational space and the funeral home's administrative zone are located within the ground. Spaces for the deceased are raised above in a symbolic manner.



Courtyard view to Medical Examiner's Office (forensic education at courtyard level) and Chapel space.



identity time memory

final project

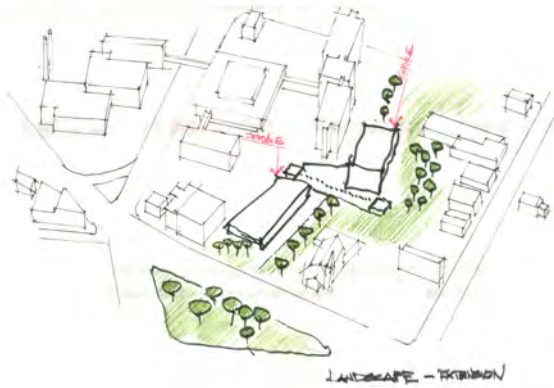


Funeral home (left-side of render) public entrance view from Main Street.

The funerary component to the project is located on Main Street in Hartford to give the public a direct connection to the urban streetscape. A forecourt fronting the funeral home gives privacy and provides a sound buffer from the traffic. The main concrete wall which mirrors the adjacent chapel's wall rhythm is abstractly punctured and allows for a direct view into the site.







Hartford's urban fabric in the south end is connected by the North-South artery, Main Street. The hospital district in this South Green neighborhood is a significant node for the city. Residential and commercial areas surrounding the site cause pedestrian movement to circulate by the building. A greenscape filters through the site connecting Hudson Street with Barnard Park, originally proposed in the Hartford 2010 plan. The proposed program is organized inwardly on the site for security and allows exterior connection with Hartford Hospital.



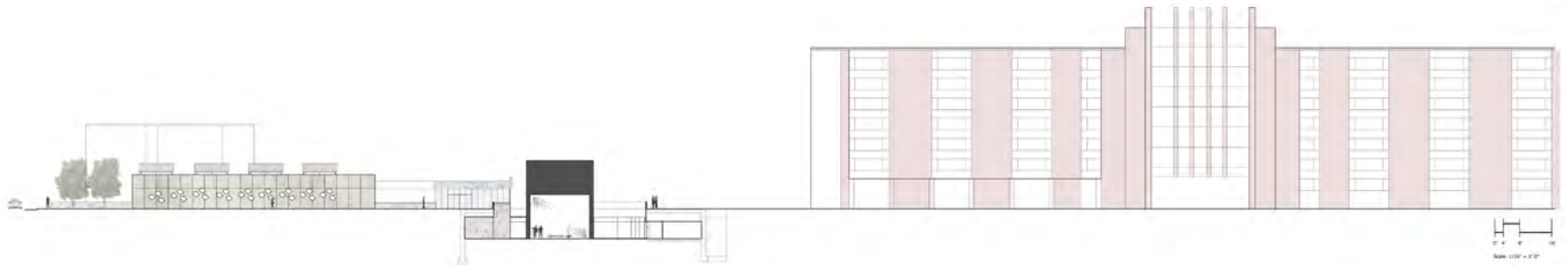
Site Plan.



Physical Site Model.



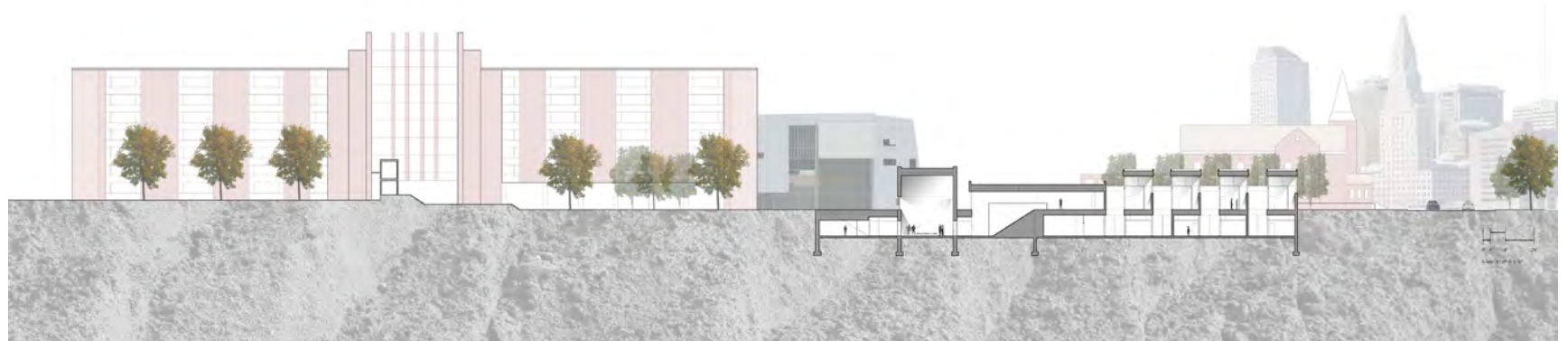




South Elevation of Funeral Home and Crematorium.



The entrance to the funeral home is located inward from Main Street. Views to the complex at this point are down to the courtyard level (at -14'-0") and upward to the main morgue. The two significant cladding materials are limestone and black granite. Limestone occurs at ground level to work with the stone material of the context. Black granite is used for the chapel and crematorium which are partially below grade level.



Section A.A. through Funeral Home, Crematorium, and forensic education (underground - adjacent to H.H. Education and Resource Center).





Ground Floor Plan.



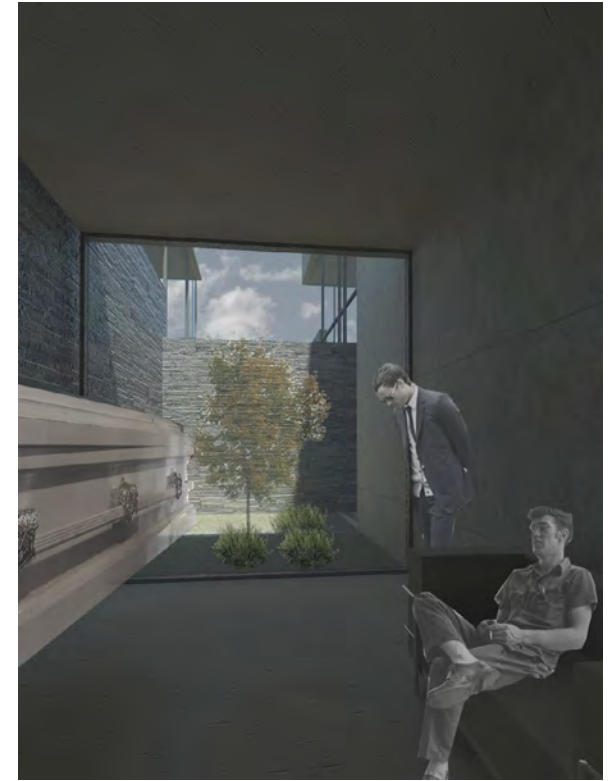
Large gathering and meeting area for families.

At ground level, the funeral home's lobby has a view outward to the courtyard and the medical examiner's office. From the lobby families proceed west to the viewing spaces. A staircase to the courtyard level services the funerary administration and contract areas.



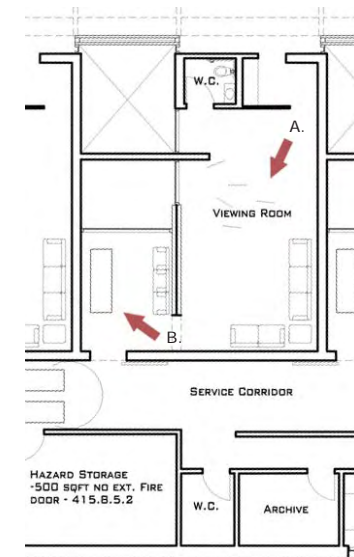


Private Family Room before entry into Viewing Room (view A. on plan).



Viewing Room with a private outside courtyard (view B. on plan).

An important concept for the viewing rooms is to have natural daylight and an airy atmosphere for the families. The only exterior views from this space are to a small courtyard and clerestory windows provide a view to the sky. An accent wall separates the family from the private viewing. In total there are four viewing spaces, each separated by light-wells to allow light to enter down to the lower administrative level.



Plan of Viewing Room.



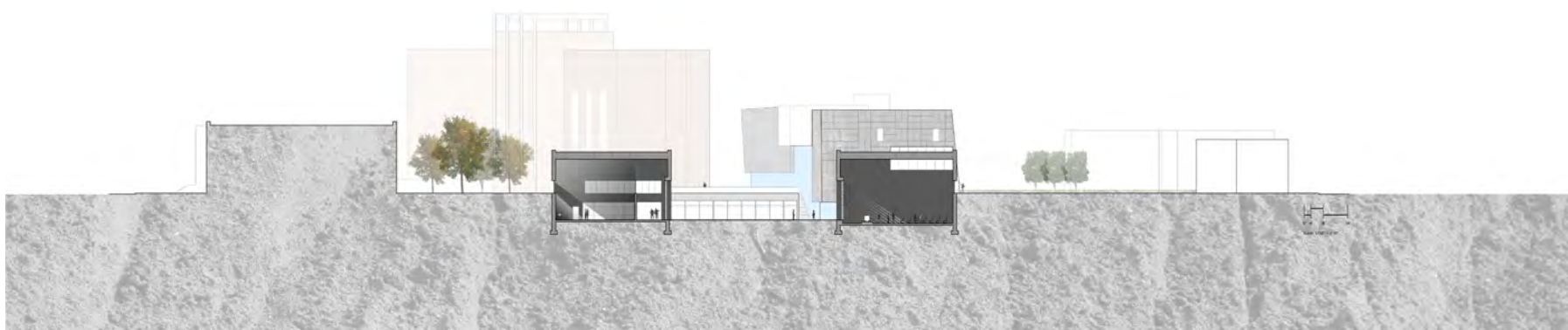
identity time memory

final project





Chapel's entry from the main courtyard and a view down the corridor to the funeral home.



Section B.B. through Crematorium, Courtyard, and Chapel.

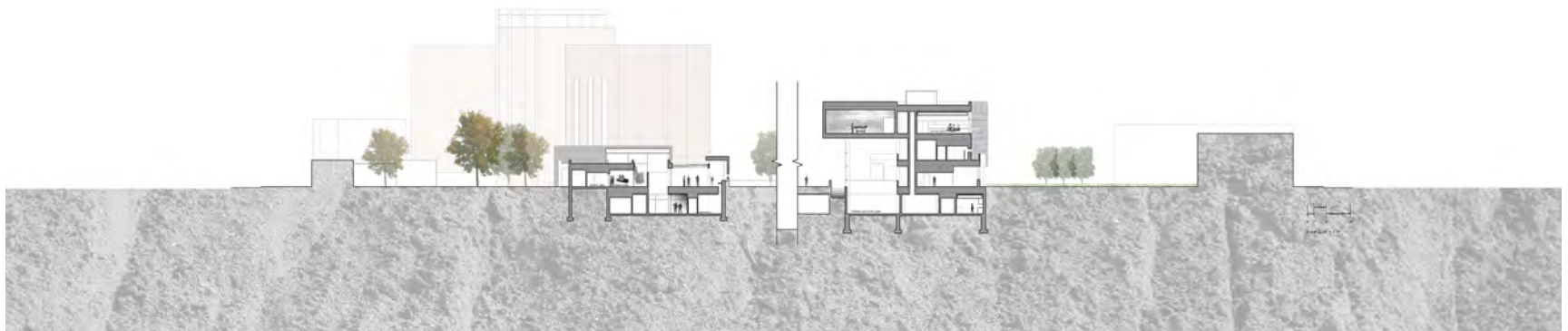






View within the Chapel.

The two underground spaces which are accessible from the funeral home is the crematorium and chapel. The crematorium is adjacent to the funeral home to allow the families to proceed directly from the viewing to cremation. The chapel is a mirrored "object" from the crematorium. These two facing volumes symbolize reflection. Natural daylight filters into this contemplation space through the use of a south facing screen.

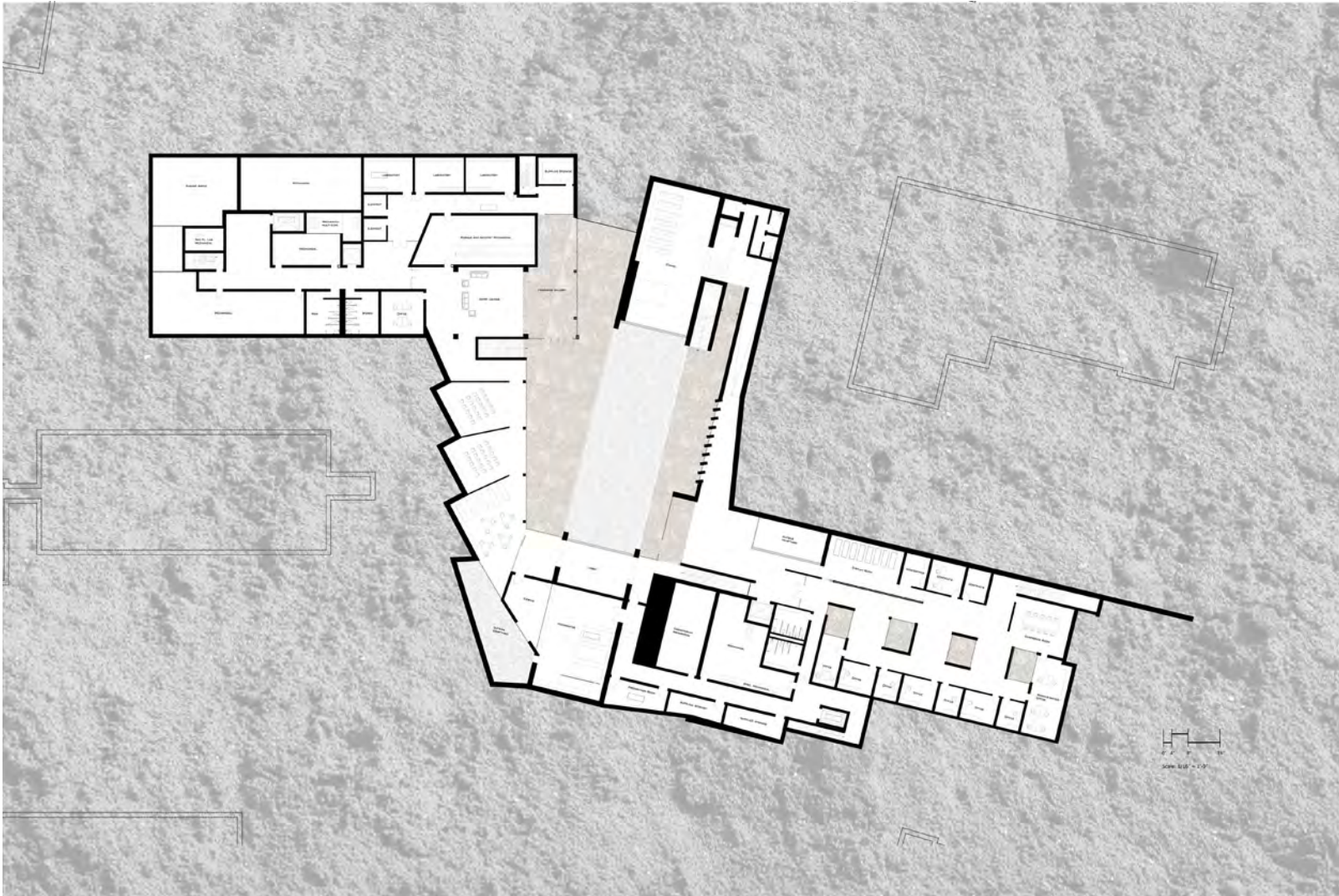


Section C.C. through funeral home and the medical examiner's office (with forensic education below grade).



identity time memory

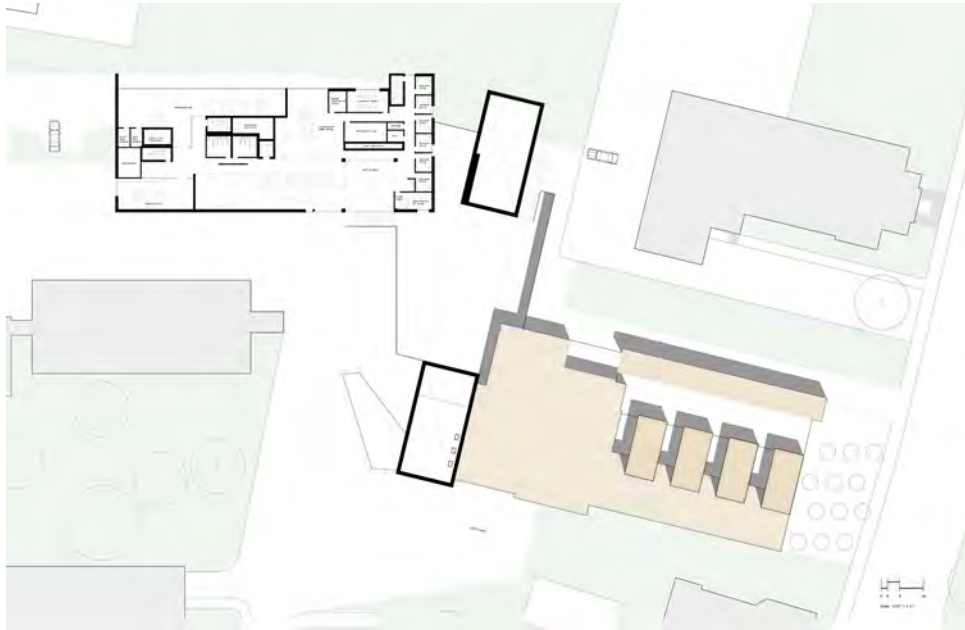
final project



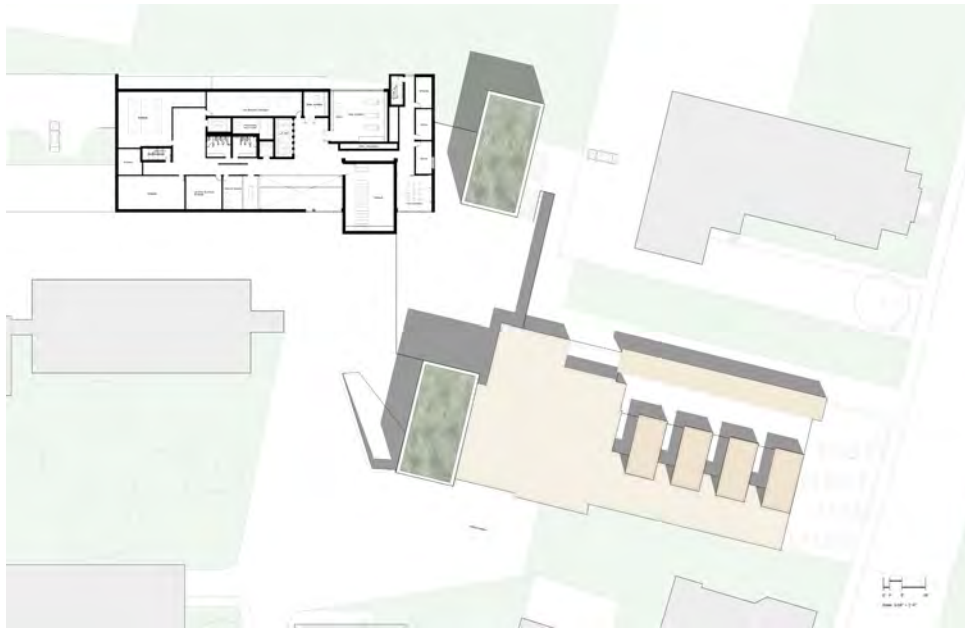
Lower Level Floor Plan at -14'-0" below grade.

The lower level of the complex is a gathering node for the building. This space is accessed from the medical examiner's and funeral home's interior staircases, as well as from two exterior stairs. White limestone emphasizes the mirrored chapel and crematorium volumes. The underground level is organically expressed from the other floors.





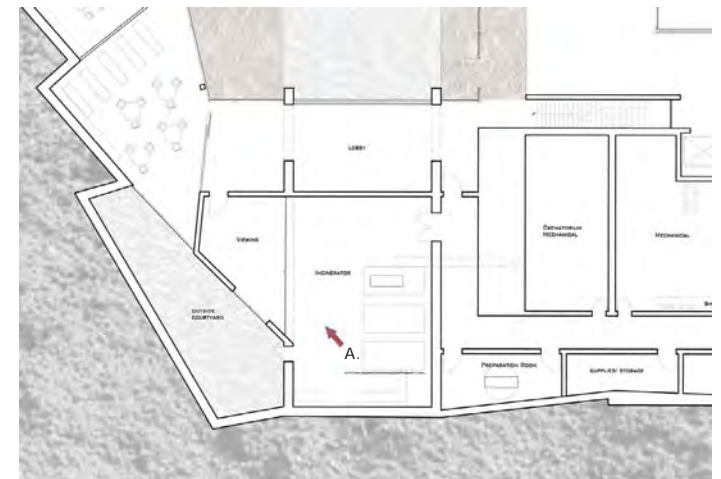
Second Floor Plan - Office of the Chief Medical Examiner.



Third Floor Plan - Office of the Chief Medical Examiner.



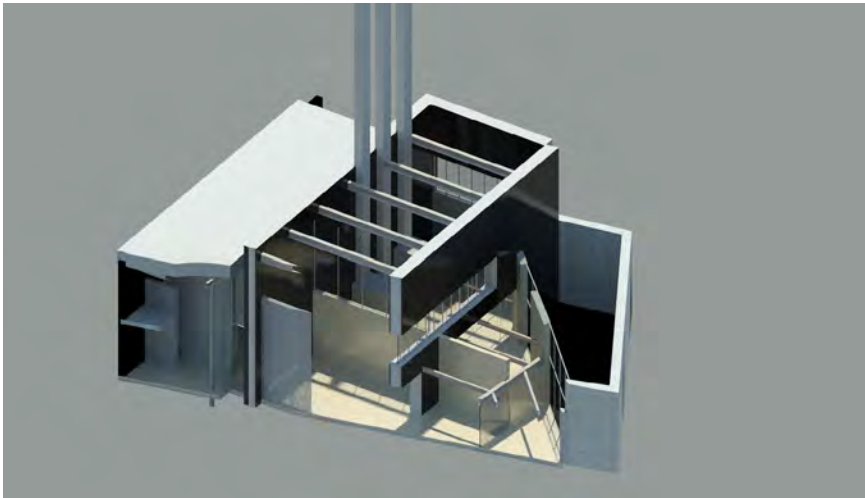
Incinerator Space with Viewing Room for families (view A. on plan).



Plan of Crematorium.







Structure axon of Crematorium - Concrete load bearing wall with steel span.



View from Hartford Hospital's Education and Resource Center courtyard to Medical Examiner's Office, Crematorium, and Chapel.







Medical Examiner Office entrance view of double height space.



View to Medical Examiner's Office from Hudson Street.

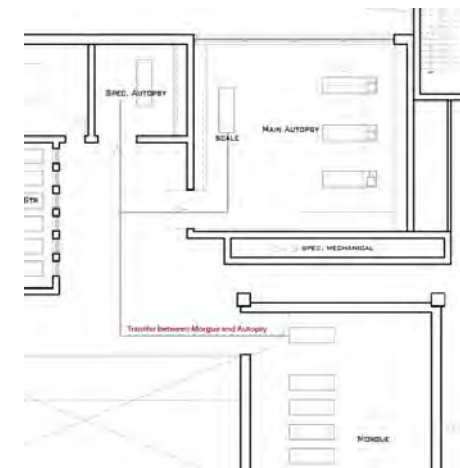
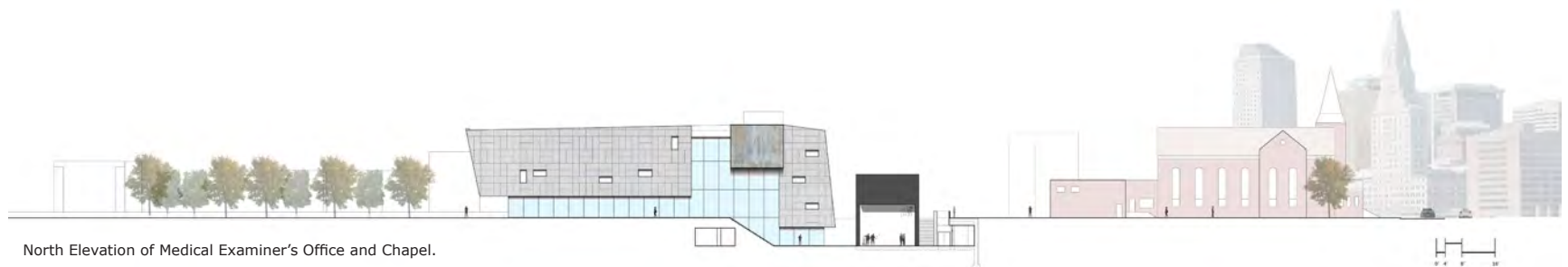


Diagram relationship between morgue and laboratory - level 3.



North Elevation of Medical Examiner's Office and Chapel.

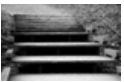


identity time memory

final project



Physical Site Model.



identity time memory

final project



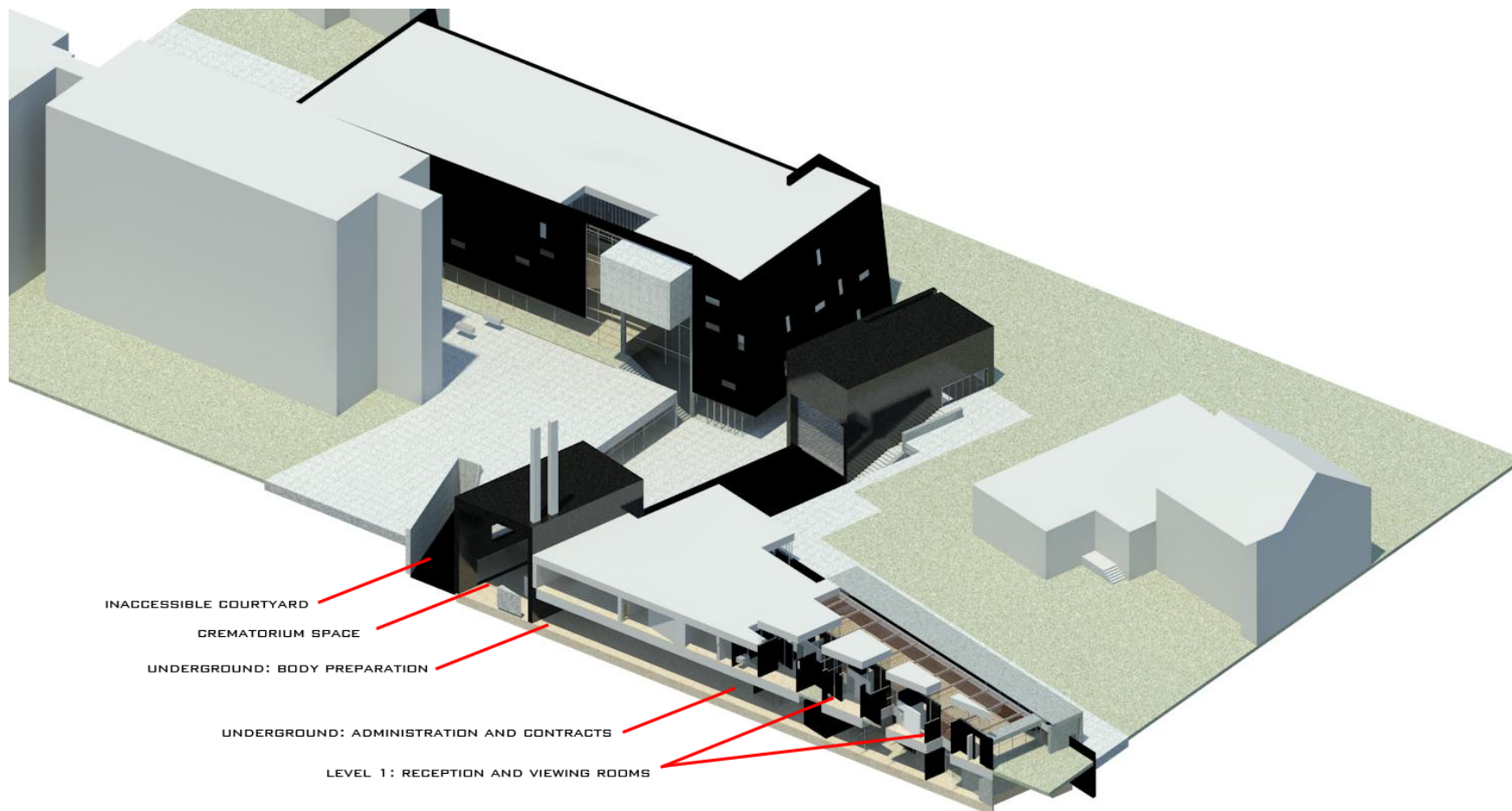


Physical Site Model.



identity time memory

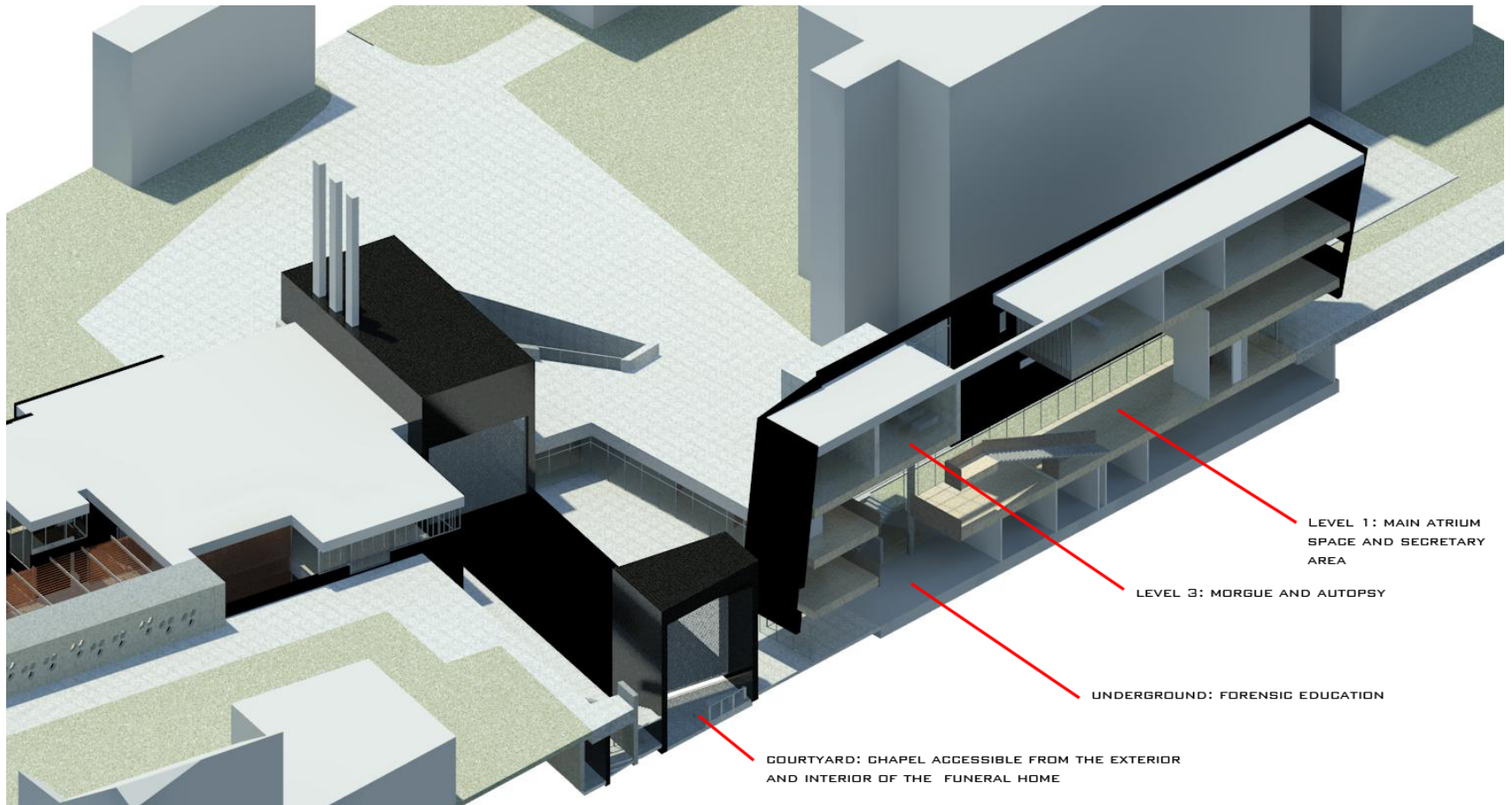
final project



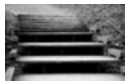
Sectional perspective of funeral home and crematorium.

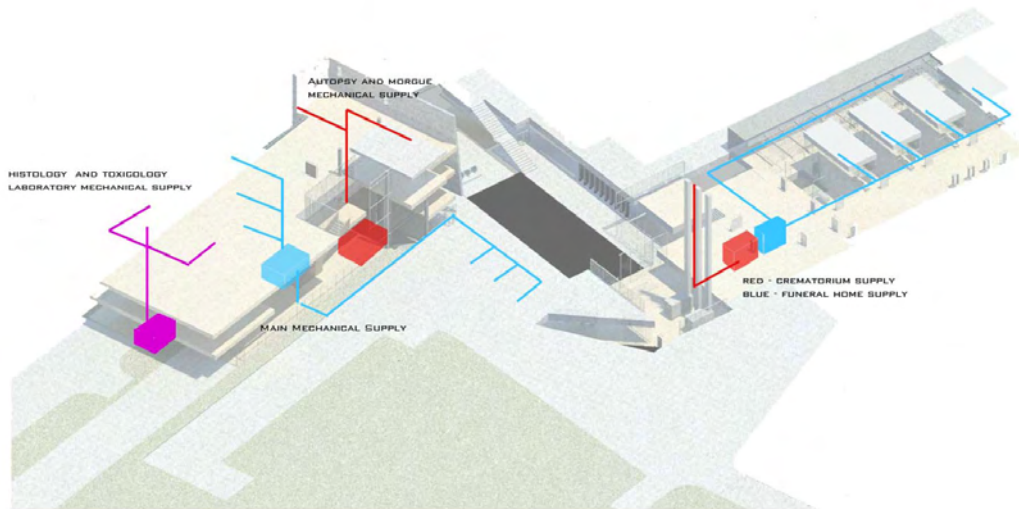






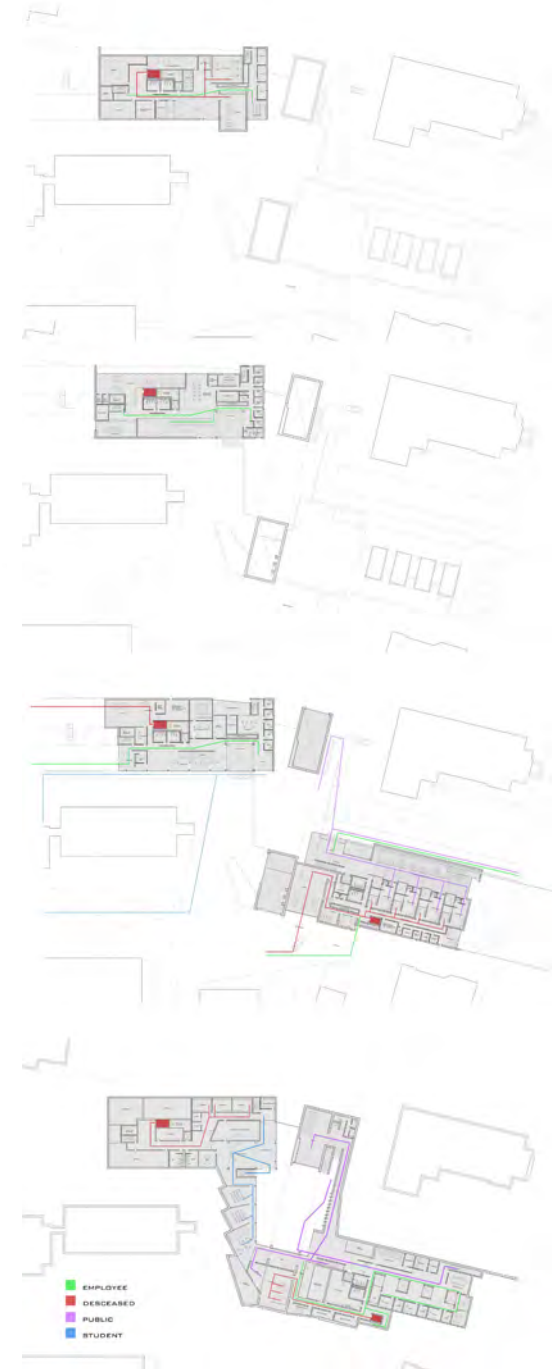
Sectional perspective of medical examiner's office and chapel.





Mechanical diagram showing cores and vertical chases.

The medical examiner's office has three mechanical cores centrally located. There are separate systems for the laboratories and storage spaces to prevent air mixing with sterile areas. Stacks for the crematorium are required by code to be higher than the existing building heights. Also the incinerators require a fresh air intake at the same level as the unit. User circulation is divided between service/security spaces and public areas.



User circulation diagram for each level.



Appendix

# Manifesto

Architecture is a social artifact which is thoroughly implicated in the lives of all people whether it is in consciousness or sub – consciousness. This global phenomena of creating spaces for a developing humanity, has the capability to evoke and stimulate inner emotions on a spectrum from fear and tension to exhilaration and vivacity. One notion is of the manipulation of inaccessible spaces or spaces which serve a function are apt to influence the user or inhabitant at a psychological level. Thus architecture can be represented as a lens in which different layers maybe adjusted and established yet the whole idea is embedded as an entity. This entity should be bold and not superficial; however, the idea ought to respect the context and be cognizant of the past.

This action of remembering, to ourselves, is a fragmentation of history and to which a surreal experiential relationship occurs within the mind. Architecture has the potential and ability for the insertion of present ideas into the frame of the past. Once the individual has recognized their identity within the realm of architecture (and time) does the framework begin to unfold and expose the sub-layers resulting in a carving comprehension towards the future. An interactive approach, through architecture, is established between the individual, the culture, and the earth.

Not only does the scope of architecture communicate to the users, the cultural fabric is another component to the dimension of architecture. Designing with the lifestyles allows for ideas to be intertwined and the ability to apply insight exists where the boundaries have been broken. Architects should express themselves as active agents in the society's anatomy. Understanding the parallels between people and how they want to be contained in space are initiated as expressive abstract theories. Architecture should challenge to promote discussion but also allow for cultural sensitivity and sustainability while maintaining an inquisitive aspect. This aspect has an opportunity to be expressed in the material and/or the program. Beyond the societal aspects (although they are important), these structures utilize the ground into which the past has been shaped.

The connection of architecture to the earth and site re-presents the notion of the entity of what came before it while evoking an individual experience. Experiences should consist of how the ground interacts with the building and if this promotes uncanny spatial qualities. Architecture is a vessel for the interactions of those in public and private spaces to converse in dynamic creative thought. The idea of creating space needs to co-exist with the notion of place. Recognition of certain spaces and how these 'voids' are handled has the ability to transform in essence the idea of place. Establishing an architecture which is dynamically emotional to the soul/poetically recognizable and promotes contemplative activity through spatial experience will transfer inquisitiveness and potentially knowledge to one's own mind for the future.





## Continued Themes

Architectural themes to be explored in the thesis shall consist of solid and void relationships and extrusions which will work dynamically in plan and section. A second idea is of natural lighting and shadow (and use of darker/ restricted light possibly through screening/camouflage) for emotive and fragmentized quality to encourage thoughts of the past in the present and further into the future. Programmatically and the proportional aspects of the spaces should relate to the site/context as utilizing the ground plane and existing volumes/masses.

Theoretical positions of time and history while incorporating future uses/thoughts will be adopted. First time investigations will be in screen/camouflage architecture. These positions include representation of memory within spaces and create sense of identity. The ideas on what has been left behind and those objects/people which have been forgotten are issues to be worked into the thesis. The landscape/ topography and how it interacts with the exterior and interior spaces of a building can be investigated.

A source of guidance for the occupant will be through lighting (Lighting from above "Zenithal Light"). Issues in humanity and the artifact will also be researched. Type/Typology is important for architecture in the way the scale of the building is in relation to the user/program. These references should include interviewing the people who would be accustomed. Programmatic sources involving the typology realm will investigate places for research, production, exhibition, and possibly spaces which remain inaccessible from certain moments within the architecture.

I hope from this experience to gather a more comprehensive approach to architecture. This research should enable my thoughts to become more coherent and provide a sufficient process of architectural theory based thinking and a practical aspect for use in the professional world of architecture. \_\_Spring 2009.



## A Painting



*La Mort de Marat* Jacques-Louis David, 1793 oil on canvas.

Jean-Paul Marat was a Swiss born French physician, philosopher, political theorist, and scientist best known in the French Revolution [1789-1799] as a radical journalist and politician. Due to Marat's extremist views, he went into hiding throughout the Paris sewer system to escape his opponents. While in isolation he contracted a skin disease that forced him to take cold baths to alleviate pain and irritation. Jacques-Louis David, a close friend of Marat, accepted to paint the "idealized" assassination portrait in order to memorialize the victim; and the painting *La Mort de Marat* is viewed to many as David's masterpiece.

The painting as a whole is a methodical composition focusing on a victim in which there are realistic elements within the situation; however, the image is not accurate in terms of how the crime scene was depicted. This allusive image dramatically reflects the complex issues which surround an investigative scenario in terms of questioning the event and providing theories to what happened, while at the same time allowing the viewer the capability to evoke inner emotions on a spectrum from fear and tension to exhilaration and vivacity. The notion of event and the individual's sense of being are encapsulated by time.



## Narrative

As I took the number thirty seven bus south from downtown I gathered my files and hit the "next stop" button adjacent to my seat. The bus's breaks screeched to an abrupt halt and the driver yells out "135 Main" and I proceed to exit off. I wondered what caused the sudden stop but as I made my way out of the bus I realized a large group of people had been crossing the intersection toward Barnard Park, a common gathering area for the locals. I proceeded to head in the same direction through the park to meet with a detective for one of my cases. After a brief introduction we proceeded to follow a "green corridor" and headed toward a stone cladded and screened building which was recessed from the street frontage. Ramping down into a rectangular courtyard we were then immediately entering into the forensic institute. The detective was interested in touring the educational side before entering into the medical examiner's office. As we walked down the light filled entry corridor, to our right were the classrooms which have transparent and filtered glass that provided a view beyond into a green space which follows the property's edge. Walking through this shaded lower level, I could sense a larger mass above my head, but in fact it was the cladding which wrapped the facade and turned downward. A portion of the solid form above was the second level which consisted of the medical examiner's morgue and evidence room. We continued walking, passing a large lecture hall, and began ascending a fragmented encased staircase which allowed for certain small slivers of light to pass through and views of a smaller inner courtyard. As we arrived to the more private side of the program, a secretary welcomed us, and we continued through a larger open office space which had natural lighting from above. The conference room was our destination, an adjacent space to the offices, this area provided views down into the entry court. From here you could see the toxicology and histology laboratories closer to the hospital; as we turned around the floor to ceiling height glass provided a view down to the ground level green space "edging the site" and straight ahead in the northern direction for panoramic view of downtown Hartford. \_\_Fall 2009 (before added program).



# Final Presentation Layout



VIEW FROM COURTYARD TO THE MEDICAL EXAMINER'S OFFICE AND CHAPEL

## DEATH AND ARCHITECTURE. RECOGNIZING NATURAL AND VIOLENT CASES

GRADUATE THESIS DESIGN STUDIO, PROFESSOR: JULIAN BONDER, ADVISOR: ANDREW COHEN FALL 2009 STUDENT: MICHAEL CAPRO

DEATH IS UNDERSTOOD IN DIVERSE WAYS THROUGHOUT THE WORLD. AMONG THE MANY CIVILIZATIONS WHICH HAVE EXISTED AND THOSE THAT CURRENTLY REMAIN, EITHER EXPRESS OR IGNORE THE EVENT OF DEATH. CULTURES WHICH HAVE SYMBOLIC AND RITUALISTIC EVENTS RECOGNIZE DEATH BY WAY OF MOURNING OR CELEBRATING THE OCCURRENCE.

THERE ARE TWO FORMS OF DEATH WHICH CAN CAUSE DIFFERENT EMOTIONAL REACTIONS TO THE FAMILY. ONE IS A NATURAL DEATH AND THE OTHER IS A SUSPICIOUS OR VIOLENT DEATH. THE SUSPICIOUS CASES FOR THIS AREA INVOLVE THE STATE MEDICAL EXAMINER. ONCE THE CASE HAS BEEN PROCESSED, THE EVENT OF MOURNING BEGINS. MOURNING PROCESS BETWEEN THE FAMILY AND THE BODY IS EXPERIENCED AT A PRIVATE LEVEL; HOWEVER, THE EVENT IN ITSELF, OF LOSS, IS VIEWED AS A COMMON EXPERIENCE. THE CONDITION OF DEATH ALLOWS FOR THE OPPORTUNITY TO PROVIDE OPEN SOCIAL SPACES WHICH THEN SEPARATES INTO THE PRIVATE VIEWING SPACES. FOR THE COMMUNITY, THIS BUILDING REPRESENTS AN APPRECIATION TO THE REALITY AROUND DEATH.

### PROGRAM

OFFICE OF THE STATE MEDICAL EXAMINER \_35,000 SF  
FORENSIC INSTITUTE/EDUCATION \_11,000 SF  
FUNERAL HOME, CREMATORIUM, AND NONDENOMINATIONAL CHAPEL \_36,000 SF



LA MORT DE MARIE-JACQUES-LOUIS DAVID  
1793 oil on canvas



### EXISTING SITE

HARTFORD, CONNECTICUT SOUTH GREEN NEIGHBORHOOD

THE SITE IS LOCATED WITHIN THE HARTFORD HOSPITAL DISTRICT, THUS PROVIDING AN EDUCATION LINK WITH THE FORENSIC PROGRAM. LOCATING THE FUNERAL HOME CLOSER TO MAIN STREET ALLOWS FOR A CLOSER CONNECTION WITH THE PUBLIC. THIS INTERNALIZED SITE ALLOWS FOR THE BUILDING'S PROGRAM TO BE ACCESSED FROM SPECIFIC POINTS AROUND THE CITY BLOCK.



EXISTING SITE PARKING

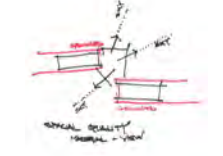
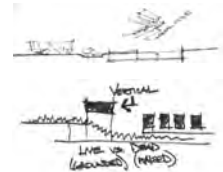
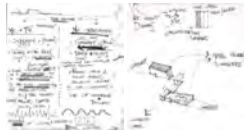


EXISTING SITE PARKING



VIEW TO DOWNTOWN FROM SITE

### CONCEPTUAL IDEAS



SECTION A.A. SCALE 1/16" = 1'-0"



SECTION B.B. SCALE 1/16" = 1'-0"



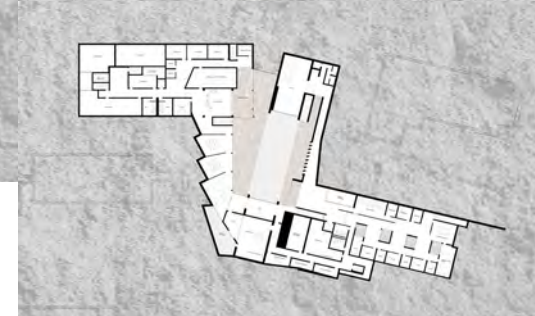
PRIVATE VIEWING ROOM



PREPARATION SPACE WITH VIEWING ROOMS FOR FAMILIES



ENTRANCE FROM THE MAIN COURTYARD INTO THE CHAPEL'S LOWER



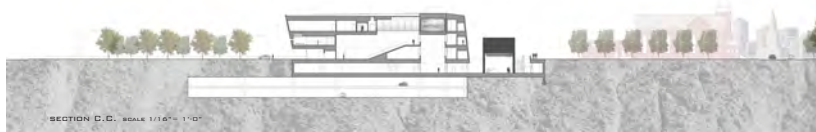
[UNDERGROUND -1.4 FT.] FLOOR PLAN SCALE 1/16" = 1'-0"



VIEW FROM HUDSON STREET TO STATE MEDICAL EXAMINER OFFICE



VIEW FROM HARTFORD HOSPITAL'S EDUCATION CENTER COURTYARD



SECTION C.C. SCALE 1/16" = 1'-0"



CHAPEL SPACE FACING THE CREMATORIUM VOLUME



ENTRANCE AND VIEW FROM STATE STREET



identity time memory

appendix





SITE PLAN SCALE 1/8" = 1'-0"



SOUTH ELEVATION SCALE 1/16" = 1'-0"

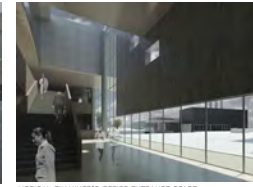
NORTH ELEVATION SCALE 1/16" = 1'-0"



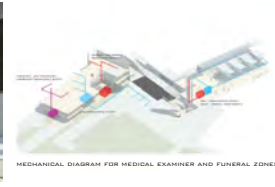
LARGE GATHERING AREA FOR MULTIPLE FAMILIES



FAMILY VIEWING ROOM WITH VIEW TO SKY



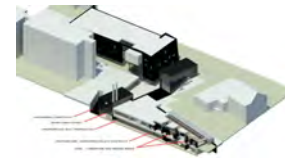
MEDICAL EXAMINER'S OFFICE ENTRANCE SPACE



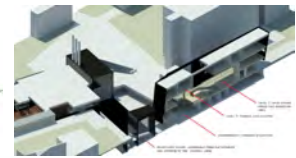
MECHANICAL DIAGRAM FOR MEDICAL EXAMINER AND FUNERAL ZONES



SECTION C.C. SCALE 1/16" = 1'-0"



FUNERAL HOME PROGRAM ORGANIZATION



MEDICAL EXAMINER'S OFFICE PROGRAM ORGANIZATION



GROUND FLOOR PLAN SCALE 1/16" = 1'-0"



FIRST FLOOR PLAN SCALE 1/16" = 1'-0"



SECOND FLOOR PLAN SCALE 1/16" = 1'-0"

CONTEXT AERIAL VIEW



USER CIRCULATION THROUGHOUT THE BUILDING





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