

## **ABSTRACT**

Title of Thesis:

**CHILDREN'S HOSPICE: A CARING  
ENVIRONMENT FOR FAMILIES TO LIVE  
THROUGH A CRITICAL TIME**

Lynn M. Riley Stokes, Master of Architecture, 2003

Thesis Directed by:

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Hospice is a concept of caring – a philosophy emphasizing quality rather than quantity of life. A residential hospice is a place where patients with terminal disease can go to live their last moments in a supportive environment.

Currently, in the United States, there are no free-standing children's hospices in existence.<sup>1</sup>

This thesis proposes the Hospice as a feature to the Johns Hopkins campus in downtown Baltimore, Maryland. Johns Hopkins prides itself on its history of medical, philosophical innovation and unsurpassed medical talent. This site, with its urban, campus and residential neighborhood elements, will provide a rich dialog between building and site, boundaries and gateways.

An ultimate goal of the Children's Hospice is to assist families in remaining intact, functional and capable of achieving the highest quality of life together in the midst of very extreme circumstances.

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<sup>1</sup> The George Mark Children's House is currently under construction in California, and scheduled to open in Fall 2003.

CHILDREN'S HOSPICE:  
A COMPREHENSIVE ENVIRONMENT FOR FAMILIES  
TO LIVE THROUGH A CRITICAL TIME

by

Lynn M. Riley Stokes

Thesis submitted to the Faculty of the Graduate School of the  
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of the requirements for the degree of  
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Advisory Committee:

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## **PREFACE**

Currently, in the United States, there exist no free-standing residential children's hospices. The only residential hospices for children available for study were located in countries whose socialized medical care enables such places to exist, and even then are primarily funded by benefactors.

Residential hospice is a costly endeavor. It is my hope that this thesis proposal will help raise awareness of the need for residential hospice facilities for children and their families; that the proposed mixed use nature of the design solution presented herein can help inform reasonable ways to provide such facilities; and that large institutions will take a more active role in developing environments like these for the communities they support.

## **DEDICATION**

To my family, whose love and support has helped me realize a dream.

To Phyllis, who taught me that dreams are worth fighting for.

And to Chris, and all the men and women involved in supporting the fight against terrorism, who have put their dreams on hold to do so.

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CHAPTER I  
INTRODUCTION

## STATEMENT OF THESIS

Hospice is a concept of caring derived from medieval times, symbolizing a place where travelers, pilgrims and the sick, wounded or dying could find rest and comfort. Hospice emphasizes palliative rather than curative treatment, quality rather than quantity of life. Hospice affirms life and regards dying as a normal process. Hospice neither hastens nor postpones death. Professional medical care is given, and sophisticated symptom relief provided. The patient and family are both included in the care plan and emotional, spiritual and practical support is given based on the patient's wishes and family's needs.<sup>1</sup>

Unlike an adult hospice where the care provided is comparatively short and at the end of an adult life, a children's hospice works alongside the family through the months, maybe years of care and beyond until death. At a children's hospice the whole family can stay if they wish, at repeated intervals. A hospice environment should make the children feel as comfortable and happy as possible as if they were visiting a friend, not a hospital or institution.<sup>2</sup>

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<sup>1</sup> Hospicenet.org.

<sup>2</sup> Naomi House website.

This thesis will explore the reconciliation of technology and human need in the design of a Children's Hospice by addressing program, character, materials and scale, in particular.

The hospice will be proposed as an additional feature to the Johns Hopkins campus in Baltimore, Maryland. As such, the design solution will address elements of urban design and campus planning.

A Master Plan for the site will be proposed, indicating massing, use, relationships and spatial definition of open spaces. Location on the site will reflect relationships and attitudes toward the urban landscape that will strengthen the existing campus and promote the new program.

The program will include but not be limited to patient rooms, family residential spaces, specialty care facilities, medical procedure facilities and offices, play areas (indoor and outdoor), reading room/library, small chapel, dining room and kitchen, physical therapy facilities, and landscape.

There will be a strong focus on creating an environment that seeks to promote comfort, stimulate intellect, and provide emotional support, so that patients and their families can concentrate on living each day to its fullest.

CHAPTER II  
THE SITE AND ITS IMPLICATIONS

## LOCATION

The site for this project is the urban fabric of Baltimore, Maryland.

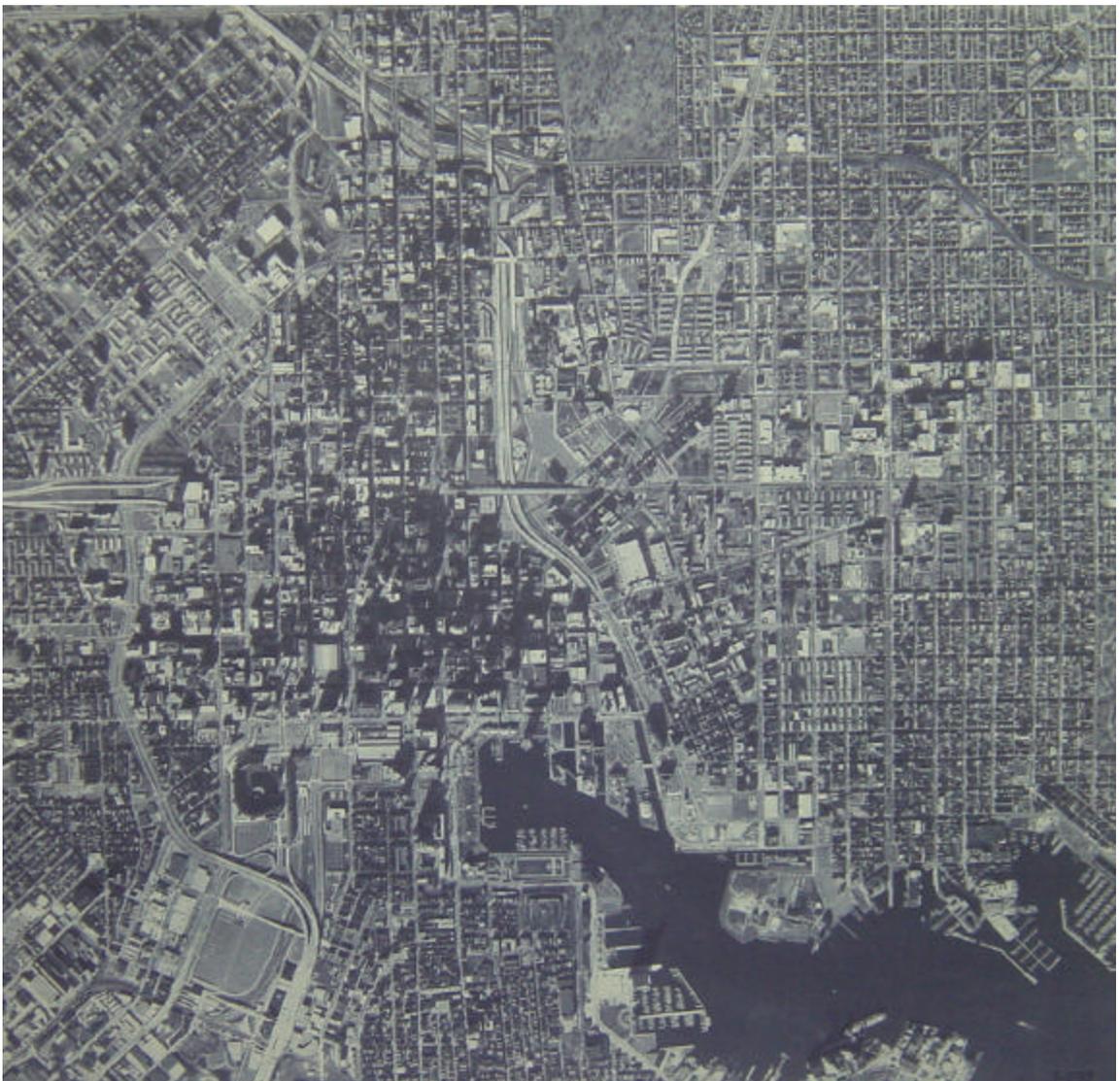


fig. 1: Aerial Photograph of Baltimore.

Baltimore is a dense city, organized by strong orthogonal grid systems.

## SITE HISTORY

The site within this urban fabric is the Johns Hopkins medical campus. Hopkins built his hospital on the site of Maryland's economically unstable insane asylum, when state law-makers suggested he buy it. (The asylum's patients were relocated to a new hospital in Spring Grove.) Hopkins was familiar with the site, located at the crown of what was then called Loudenschlager's Hill, as he had served on the asylum's board for nearly twenty years. The site had an even older history, as a general hospital, built not only to handle mental disorders, but to cope with an epidemic of yellow fever, which killed 1,200 people in Baltimore in 1798. Hopkins' decision to locate the hospital there was confirmed when his board of trustees (mostly Quaker, like Hopkins) opined that a location closer to the less prosperous urban neighborhoods would more likely benefit the poor than a hospital facility removed from the city.<sup>3</sup>

## THE RATIONALE

Johns Hopkins prides itself on its history of medical, technological and philosophical innovation, and unsurpassed medical talent. It has a history of Quaker leadership as stewards of the community. It has the resources and the connections to promote the concept of hospice, and it has the medical community to support it. Just as the early advisors to Hopkins suggested the urban site for the hospital as a more accessible site to the common good, so this thesis proposes an urban site for a children's hospice.

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<sup>3</sup> Johns Hopkins website.

The typical situation of freestanding hospices for children as rural residences in the landscape here is challenged in order to bring this important service to a broader base and propose a more economically justifiable solution.

#### SITE ANALYSIS

. The medical campus of Johns Hopkins is located on the crest of a hill, with its head building on North Broadway Street; East of the downtown district, and due North of the city's harbor, and the Fells Point area.

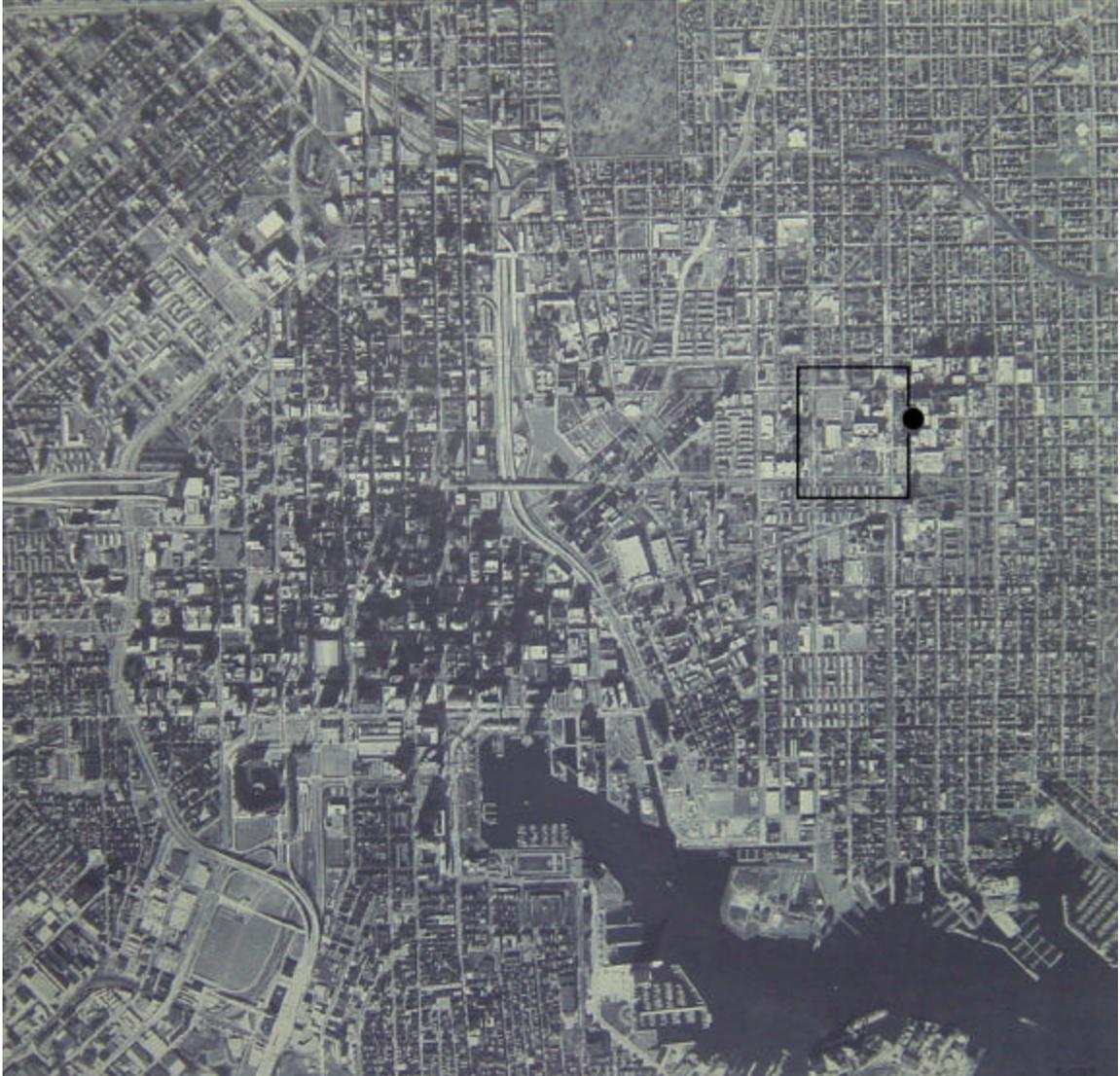


fig. 2: Aerial Photograph denoting Johns Hopkins Head Building and block of Proposed Site.

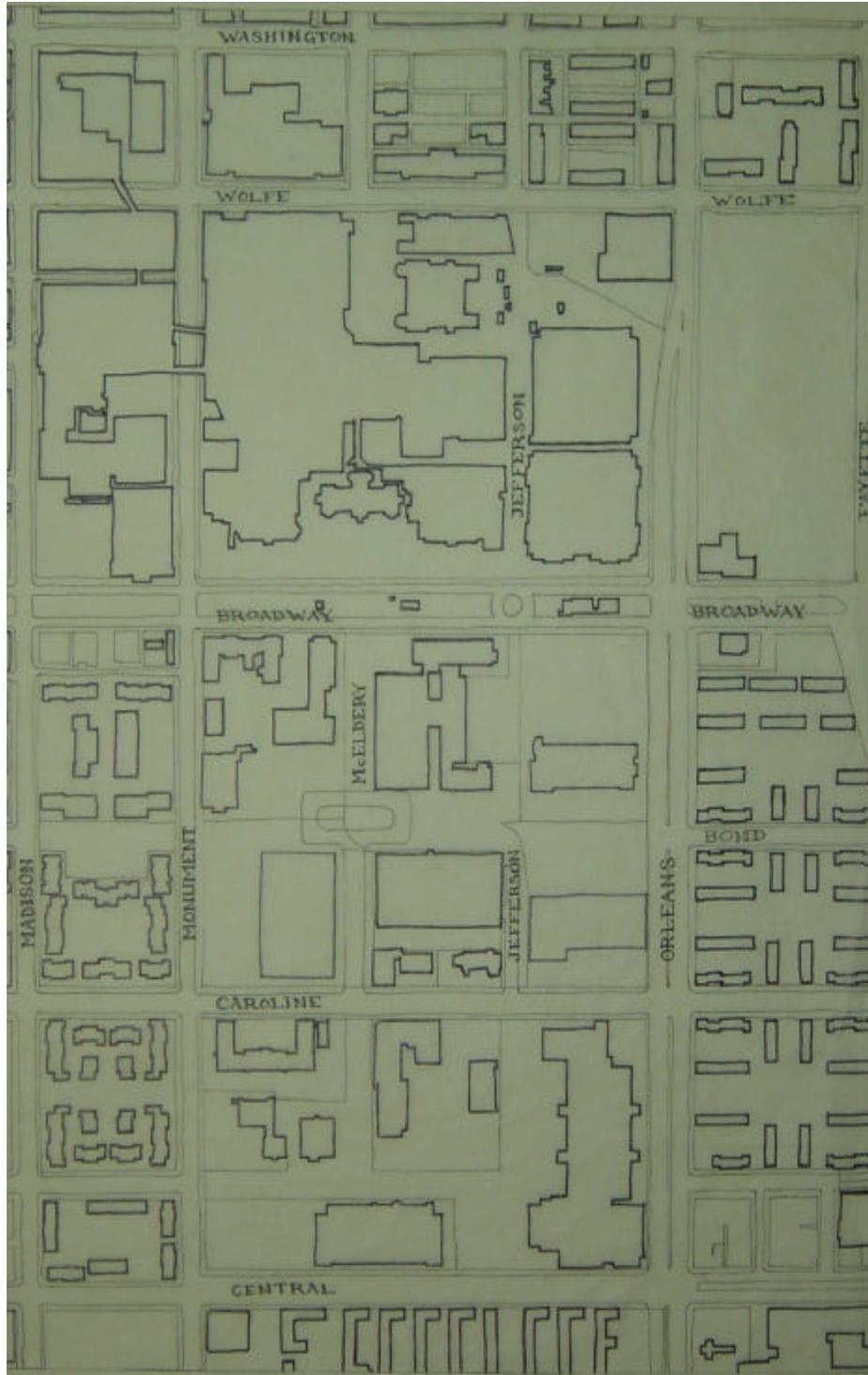


fig. 3: Local Building Footprints and Street Names.

Several sites on the Johns Hopkins campus were considered. Currently, Hopkins is undergoing major development, as is the urban fabric that surrounds it.



Fig. 4: Site A: A Recently Acquired Block Under Development by Hopkins.

(Located between Broadway, Wolfe, Fayette and Orleans.)



fig. 5: Site B: Former Ground Parking, Currently Under Construction. (Located

on northeast corner of Orleans and Caroline.)



fig. 6: Site C: The Space Located to the southern edge of the Traffic Square.  
(Located in the center of the block, between Caroline and Broadway.)



fig. 7: Site D: The Ground Parking Located on Broadway and Orleans.

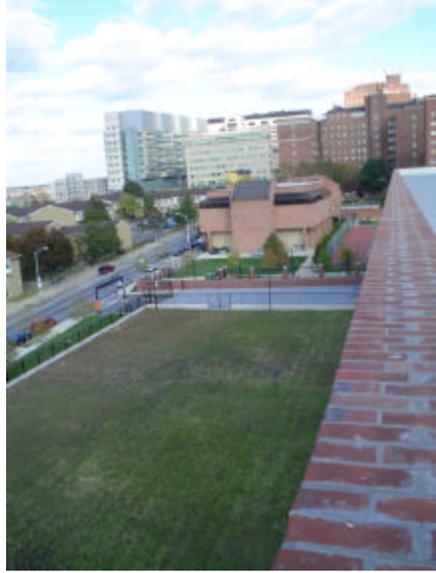


fig. 8: Site E: The Grassy Plinth located at the corner of Monument and Caroline.



fig 9: Site F: The Tennis Courts located at the north edge of the Traffic Square.

A topography study was done, as well as analysis of massing and land use.

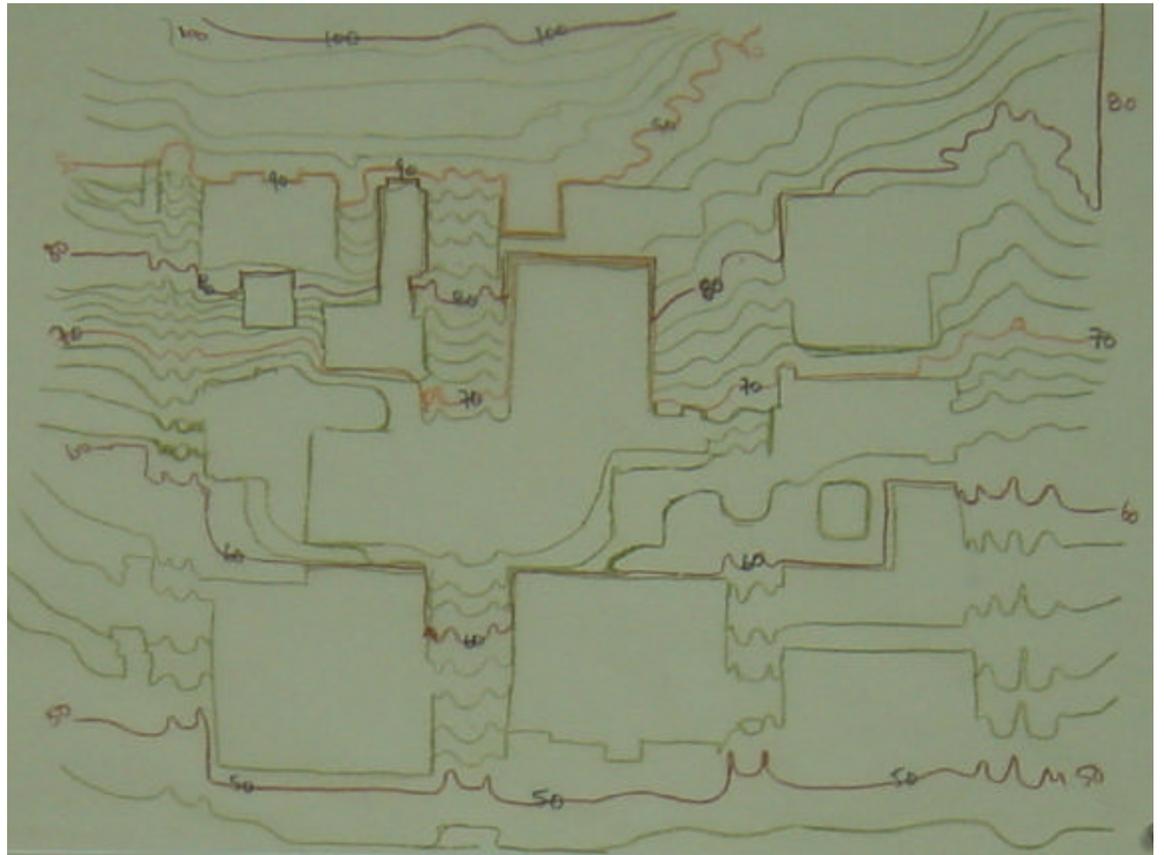


fig. 10: Topography of Site with Building Footprints Incorporated.

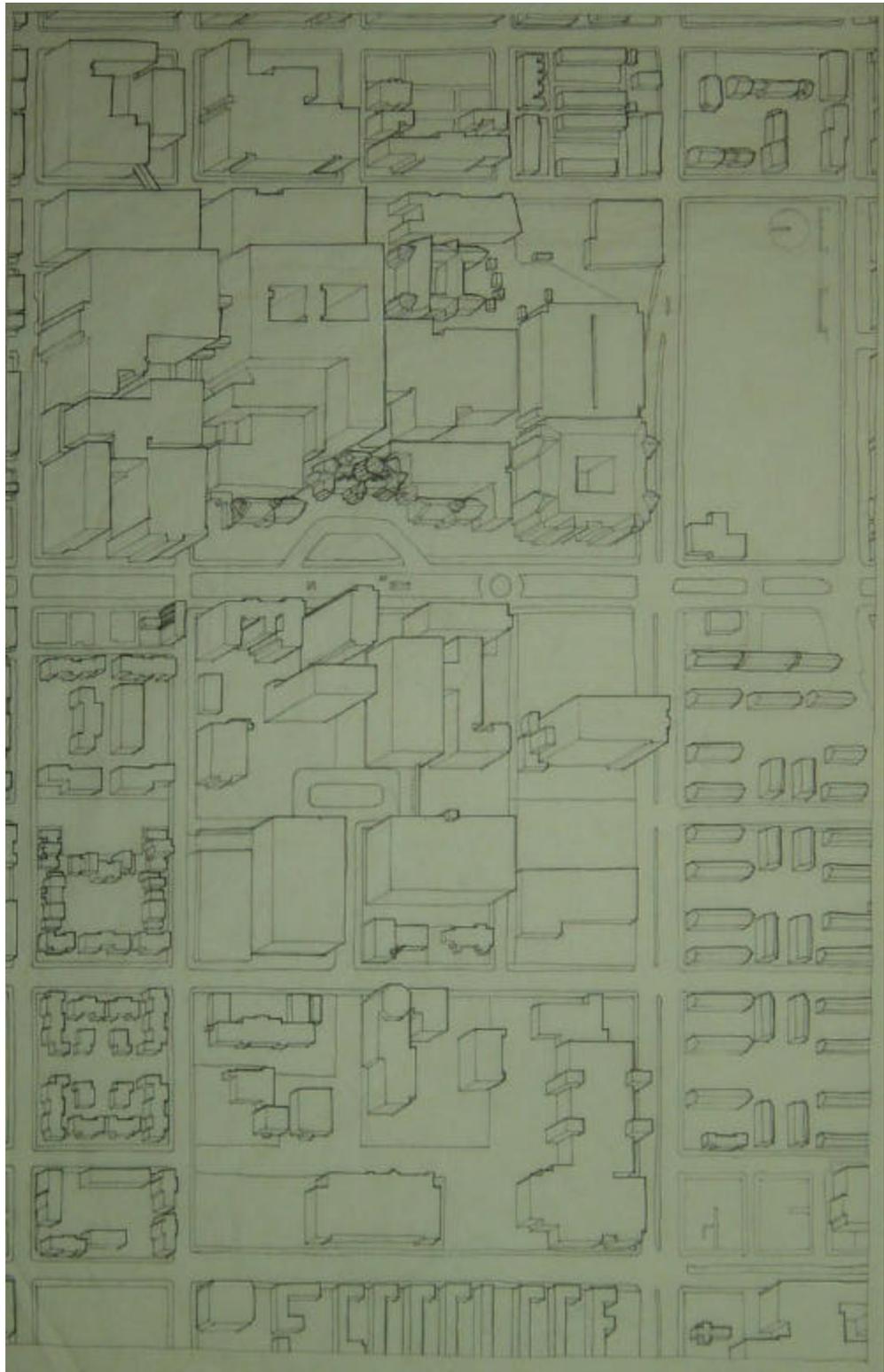


fig. 11: Axonometric of Site Area.

Site A was rejected early on, as plans for developing large physical plants and additional parking garages by Hopkins was already underway. The location and surrounding use would impose a disconnect on the hospice at that site that is counterintuitive to the needs of the hospice community.

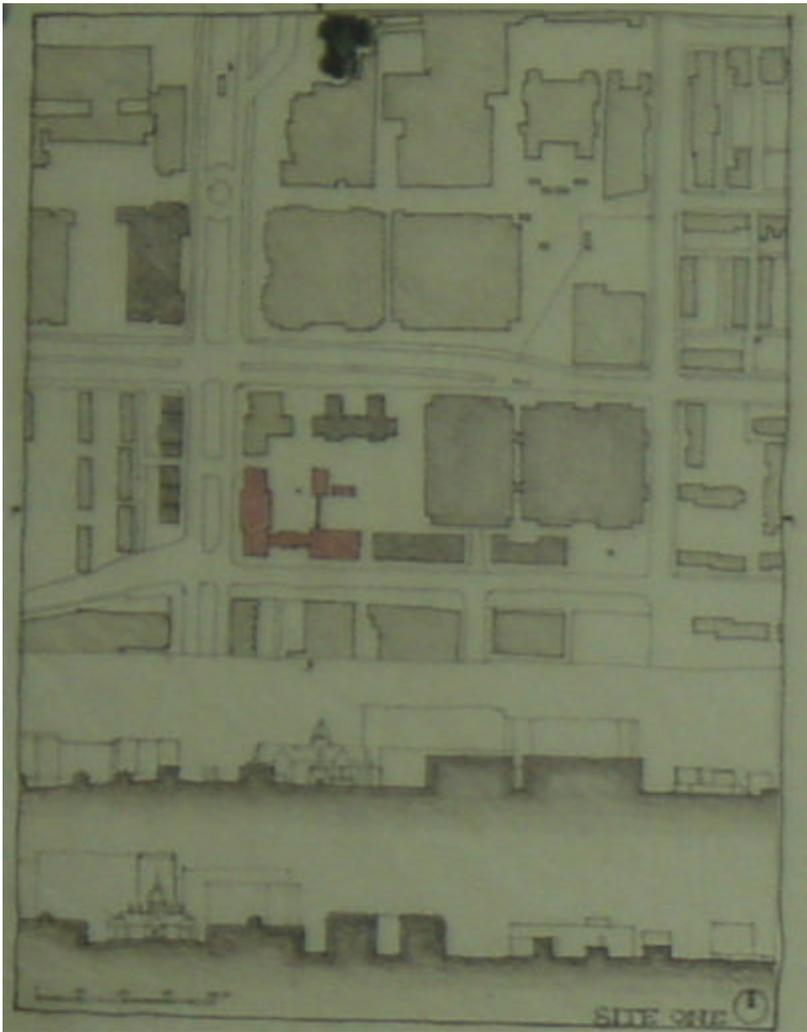


Fig. 12 Site Analysis Site A.

Sites B and D were also rejected at an early stage, as a result of the heavy traffic and dangerous circumstances posed by Orleans Street, and also massing and security



issues posed by neighboring land use.

fig. 13: Orleans Street, Sites B and F Located to the Right.



figs. 14 and 15: Early Schemes Proposed for Sites B and D.

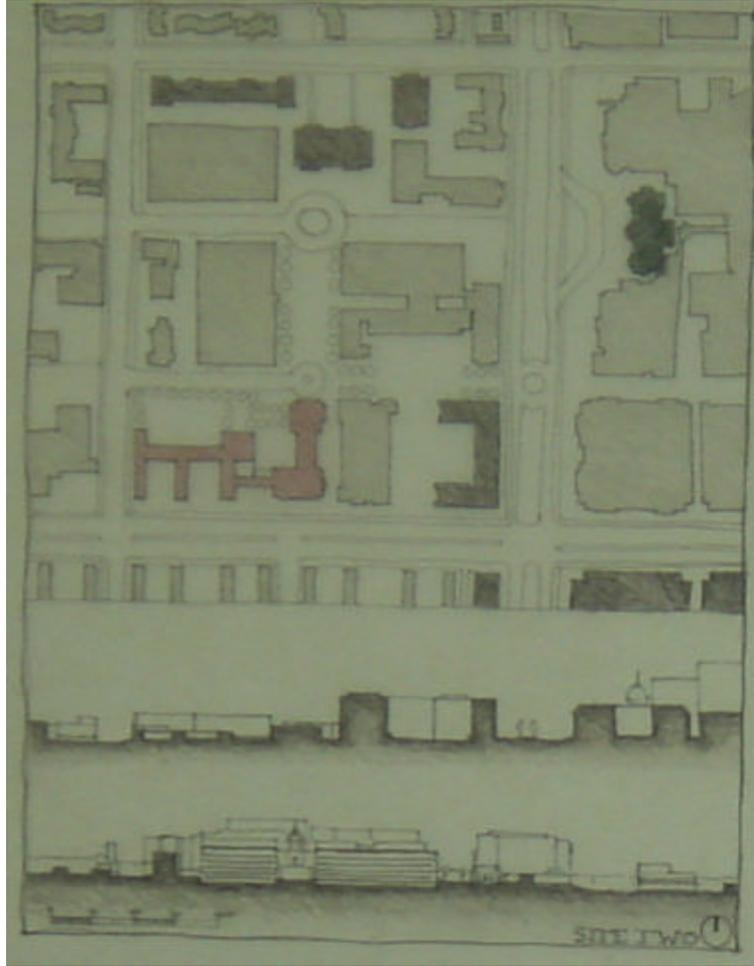


fig. 16: Site Analysis Site B.

Site analysis for Site C determined its relationship to the campus and Head Building would be dependent on connecting new features. Additionally, massing and surrounding land use were not ideal.

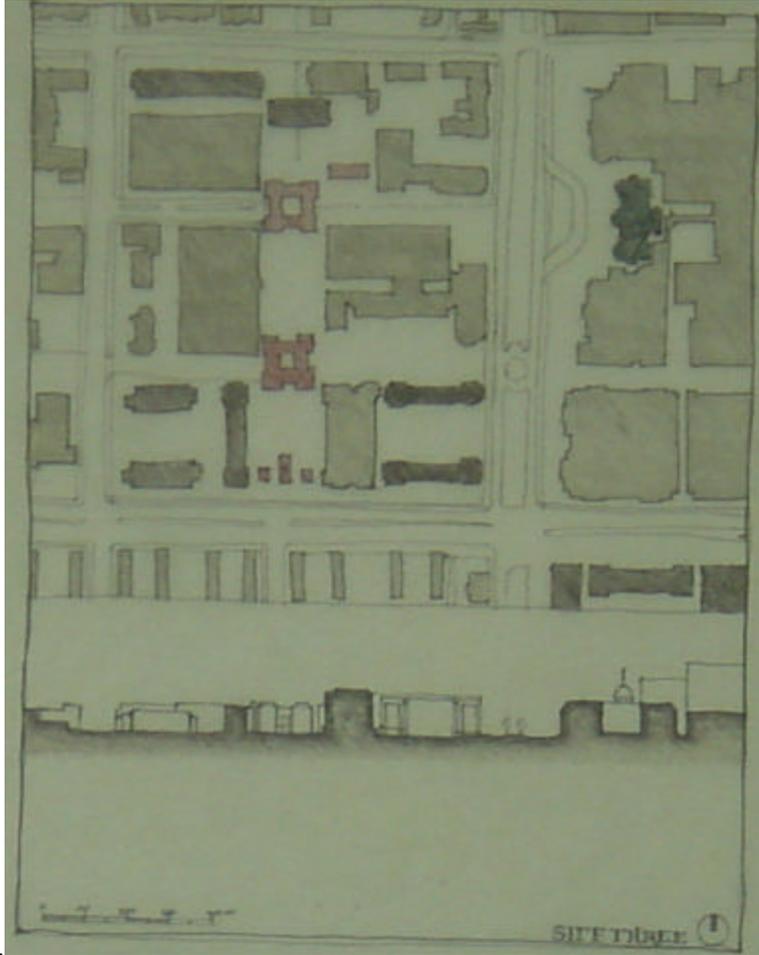


fig. 17: Site Analysis Site C.

Site Analysis for Sites E and F showed favorable conditions with regard to massing. Additionally, the traffic conditions of Monument Street highly exceed those of Orleans, as Monument is about half as wide, and travels in one direction only. Site F showed still more favorable conditions, as its relationship to the campus was very clear, located at the edge of the already defined traffic square, and posing the opportunity to develop a strong cross axial relationship with the campus' main pedestrian path.

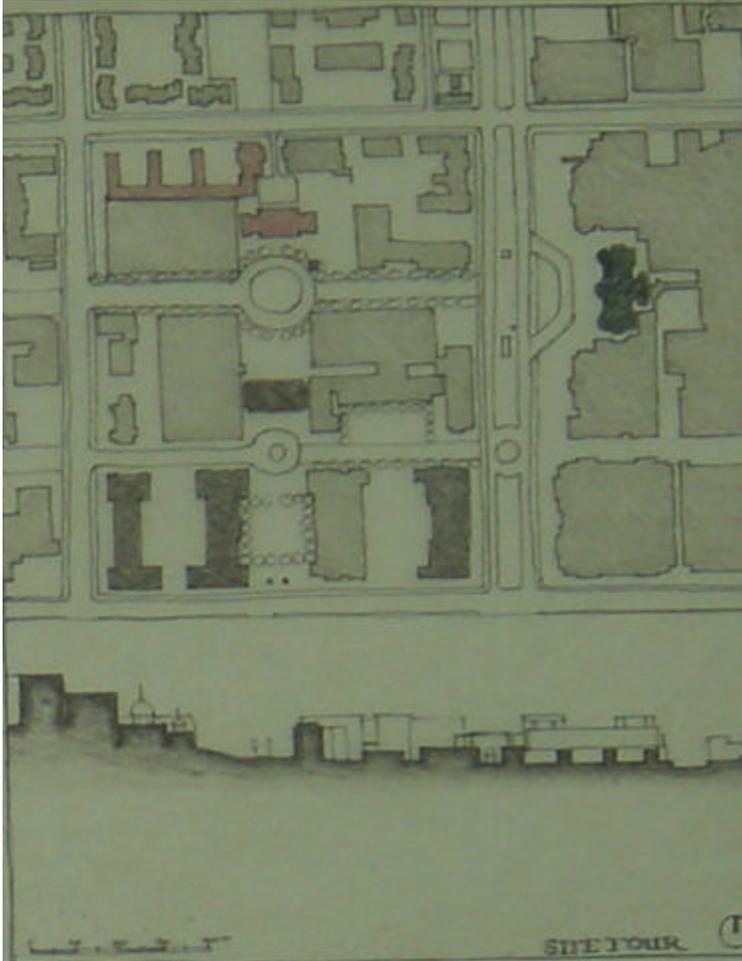


Fig. 18: Site Analysis Sites E and F.

Additionally, in this location, the hospice could serve as connector between the residential high rise apartment buildings that house the Hopkins medical students, and the much minutely scaled low income housing located across Monument Street.

Further analysis showed key views from the upper level of the parking garage, located immediately west of Site F.



figs. 19 and 20: Views from Site at 60 Feet above Ground.



figs. 21 and 22: More Views from Site at 60 Feet above Ground.

The boundary conditions at the site vary. The East edge is bounded by a service parking lot, for the neighboring medical residents' apartment housing.



fig. 23: East Boundary.

The South boundary consists of the Traffic Square that sits at the base of the Pedestrian Axis Path leading to the Head Building



Fig. 24: Traffic Square at South Boundary.

The West boundary is a parking garage, presenting an interesting challenge in the Site relationship.



fig. 25: West Boundary – Parking Garages.

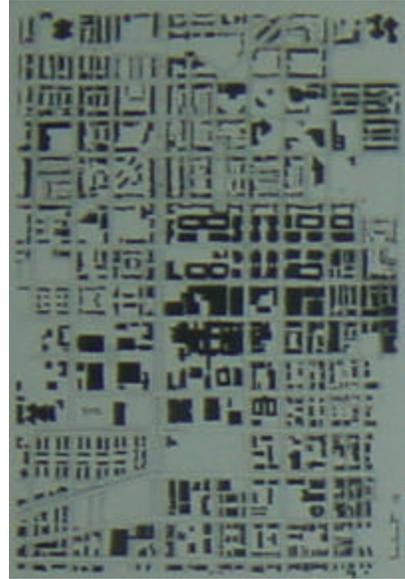
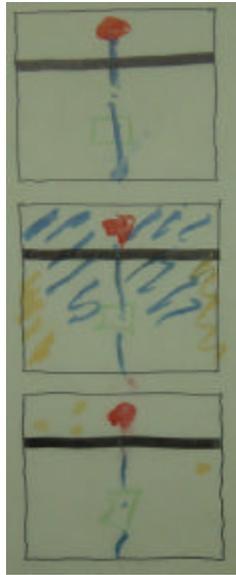
And the North boundary is defined by access to Monument Street, and also a four



story recreational facility.

fig. 26: North Boundary.

Additionally, Land Use and Figure Ground Studies were documented, to help inform design decisions during Process.



figs. 27 and 28: Land Use and Surrounding Children's Medical Facility Locations in Relation to Hopkins Head Building and Broadway Street; Figure Ground Hopkins Campus Region.

CHAPTER III  
THE PROGRAM

## THE PROGRAM

Children are not little adults. They do not live like adults; they do not die like adults. When a child becomes seriously or terminally ill, his or her needs are very different from those of an adult and require a different kind of treatment. Therefore, their needs and the needs of their families are not adequately served by traditional adult hospice services, or traditional adult hospice facilities.

Consequently, we must adapt methods and programming to the specific needs of children and their families. When a child has a life-threatening illness, families tend to want the child at home, rather than in a hospital setting. But children need pediatric nursing on call every hour of every day, expert pain and symptom management, play therapy, parent education, and intensive family support, including counseling and support for siblings.<sup>4</sup>

Through analyzing the proposed program for the George Mark Children's House, and compensating for the larger proposed patient capacity of this urban children's hospice, and also determining what density the site will bear, program tabulation has been calculated

## PROGRAM OBJECTIVES

The Children's Hospice is an opportunity to create a nurturing environment, where families can feel secure and cared for while living through a critical time. The overall feeling should be that of a large home, or perhaps in this case, a very small home town. The special issues brought about by being part of an urban campus – shaping spaces with buildings, relationships between buildings, density, massing, accommodating

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<sup>4</sup> Hope House website.

private space, providing public space --- all contribute to the multiple architectural readings afforded by this project.

The success of this design will hinge upon the creation of warmth, security and privacy, the program's connection with the campus and city, and the organization and separation of key program elements like living areas and service areas, with medical functions providing a link between the two. There needs to be an attempt to create an environment where social interaction can occur easily, providing support among co-residents, and also provisions for remote areas for reflection, retreat and solitude.

Additionally, the issue of accessibility will take on a primary role in the design process.

The programmatic issues for this project are:

- Zones of public, private and service elements
- Accessibility
- Links made to campus and community
- Landscape and outdoor living spaces
- Providing opportunity for community interaction

#### Zones of public, private and service elements

A clear organization of public program elements, private elements and service elements should be developed. The public living spaces should be easily accessible and open, so that social interaction can be facilitated, enabling supportive relationships among residents to form. Private elements need to be incorporated, and located appropriately, so residents who are in need of solitude, rest and reflection, can easily find

the privacy and quiet they need. Service connections and facilities need to be incorporated to allow discrete inter-workings of a medical facility, minimizing intrusion on the residential atmosphere.

### Accessibility

The primary residents of the facility are children with compromised health. They have likely undergone intense medical treatment, greatly reducing their strength and mobility. The arrangement of spaces needs to accommodate their level of mobility, giving them access to all public areas, as independently as possible. Visual connections to public spaces from private spaces should be incorporated to allow residents to be connected to the community even when not physically possible. Additionally, visual connections from living space to living space can afford interaction as simple as a daily wave through a window to occur. Indoor and outdoor connections need to be made as smoothly as possible, to accommodate wheelchairs, walkers and rolling medical devices. Outdoor spaces need to be carefully designed with ground surfaces allowing for all levels of mobility.

### Links made to campus and community

Architectural links should be made to the medical campus, relating the facility to the campus as a piece of the whole. The security lent by a connection in an urban environment to an established community, like Johns Hopkins, will support the desired atmosphere of the hospice program. Neighboring residential communities should be respected, including their schools and places of worship, and the facility can serve as a transition piece between the two.

### Landscape and outdoor living spaces

Connection to the campus should be made through landscaped paths and open space relationships. Outdoor spaces of varying scale should be incorporated to provide places for recreation, relaxation and reflection. Special consideration should be made for developing a lush landscape on an urban site. Features like garden walls and formal gardens at a residential scale could aid in the transition between urban neighborhood and campus. And details as simple as locating a bird feeder on a balcony can create connections for limited individuals to interact with the outside world.

### Density

The proposed program is for a capacity of 50 patient residents and their families. This is the figure determined by studies in massing and square footage requirements. (See Family Units below, and also Axonometric Master Plan)

**TABLE ONE**

---

**PROGRAM SUMMARY Children’s Hospice**

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<b>100</b>	<b>Public Space:</b>	<b>N.S.F.</b>
<hr/>		
101	Entry	800
	101.1 Storage Closet	120
102	Reception	120
103	Forecourt	as required
<b>Subtotal:</b>		<b>1040</b>
<hr/>		
<b><u>Gathering Space:</u></b>		
104	Dining Room 3 @ 960	3840
105	Family Room 3 @ 600	2400
106	Great Room	2400
107	Kitchen	2400
	107.1 Loading Dock	300
	107.2 Storage	100
	107.3 Refuse/Recycle	100
108	School Room	900
109	Sunroom 2 @ 500	1000
<b>Subtotal:</b>		<b>13440</b>
<hr/>		
<b><u>Semi-Private:</u></b>		
110	Administration Offices	680
	110.1 File Room	300
	110.2 Photocopy/Fax/Mail Area	150
124	Staff Offices	2500
	124.1 Staff Lockers	225
	124.2 Storage 5 @ 120’	1100
111	Art Room	350
112	Computer Room	500
113	Conference Rooms 2 @ 600	1200
114	Courtyards	as required
115	Lap Pool <sup>5</sup>	-----
	115.1 Powder Rooms 2 @ 120	240
	115.2 Whirlpools	450
116	Library	625
117	Multi-sensory Room	350
118	Music therapy Room	225
119	Outlet Room	225

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<sup>5</sup> It was determined through site analysis, that this site doesn’t not require a lap pool, as the neighboring recreation center has a large pool facility, and an outdoor pool is located just across the service access road. The whirlpools will still be incorporated as part of the physical therapy facility.

120	Powder Rooms 10 @ 100	1000
121	Playroom	600
	121.1 Toy Closet	100
122	Play Ground	as required

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**CONTINUATION OF PROGRAM SUMMARY** S.F.

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125	Teenage Room	300
		<b>Subtotal: 10945</b>

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**200 Special:**

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201	Chapel	480
202	Meditation Garden	as required
203	Reflection Spaces 6 @ 120	720
204	Retreat	300
205	Wake Room	400
	205.1 Loading Dock	300
	205.2 Service Elevator	100
	205.3 Storage	150
		<b>Subtotal: 2450</b>

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**300 Private:**

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301	Family Unit Typical 18 @ 840	15120
	Family Unit Large 6 @ 900	5400
302	Parent Child Room Large 6 @ 576	3456
	Parent Child Room Penthouse 20 @ 464	9280
		<b>Subtotal: 33256</b>

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**400 Medical support:**

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401	Emergency Room	600
402	Emergency Vehicle Access Entry	as required
403	Nurses' Stations 5 @ 300	1500
	403.1 Medical Supply Rooms 5 @ 90	450
404	Medical Waste Rooms 2 @ 100	200
405	Tub Rooms 2 @ 100	200
		<b>Subtotal: 2950</b>

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**500 Service:**

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501	Dirty Linen 4 @ 120	480
502	Janitor Closet 3 @ 100	300
503	Laundry	500
504	Mechanical	as required
505	Refuse/Recycle	150
		<b>Subtotal: 1430</b>

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<b>600</b>	<b>Educational:</b>	
601	Classrooms	1500
602	Lecture Hall	1400
603	Study Hall/Student Lounge	600
604	Computer Lab	600
	<b>Subtotal:</b>	<b>4100</b>

<b>700</b>	<b>Commercial:</b>	
701	Interior Court	As required
702	Restaurant	1400
	702.1 Kitchen	600
	702.2 Storage	150
703	Coffee Shop	400
704	Convenience Market	600
	704.1 Storage	250
705	Book Shop	700
	<b>Subtotal:</b>	<b>4100</b>

**SUBTOTAL:** **73711**

Circulation<sup>6</sup> 13636

**SUBTOTAL:** **87347**

Mechanical<sup>7</sup> 3495

<b>800</b>	<b>Basement:</b>	
801	Basement Level to accommodate Storage for Family Residents, Service equipment, back-up generators,	10,000
	<b>TOTAL BUILDING SQUARE FOOTAGE REQUIREMENTS</b>	<b>100842</b>

<b>900</b>	<b>Parking:</b>	
	70 Spaces	21000

<sup>6</sup> Circulation is based on 18.5% of the subtotal program space.

<sup>7</sup> Mechanical space is based on 4% of building net square footage, as SCUB system is in place on University.

**PROGRAM DESCRIPTION**

**100 GENERAL PUBLIC SPACE**

A. General Description: This portion of the program will consist of all the public space. The general character should be residential at a large scale, as an English Manor house, and will serve as the welcoming space for residents and their families.

B. General Relationships: The entry vestibule should be appropriately placed to form a connection to the Johns Hopkins campus, and will likely address Jefferson Street. The forecourt should be located between the front entry and campus, and be appropriately landscaped. It will likely accommodate a drive up drop off area.

**101 Entry Vestibule : 800 S.F.**

Should be large enough to accommodate informal gatherings as residents come and go. Should be visually accessible to Great Room, and in close proximity to administrative offices.

**101.1 Storage Closet: 120 S.F.**

Discretely located off Entry Vestibule, to be used for miscellaneous equipment, i.e. spare wheelchair, etc.

**102 Reception: 120 S.F.**

A desk area with seating, located adjacent to Entry Vestibule. Should have visual access to Great Room and key circulation points, i.e. elevator, front door, administration office access, to act as a control.

**103 Forecourt : as required**

An exterior marked entry space, connecting the Hospice to the rest of campus, through landscape and sequential relationship. Outdoor seating and plantings will give a welcoming first impression for residents and visitors. Access for vehicular drop off will likely be accommodated.

**104 Dining Room: 3340 S.F.**

A family style dining room large enough to seat all Residents at one time will provide a communal eating and gathering space for Residents and their families, with a visual relationship with the outdoors. During non-meal times, this space can be used as a space where families and small groups can sit at tables, work on homework, etc.

**105 Family Room: 600 S.F.**

Moderate sized space for relaxed gathering, watching television, listening to music. Should have doors to close for sound control. Located in vicinity of Family Suites.

**106 Great Room: 2600 S.F.**

Primary community living space. Should have large fireplace and hearth, visually accessible from Entry. Serves as symbolic space for Residents and their guests. Sets the tone for the Hospice as home. Atmosphere should be warm and full of texture. Large enough to accommodate entire population and staff for special functions. Accommodations must be made for piano, and flexible space for occasional performances.



Securable space for housing medical and case documents. Located adjacent to Administrative Offices and Medical Staff Offices.

**110.2 Photocopy/Fax/Mail Room: 300 S.F.**

---

A securable service room, located between Reception and Administration offices.

**111 Art Room: 350 S.F.**

---

A space for crafts and art therapy, with storage and sink, located in close proximity to Music Room.

**112 Computer Room: 350 S.F.**

---

A securable room, located in close proximity to Family Room and Class Room, with internet access, and computer stations.

**113 Conference Rooms: 1350 S.F.**

---

Two rooms for small meetings between staff, doctors and Residents and their families, located in proximity to Administration Offices and Medical Staff Offices.

**114 Courtyards: as required**

---

Outdoor spaces about which indoor program elements are organized, and which provide outdoor communal living space. They are to serve as oases that are accessible to Residents at all times. At least one shall be active, and include the Playground programming; and at least one shall be quiet.

**115 Lap Pool: 1850 S.F.**

---

A lap pool fitted with accessible lift for Residents and their families to use for exercise and therapy purposes, with adjacent Whirlpool.

**115.1 Powder Room: 120 S.F.**

---

Located directly off Lap Pool area.

**115.2 Whirlpool: 450 S.F.**

---

Sharing space and climate control with Lap Pool.

**116 Library: 500 S.F.**

---

A quiet space, with fireplace, bookshelves, and comfortable seating, including window seats, for reading.

**117 Multi-Sensory Room: 350 S.F.**

---

A space to accommodate activities such as water tables, sand tables, small science experiments, with a sound system and video equipment. Located in same vicinity as Art and Music Therapy Rooms.

**118 Music Therapy Room: 350 S.F.**

---

A space to accommodate small groups playing musical instruments. Large enough for upright piano, with storage for other instruments, and table and chairs. Located in same vicinity as Multi-Sensory Room and Music Therapy Room.

**119 Outlet Room: 200 S.F.**

---

A small closed space, with sound proofing, to enable Residents to vent their more hostile feelings. Floor mats, and foam cushions to furnish.

**120 Powder Rooms (5): 120 S.F. ea.**

---

All accessible, for use by staff, Residents and visitors.

**121 Playroom: 200 S.F.**

---

With direct access to playground.or rooftop gardens.

**121.1 Toy Closet: 100 S.F.**

---

With shelves and doors able to be opened on both surfaces, located between hallway and Playroom, so Residents can easily access toys.

**122 Play Ground: 4800 S.F.**

---

Fitted with accessible play equipment, graded for wheelchair mobility and paved appropriately, with handrails where necessary. Located directly off Play Room or classrooms.

**123 Green House: 300 S.F.**

---

Small structure located within Play Ground. Fully accessible.

**124 Staff Offices: 2500 S.F.**

---

Work spaces for staff, can be open with cubicle spaces, etc., accommodating 20 staff members, with Lockers and Storage. Located in close proximity to Administrative Offices.

**124.1 Staff Lockers : 100 S.F.**

---

**124.2 Storage: 1000 S.F.**

---

**125 Teenage Room: 300 S.F.**

---

A small place, for teen Residents to get away, and enjoy typical teen activities: videogames, music, etc. Located near Residents' rooms.

**200 SPECIAL**

General Description: These program elements each have their own special character and functions, but share the need for sound separation. Accordingly, their locations need to reflect their special functions, and present special relationship challenges regarding procession, sound separation and servicing.

**201 Chapel: 480 S.F.**

---

Residents and their families are living through perhaps the most difficult time in their lives – the oncoming death of a child. A non-denominational sacred space needs to be available for prayer and meditation 24 hours a day. The space should feel comforting, calming and intimate. There should be simple seating, an altar, or similar focal point, and appropriate lighting. A sound system should be incorporated for the Chapel’s use for occasional memorial services. The Chapel shall be located remote from energetic activity areas, and with a possible connection to the Meditation Garden.

**202 Meditation Garden: as required**

---

An intimate outdoor space with strong sense of enclosure, affording Residents and their families the opportunity to find solitude in an outdoor environment. Should have seating and visual focal point. Possibly should include running water feature to provide comfort and dampen intrusive noise.

**203 Reflection Spaces (5): 144 S.F. ea.**

---

Small pockets of space for solitude and intimate conversation. Located along window walls, with comfortable window seats large enough to accommodate two.

**204 Retreat: 300 S.F.**

---



A. General Description: These spaces include the private bedrooms of the Residents and their families.

B. General Relationships: There should be a connection between the private rooms and the Courtyards. The connection should be visual, but with some consideration for sound separation. A special condition of connection to public space should be maintained, while still allowing for privacy and quiet.

**300                      Family Units (24):                      850 S.F. ea.**

---

Each suite will be a small apartment for use by Residents' families on an extended stay basis. This will enable the family to live as a unit while their child is in residence. The apartment will have two bedrooms, one modest living area with limited kitchenette, and one bathroom. The units will be fully accessible to allow visits from Residents. The units will be clustered together, to give opportunity for supportive relationships to develop between resident families. They will have a relationship to the Courtyards

**301                      Parent Child Rooms (26):                      500 S.F. ea.**

---

These bedrooms will have two beds, and be large enough to accommodate the resident child and one other family member. Attention needs to be given to create a warm comforting space, where the child will spend much time. Special design considerations like decorative ceilings, furniture on rollers to provide flexibility, built in storage and shelves, entertainment facilities (television, vcr, sound system) should be included. Spaces will be large enough to facilitate medical equipment and service. Special features like intercom, remote control lighting and sunlight control, and temperature control, will be incorporated. Residents'

Rooms will have a relationship to the Courtyards, direct access to balconies, and also in close proximity to Nurses' Stations.

**301.1 Bathrooms : 120 S.F. ea.**

Fully accessible, with intercom and call system.

**400 MEDICAL SUPPORT**

General Description: Includes all program elements that provide medical support and service exclusively, excepting Staff Offices, noted above.

**401 Emergency Room: 900 S.F.**

A limited Emergency Room will be provided for non-invasive procedures, exams and pain-management services. Located in near proximity to Medical Staff Offices, and away from active living spaces, directly connected to Emergency Vehicle Access Entry.

**402 Emergency Vehicle Access Entry: as required**

Service access for emergency vehicles, located adjacent to Emergency Room.

**403 Nurses Stations (2): 230 S.F. ea.**

Open work spaces and reception desk, scaled appropriately to children, for staff to monitor and interact with Residents, in close proximity to Residents' Rooms. Computer terminals for charts and records of medication to be maintained, with Medical Supply Room to be located directly adjacent.

**403.1 Medical Supply Rooms (2): 130 S.F. ea.**

Controlled access.



this equipment. The square footage was based on a 4% figure of the total indoor program.

**505 Refuse/Recycle: 150 S.F.**

---

Adequate space should be provided for the various bins required for sorting recyclable materials. This room will also provide storage for the facility's non-medical refuse. Adequate ventilation is required. Proximity to the Kitchen is necessary, and desirable to a service entrance.

**600 EDUCATIONAL:**

Educational facilities as stated above in programming, will be included to incorporate medical resident students' use of the facility, activate the space, and promote campus interaction. Facilities such as student lounge, lecture hall, classrooms and computer lab shall be provided.

**700 COMMERCIAL:**

Commercial space shall occupy the ground floor of the campus side of the hospice, including an interior court with fountain and seating, a restaurant open to the community, a book store, coffee shop and convenience market. These program elements are included as a convenience to the residents, and also as destination for medical resident students and doctors.

**800 PARKING**

Seventy spaces shall be provided for Residents' families and some staff. Twenty percent of these spaces shall be designated Accessible.

CHAPTER IV  
PRECEDENT ANALYSIS

## PRECEDENT ANALYSIS

### Program Precedent

#### **George Mark Children's House Program in Square Feet**

(George Mark Children's House has a capacity for 8 children and their families.)

Entry (1) -- 20 x 23	460
Administration office (1) -- 17 x 20	340
Conference room (1) -- 22 x 31	682
Dining room (Family style) (2) -- 30 x 36 + 16 x 16	1336
Kitchen (1) -- 16 x 44 + 9 x 6	750
Great room w/ fireplace (1) -- 42 x 28 + 14 x 14	1372
Lounge (1) -- 16 x 20	
Art room (1) -- 16 x 21	336
Computer room (1) -- 13 x 21	273
Multi-sensory room (1) -- 16 x 21	336
Music therapy room (1) -- 12 x 21	252
Outlet room (1) -- 15 x 12	180
Playroom (1) -- 14 x 21	294
Retreat (1) -- 15 x 20	300
Chapel -- na	
Wake room (1) -- 26 x 16	416
	320
Lap pool (1) -- (37 x 19) 36 x 51	1836
Whirlpool (1) -- 30 x 15	450
Tub room (1) -- 10 x 13	130
Children's rooms w/ adjoining bathrooms (8) -- 17 x 22 + 8 x 4 + 12 x 10	3682
Family suites (2) -- 16 x 24 + 22 x 15 + 7 x 13	1610
Nurses station (1) -- 24 x 24	576
Medical supply room (1) -- 10 x 13	130
Staff offices (for nine) -- 25 x 45	1125
Staff lockers -- 23 x 14	322
Powder room (3) -- 10 x 13	390
Dirty Linen (1) -- 9 x 16	144

Janitor closet (1) -- 6 x 12	72
Storage (1) -- 21 x 16	336
Mechanical (1) -- 12 x 17	204
Circulation -- typ. 11 ft wide	3552
TOTAL	22206

Three key features appear in each of the precedents studied: accessibility to mass transit, a serene atmosphere conducive to children's needs, and close proximity to suitable medical families.

### Helen House

The first children's hospice, Helen House, was established 18 years ago, in Great Britain. Now there are children's hospices located in the UK, Canada, Australia, Germany and Holland.<sup>8</sup>

### Canuck Place

Canuck Place is an exceptional example of resolving an effective medical facility with a comforting home-like atmosphere geared toward children. (See Canuck Place Website.)

## LANDSCAPE

### Johns Hopkins Medical Campus

The Johns Hopkins medical campus itself is an excellent precedent for treatment of landscape. The park-like atmosphere surrounding the inner campus is well-manicured and full of vegetation. Pathways and outdoor spaces are defined. There is an overall sense of continuity achieved through landscape which carries the many different building

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<sup>8</sup> Helen House website.

types and characters. Attention is given to paving surfaces, lighting, outdoor furniture,



and fencing.



figs. 29 and 30: Johns Hopkins Campus Landscape.



figs. 31 and 32: Johns Hopkins Broadway Landscaping.



fig 33: Hopkins Lawn on Broadway.

## CAMPUS PRECEDENT

Colleges in Oxford and Cambridge, England, are prime examples of buildings that shape small secure outdoor spaces with built form. Some of these colleges were studied and placed on the site at their proper scale, to determine what kind of spaces could be made.

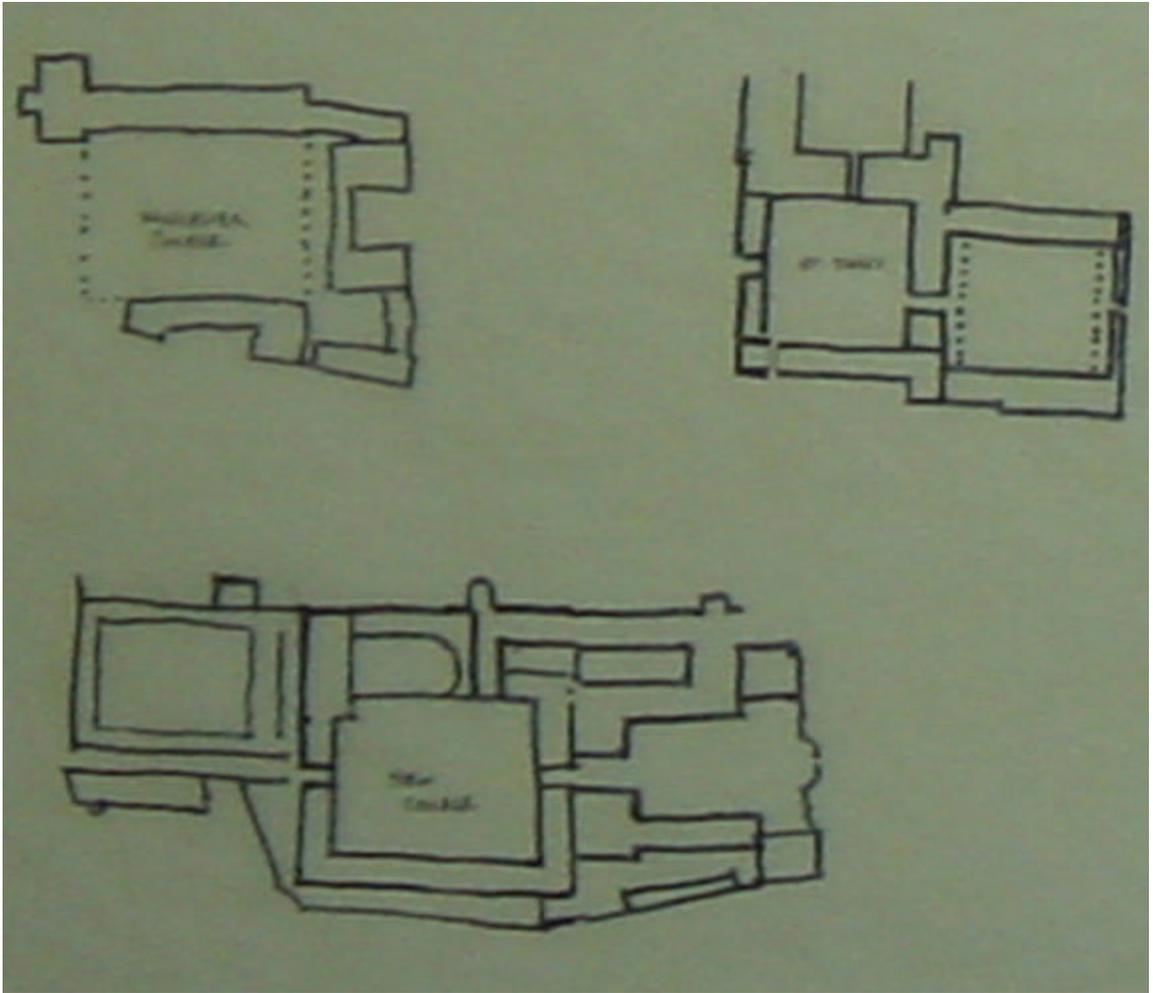


fig. 34: Three University spaces.

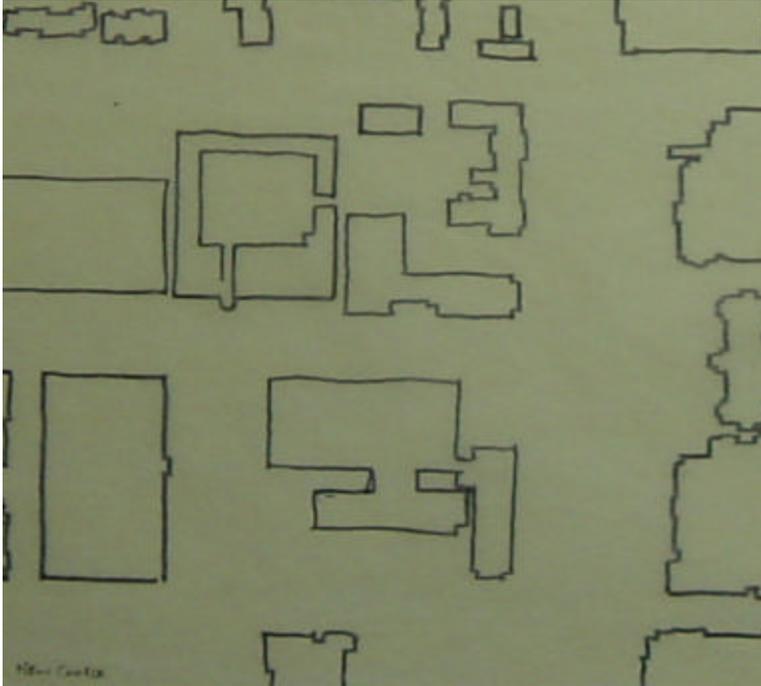


fig. 35: New College on Site.

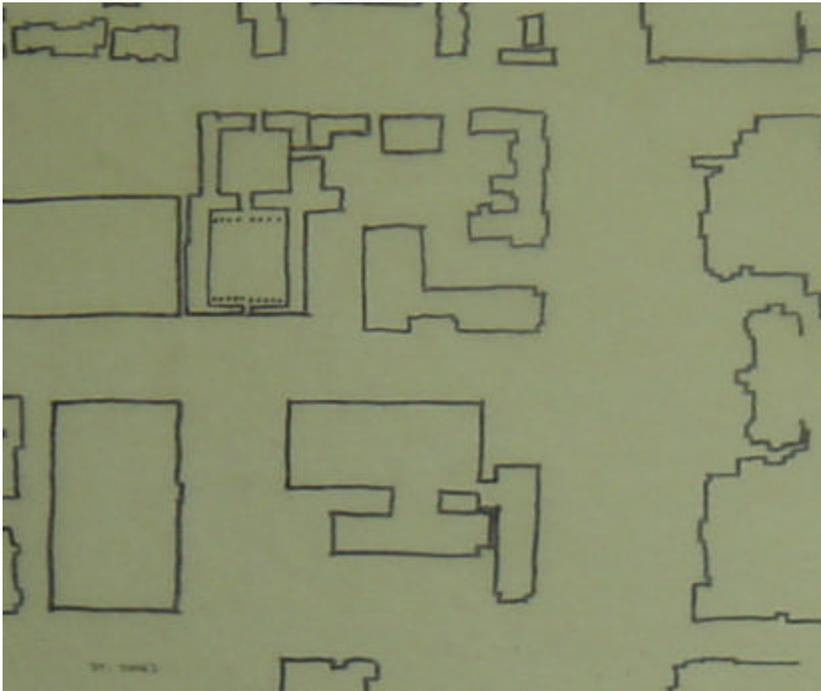


fig. 36: St. John's on Site.

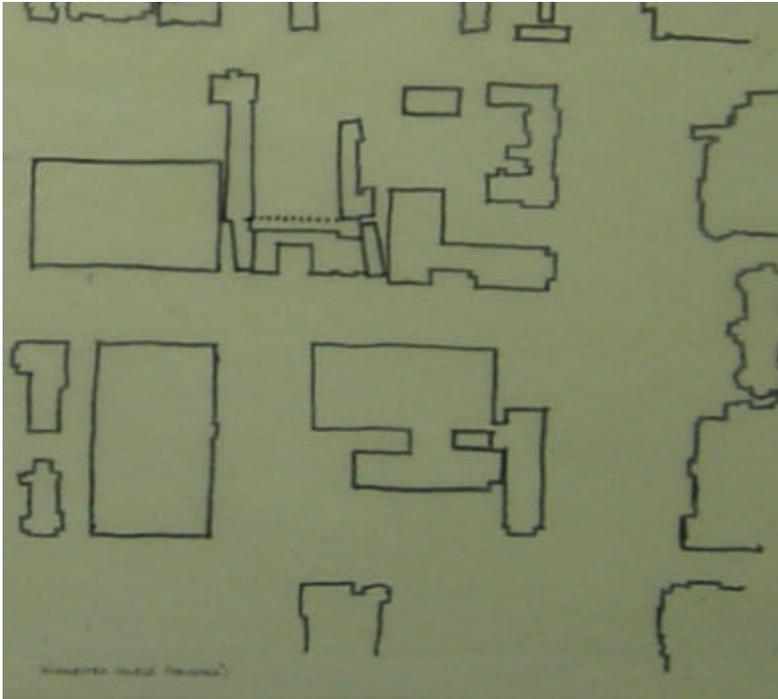


fig. 37: Worcester College on Site.

Additionally, precedent in materials and construction were considered.

CHAPTER V  
DESIGN APPROACH

## DESIGN CONCEPT

### Architecture's Role in Creating a Caring Environment

Since a hospice is an environment somewhere between hospital and home, it is the sense of place that must first establish the attitude that bridges the gap.

To provide excellent palliative care, emergency procedures when necessary, and symptom management, the hospice must accommodate medical technology, and maintain the higher standards of light and air quality that epitomize the modern hospital. But even more importantly, attention must be given to the character of the space, to provide the necessary comfort that is the hallmark of hospice care, and the family inclusiveness that is key to children's hospices, in particular.

To this end, a children's hospice must reflect the residential nature of the home, while stretching to provide spaces necessary for the hospice program. Through architectural elements such as scale, materials and character, the hospice can be interpreted as a residence for families, regardless of its atypical urban site.

- Scale is major way of achieving desired character of spaces.
- Atmosphere should be residential, warm, welcoming – non-institutional.
- Daylighting and cleanliness are key issues.
- Calm clean and simple surroundings are preferable.
- Outdoor spaces integrated to design and function are important.
- Functionality and efficient circulation, with special attention to accessibility.

## CAMPUS PLANNING

With regard to campus planning issues, analysis was done, and strategies for connections and space making were developed. The following are the proposed design strategies for incorporating the hospice on the campus, and further developing the campus itself.

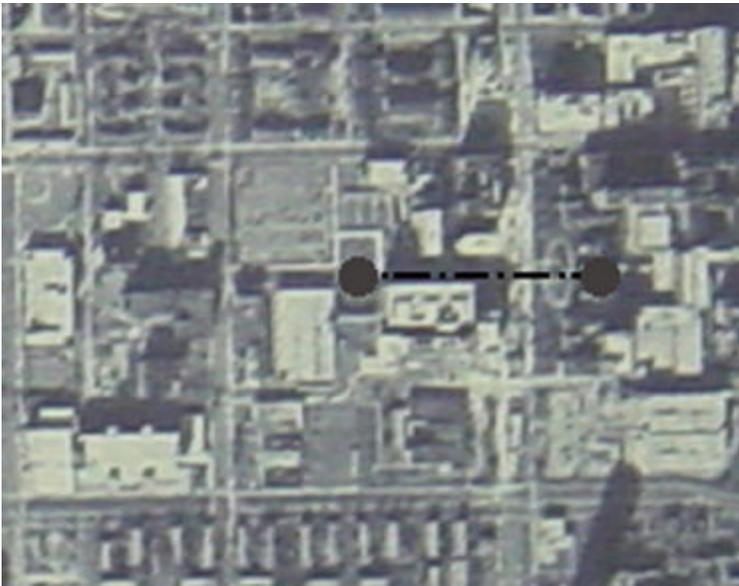


fig. 38: Primary Pedestrian Path on Hopkins Campus. Relationship needs to be established here.

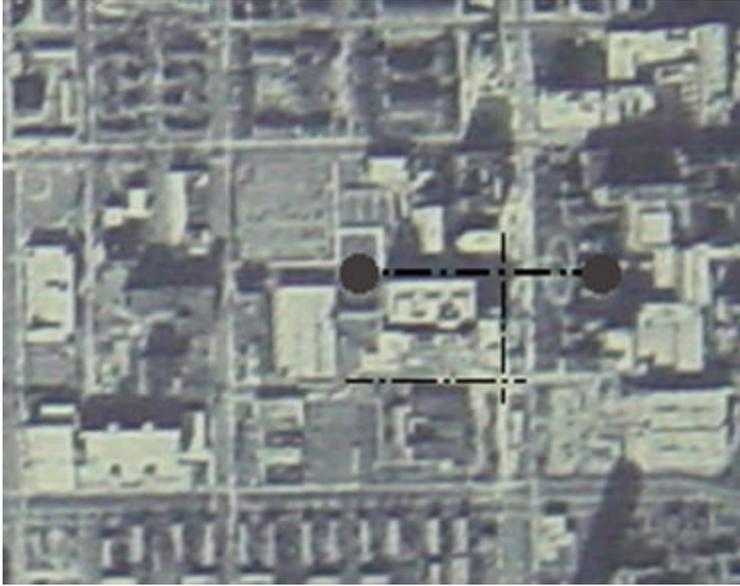


fig. 39: Secondary Pedestrian Paths are established, but weak.

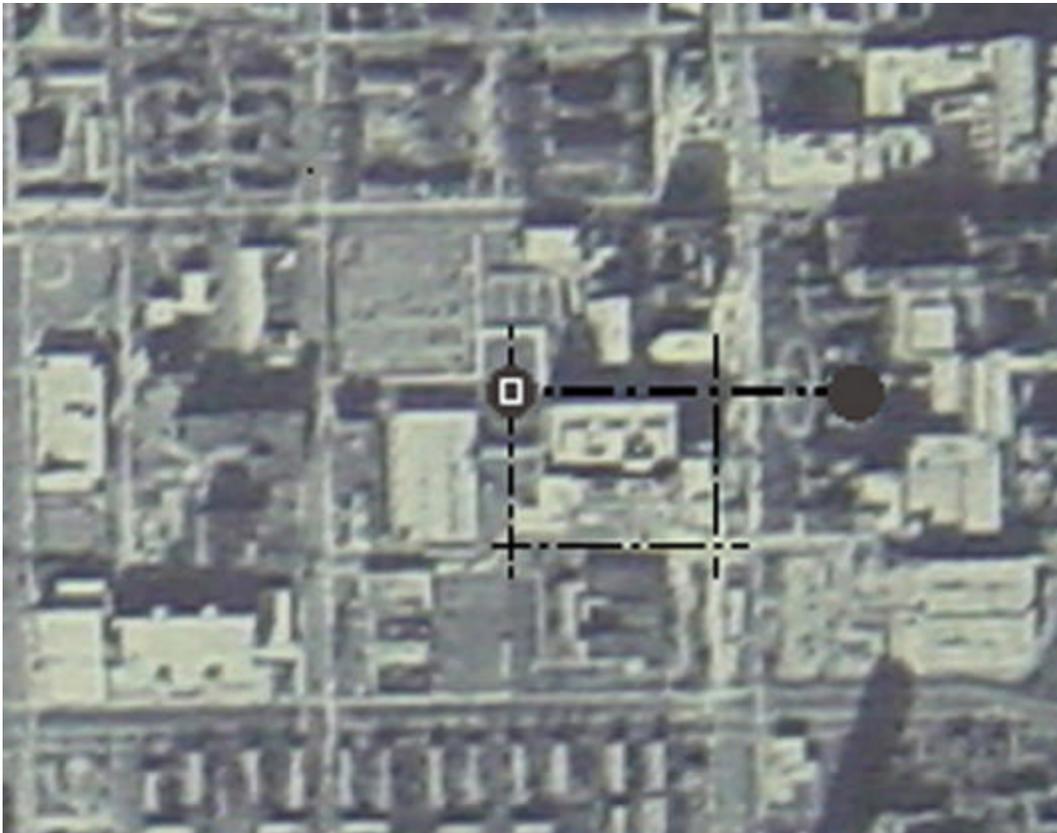


fig. 40: New Proposed Cross-Axis for Pedestrians, linking parts of campus together.

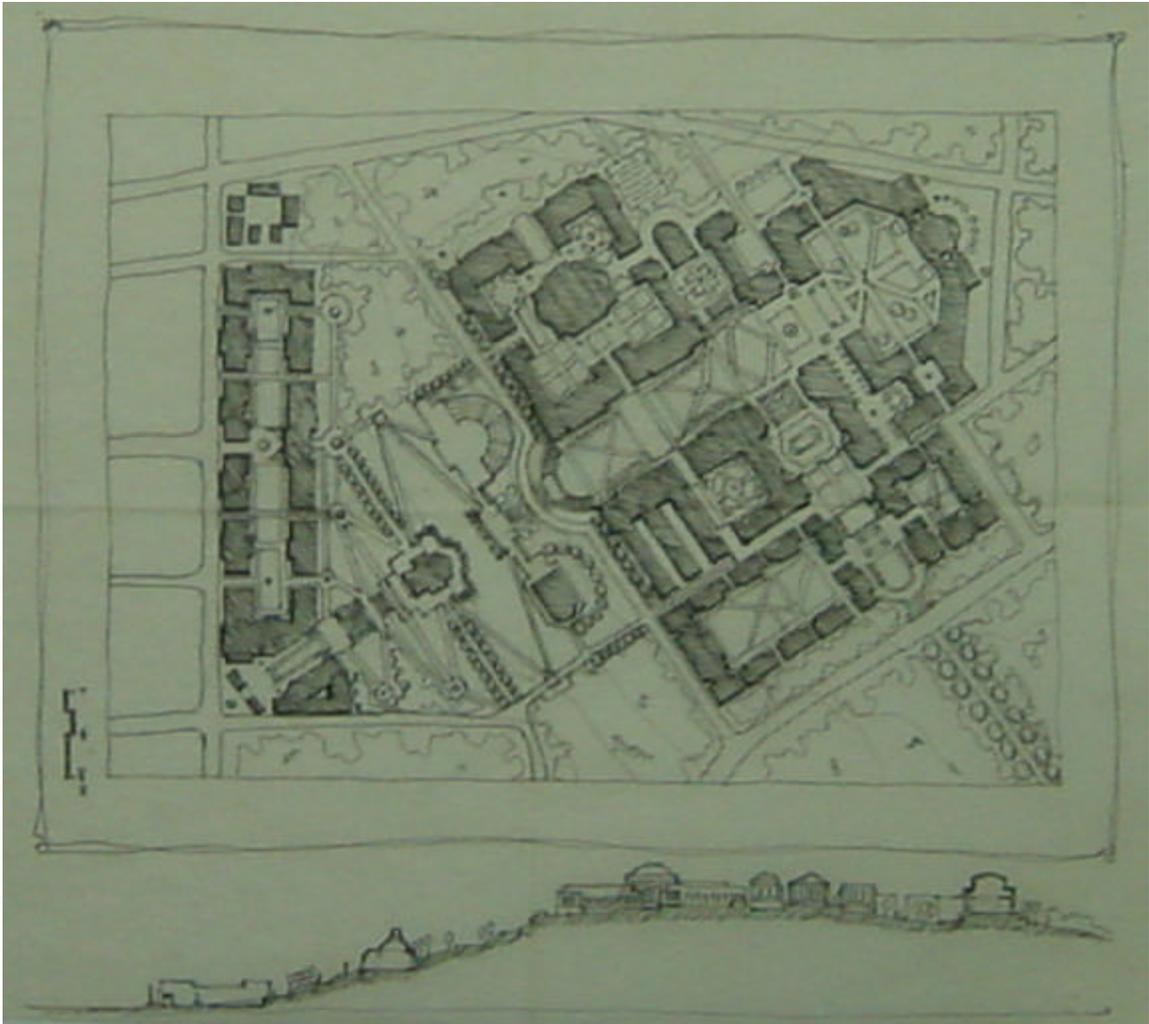


fig. 41: Lessons from Campus Planning proved Valuable.

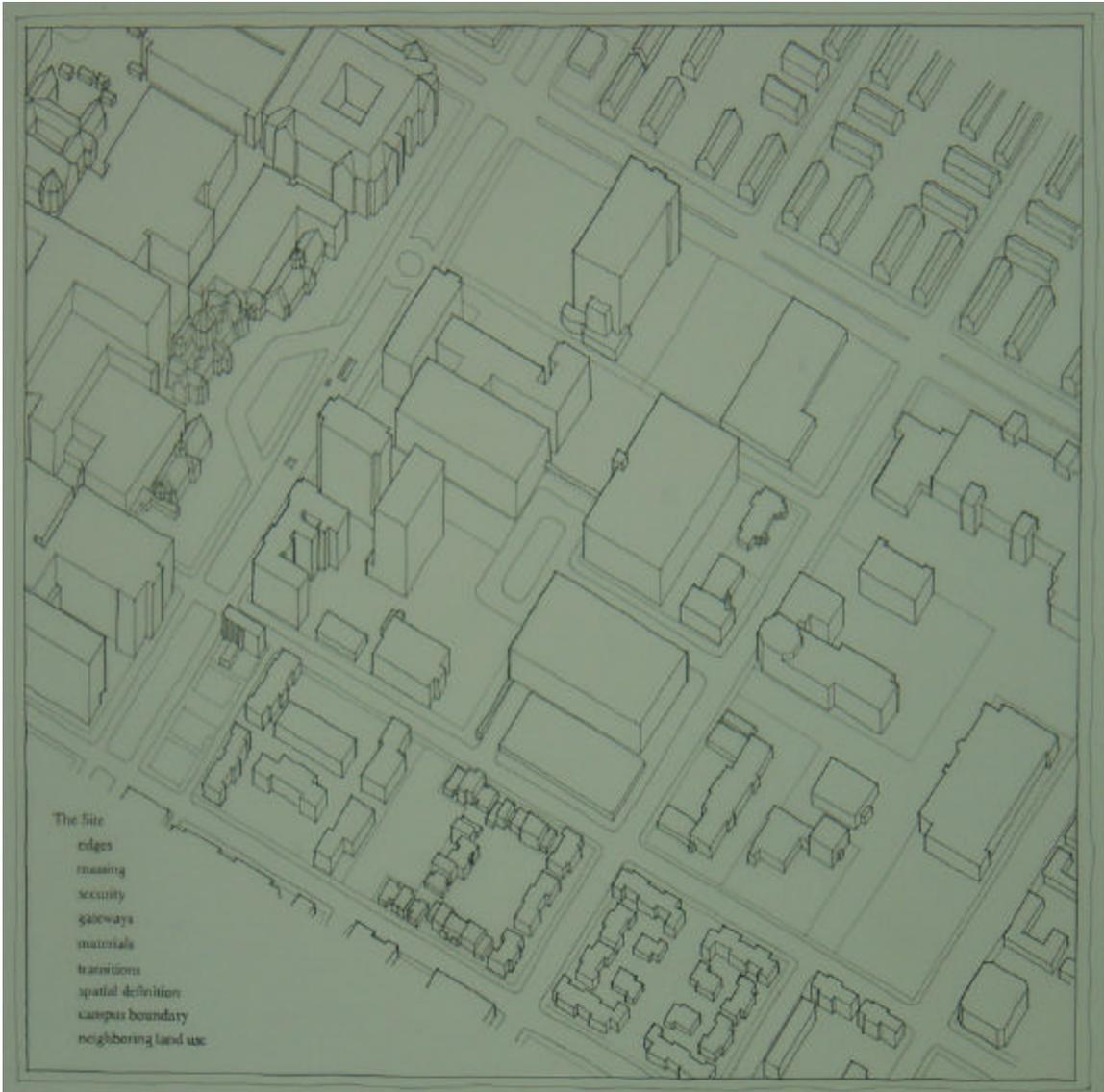


fig. 42: Axon of existing campus conditions.



fig. 43: Proposed Master Plan for Campus to Achieve Campus Goals of increasing housing for students, defining spaces, making pedestrian connections, promoting image of campus, enhancing security and activating spaces.

## SHAPING OUTDOOR SPACES

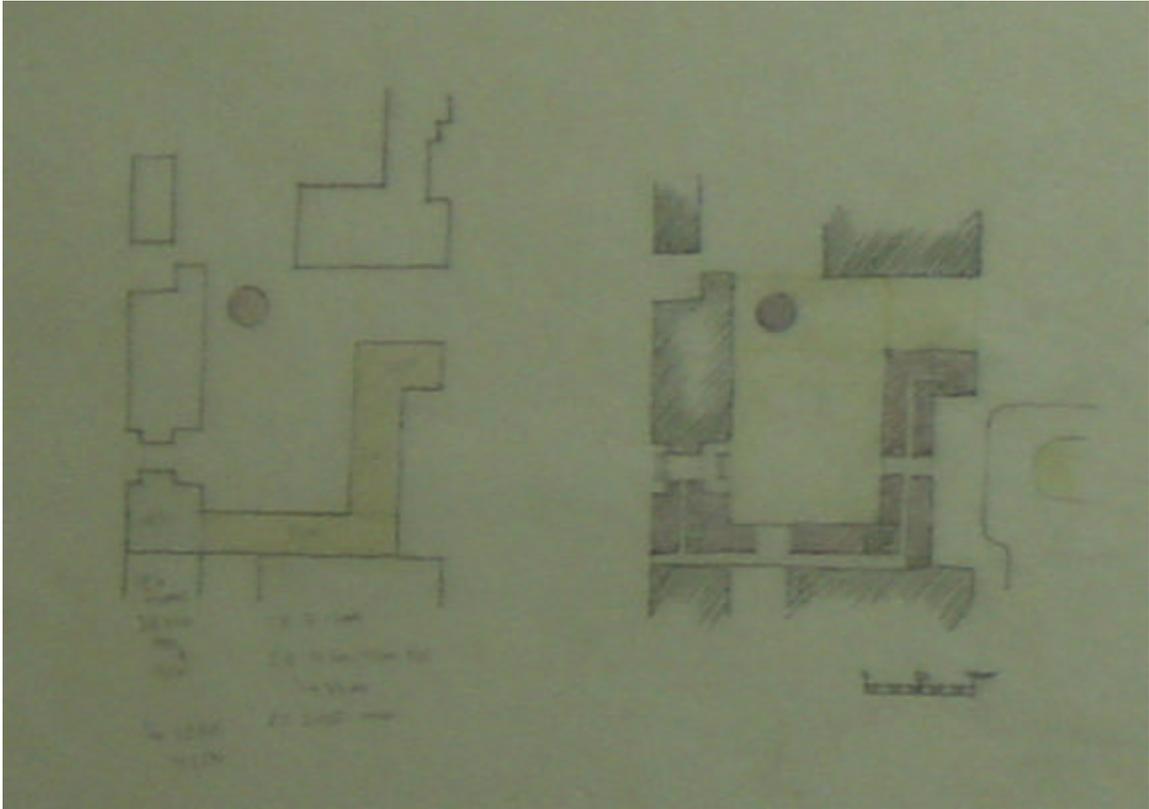


fig. 44: Early Parti study indicates U shaped building reasonable for site, but orientation should be South for Sun light exposure to courtyard, and to address campus more positively.

## FAMILY PROGRAMMING STRATEGIES

Diagrams were formulated, showing desired relationships between program elements and key spaces.

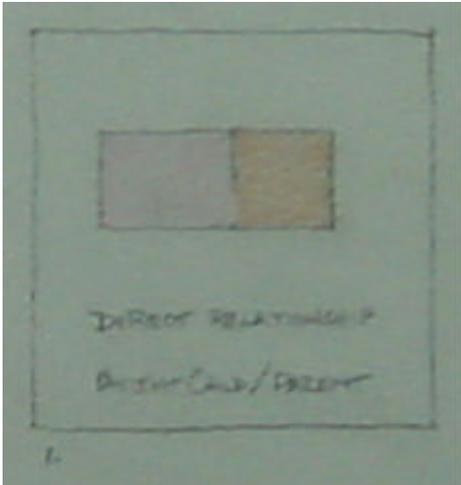


fig. 45: Parent/Child Room Relationship. Direct Access allows for constant supervision.

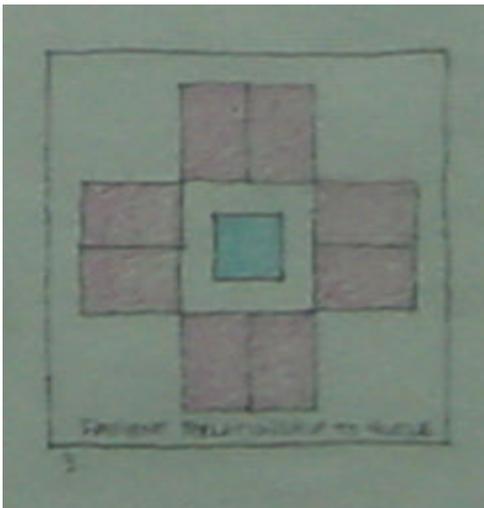


fig. 46: Patient Rooms are Clustered, to promote monitoring by Nursing Staff.

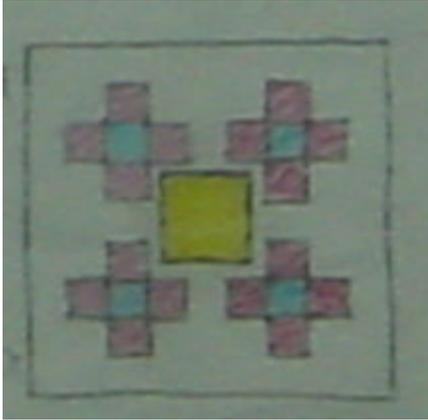


fig. 47: Clusters can be used to form Public Spaces, without Medical Service occupying immediate center locations. This promotes residential character, and minimizes institutional impact visually.

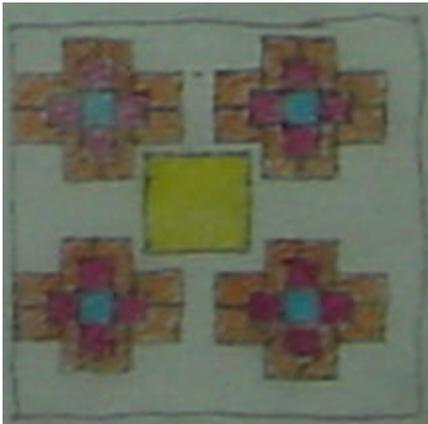


fig. 48: Family Units can occupy the space between patient rooms and common spaces, serving as transition zones and noise buffers.

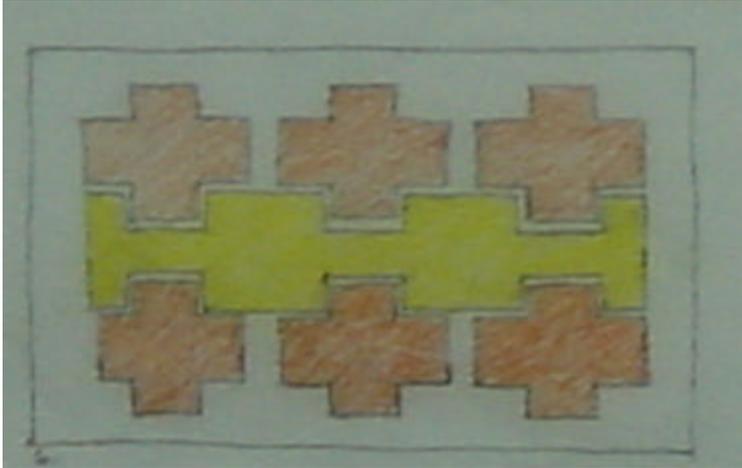


fig. 49: Clusters can be strung together to indicate neighborhood and small community groupings.

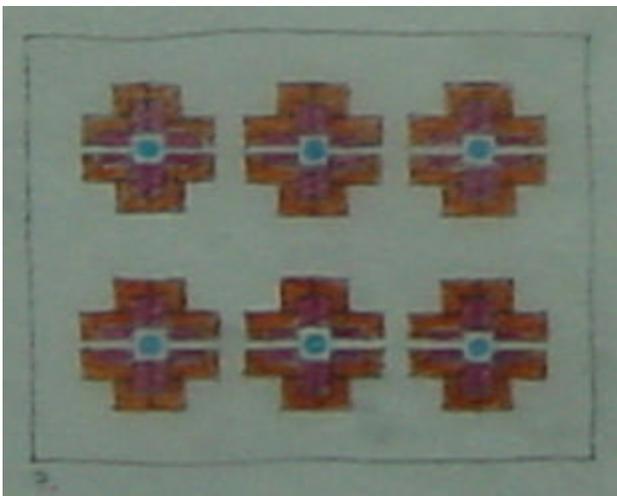


fig. 50: Clusters can open up to accommodate paths of circulation.

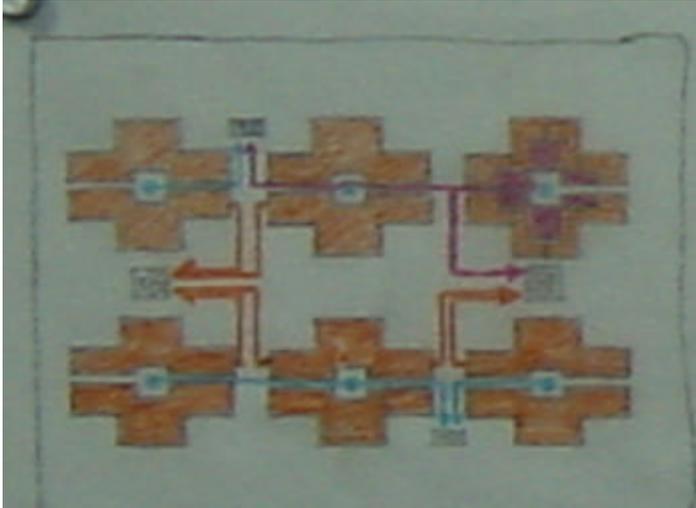


fig. 51: Paths of circulation can take on primary and secondary roles, to accommodate residential paths and medical service paths, further minimizing institutional character.

## DAYLIGHT STUDIES

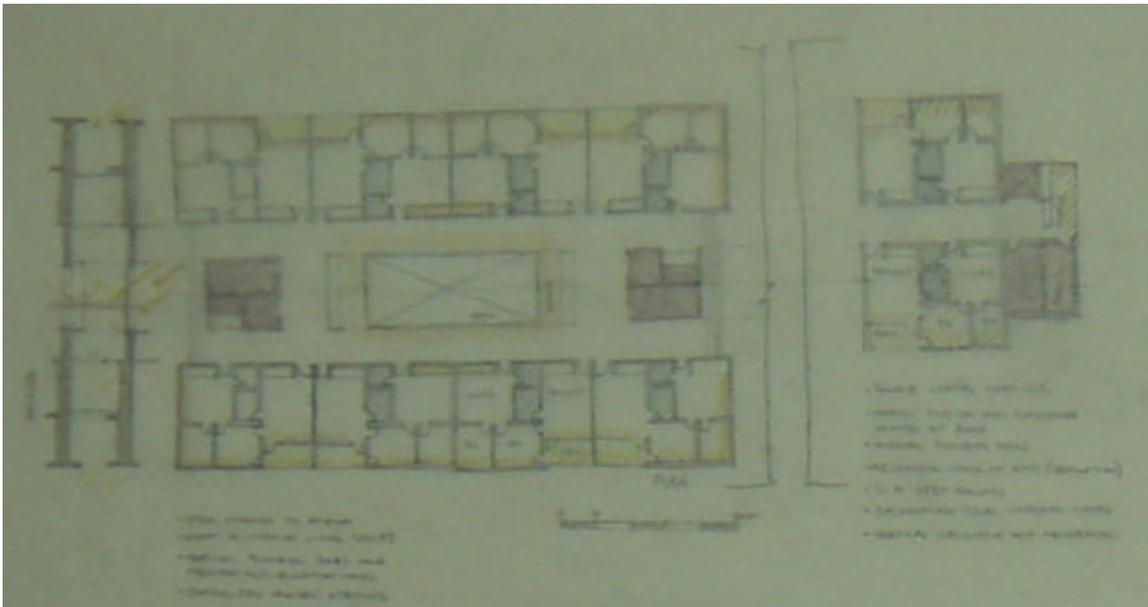


fig. 52: The organization of units was studied to enhance daylighting.

## CHARACTER

Materials were studied both for interior and exterior uses. Their qualities were considered and combinations used to enhance the feeling of the space.

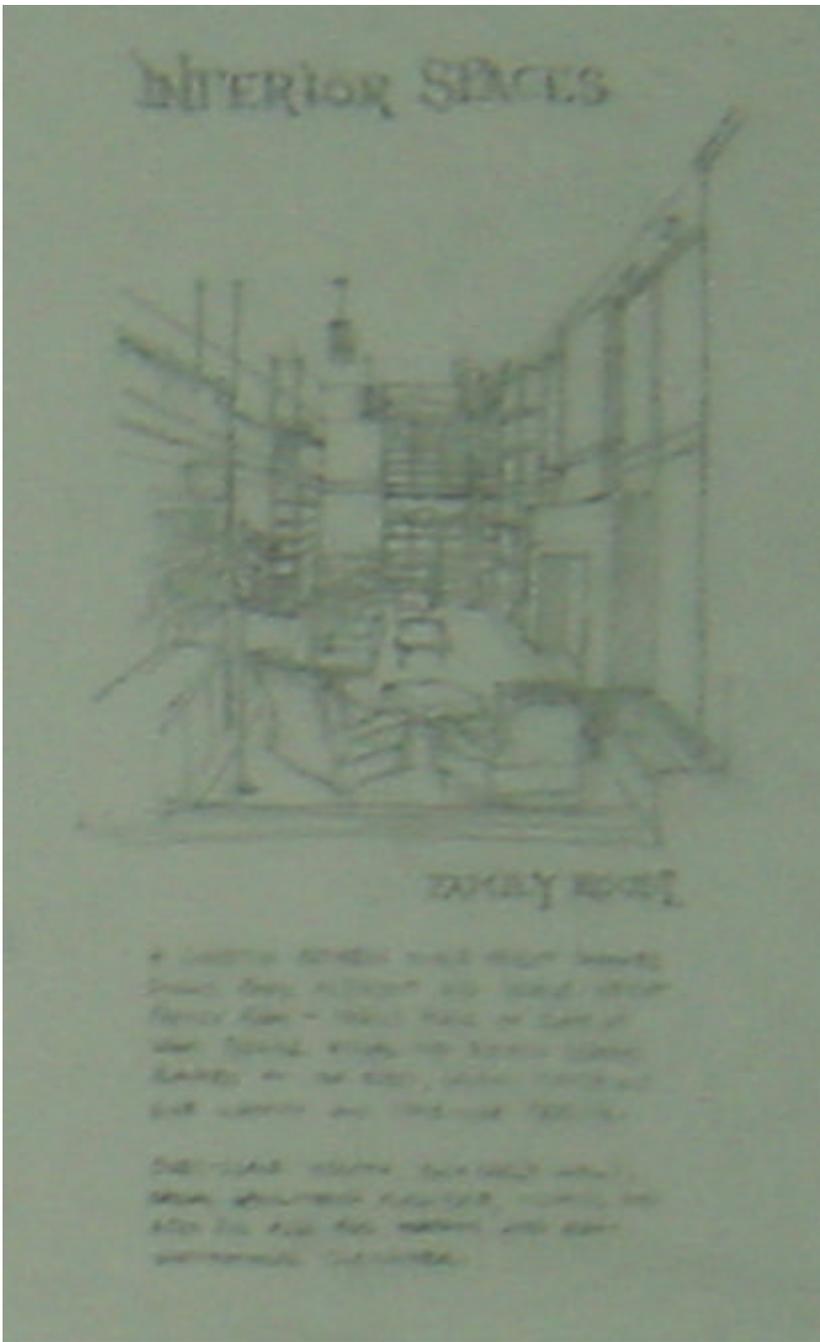


fig. 53: Family Room Explored through use of Wood, double height space, and Hearth.

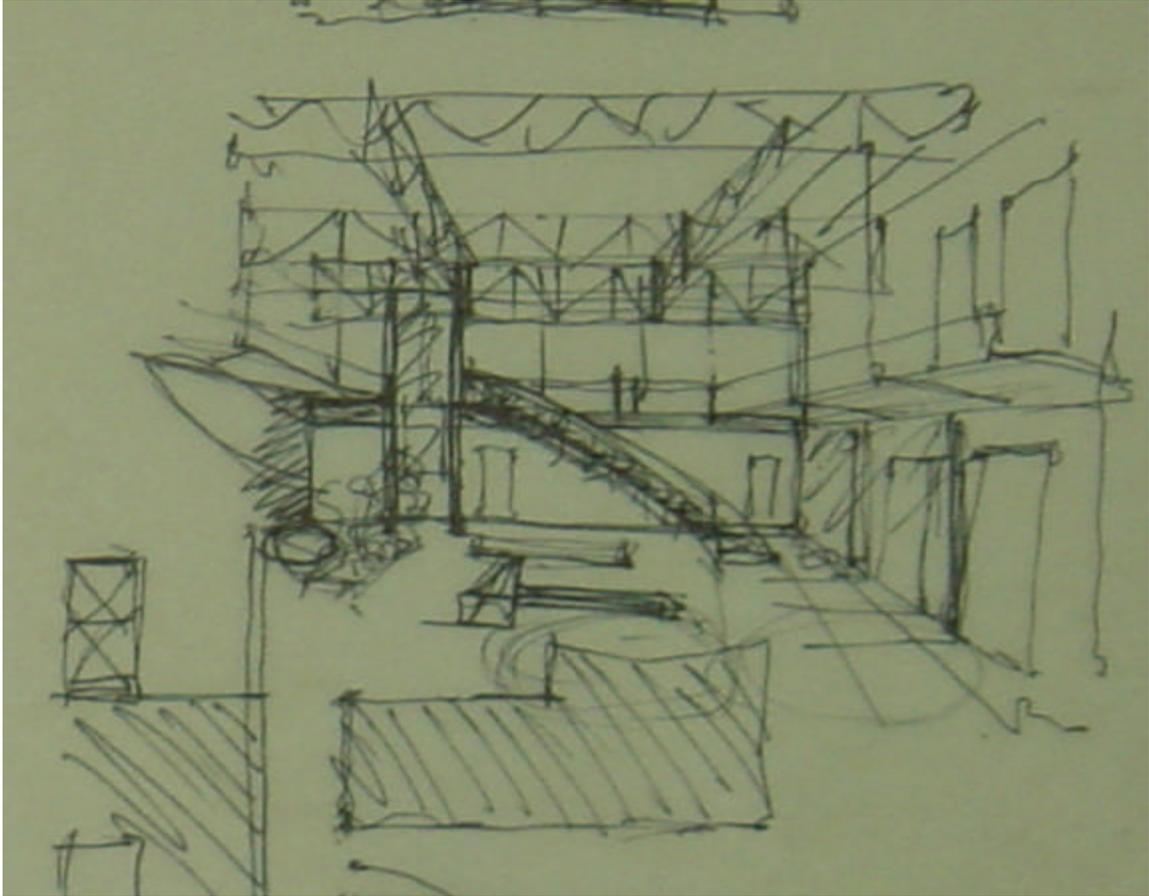


fig. 54 Exploration of Interior Court character. The steel trusses and curved stair were eventually eliminated, in favor of cleaner more pure geometric forms and warm materials such as finished/textured exposed concrete square columns, straight run stairs, grounded seating and water feature with planters incorporated throughout space.

## SPECIAL PROGRAM ISSUES

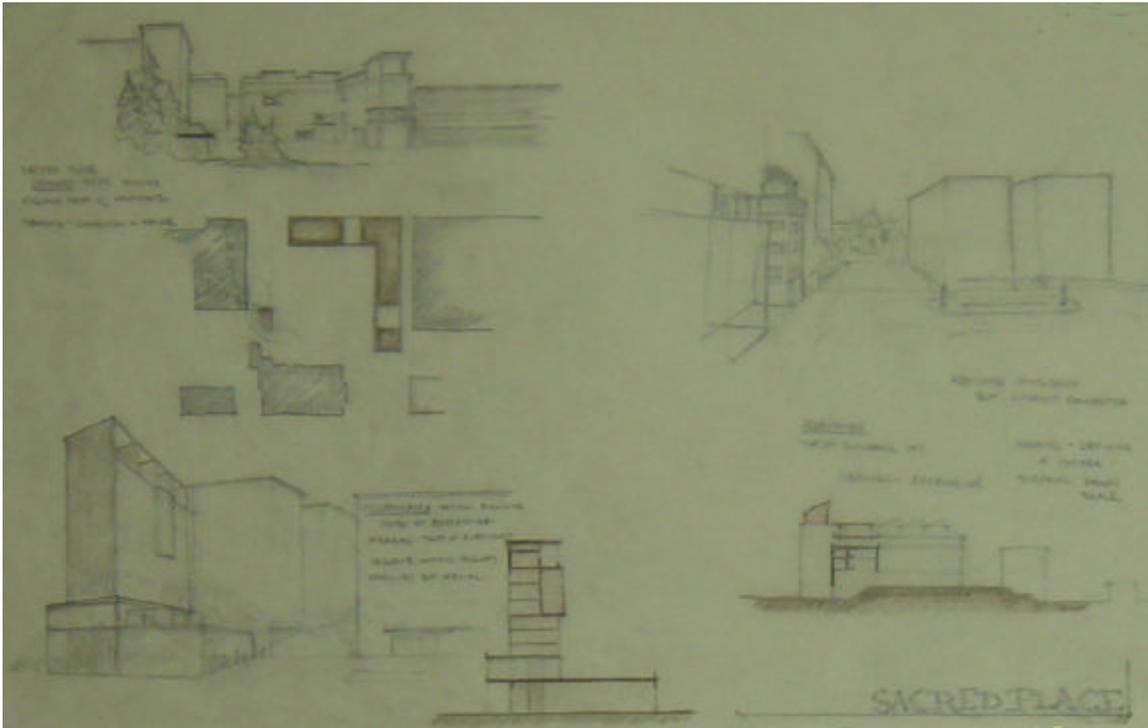


fig. 55: The exploration of Sacred Place as an integral part of the program was explored, testing out different locations' implications on the entity as a whole. The decision was made to incorporate the program into the space, and deal with it sectionally, as well as note the special function on the exterior façade.

## ENTRY AND FAÇADE ISSUES

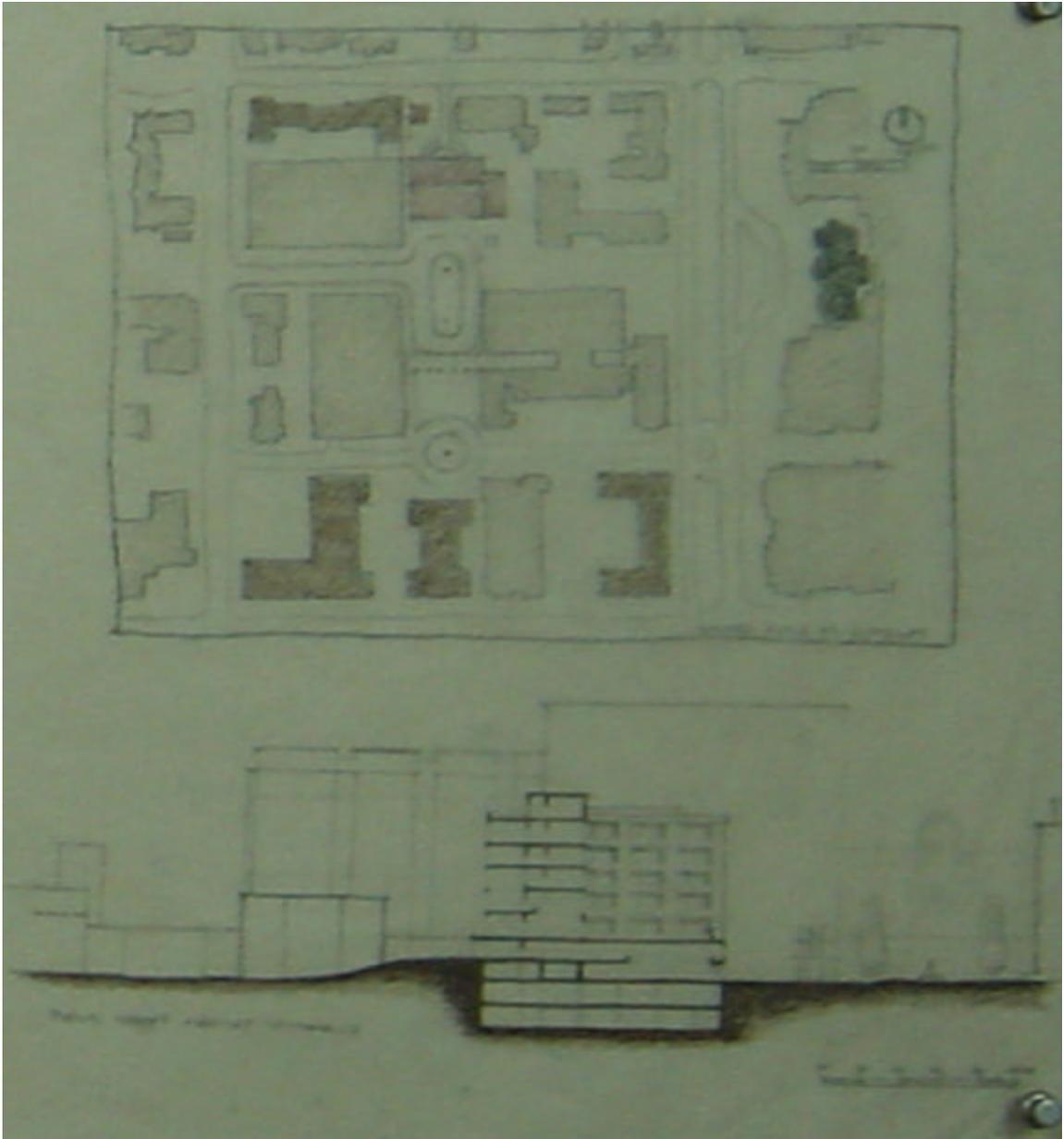


fig. 56: Exploration of Sectional solution to two entries to Building. It was determined through process that a need exists for two separate entries each with their own character. One for residents and one for the medical university community.

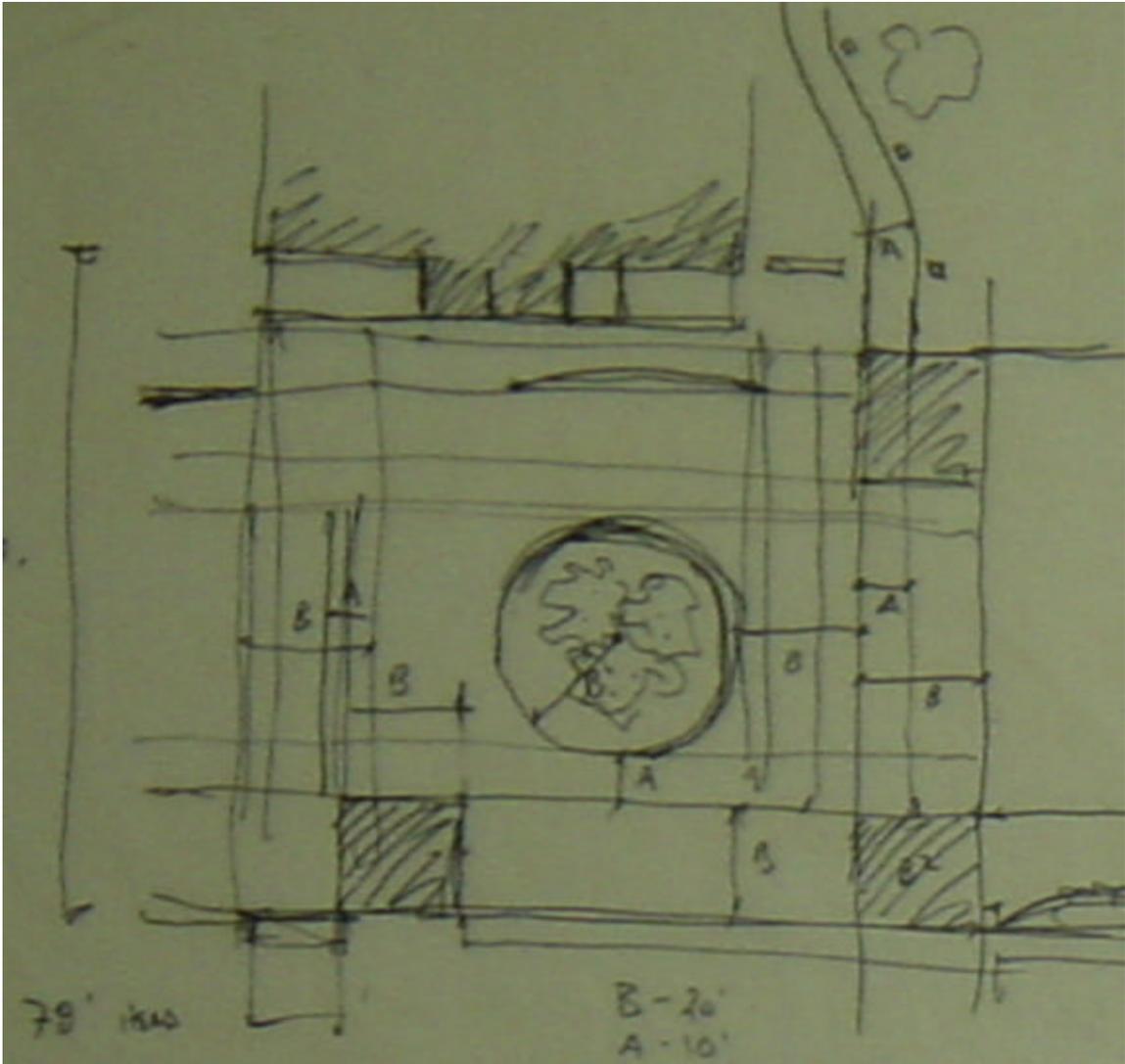


fig. 57: Working out Residents' Entry Landscaping and Proportioning.

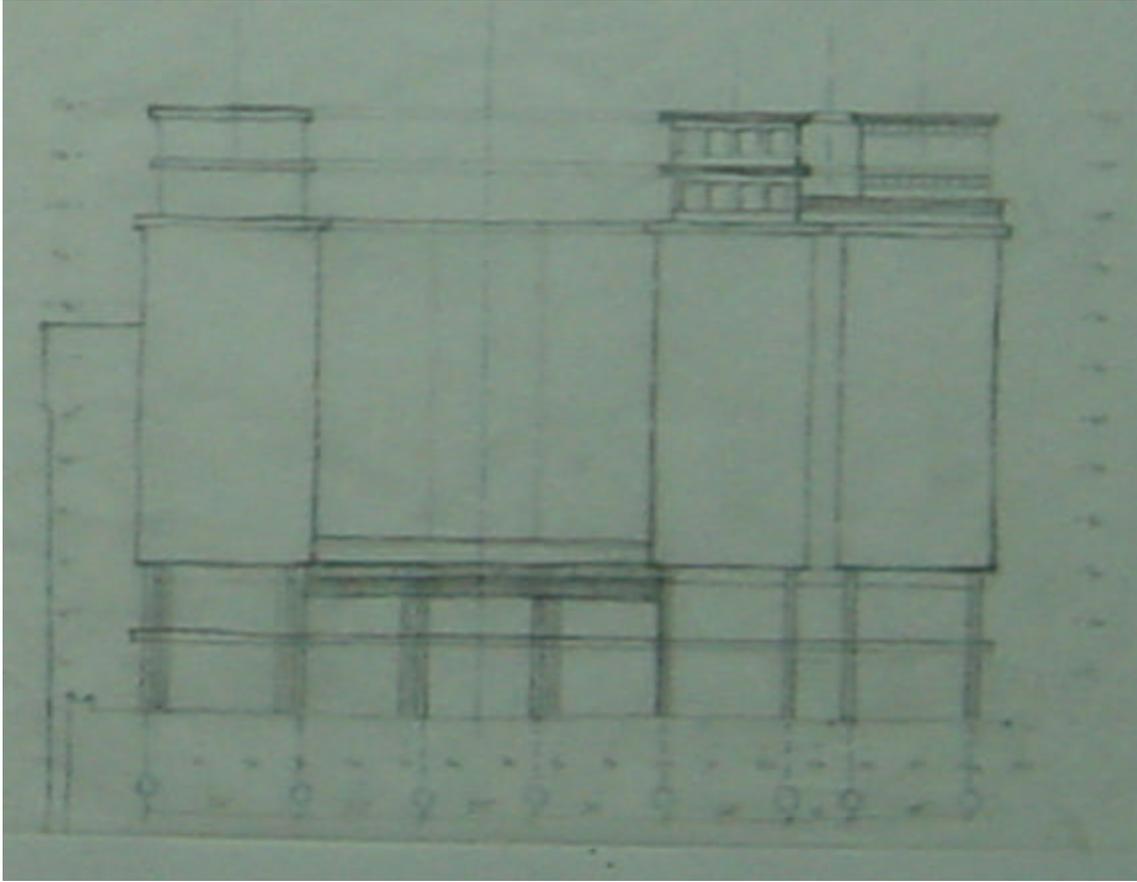


fig. 58: Proportioning Façade.

Facades were dealt with by coming to terms with proportions, street presence, structural indications, material and character.

There was an effort to be part of the Hopkins Campus entity, but also to note a special quality and use through materials, and playful rhythms and weavings of materials.

Facades were explored through diagram, shade and shadow, and renderings.

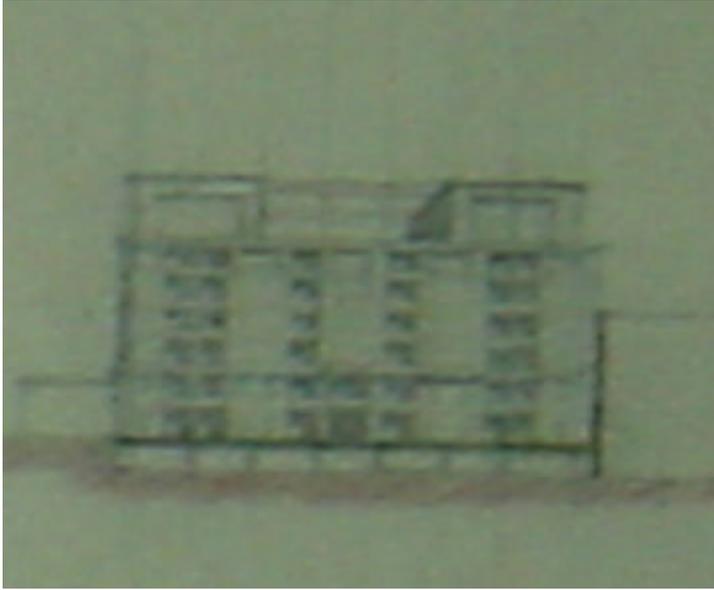
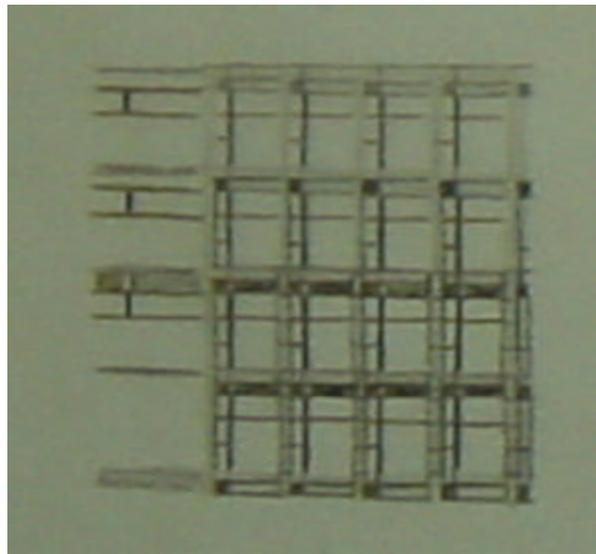
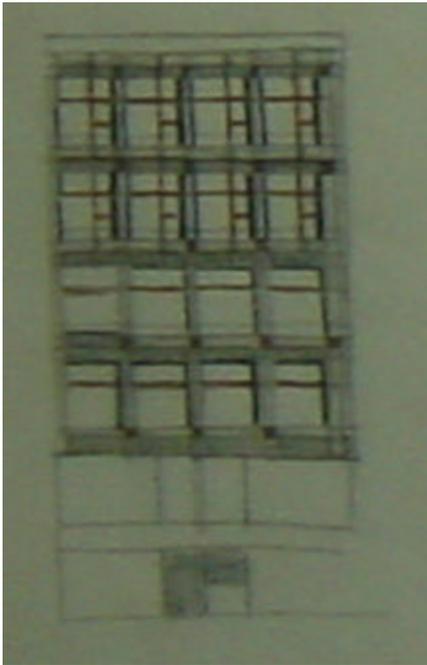
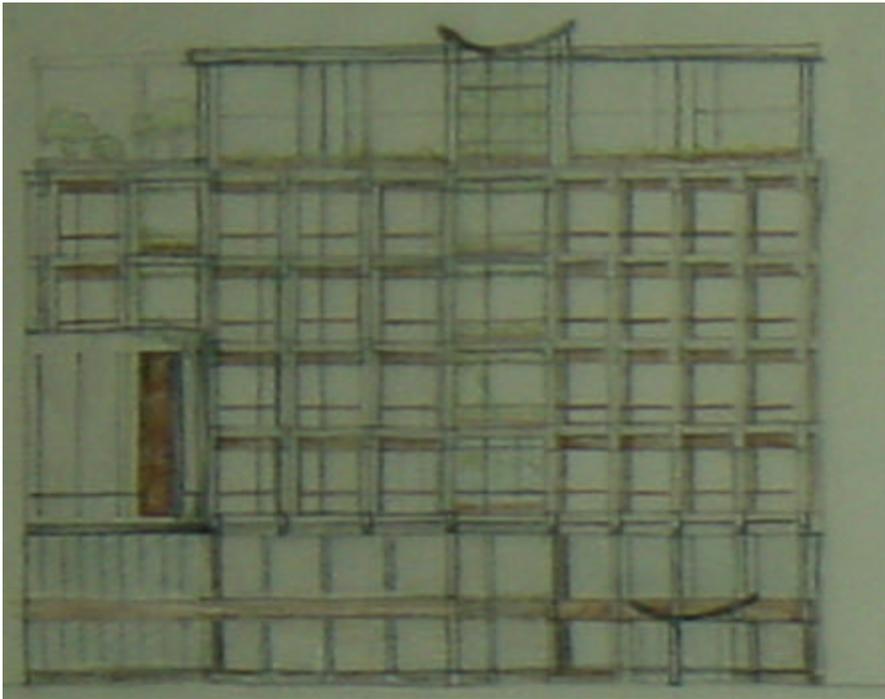
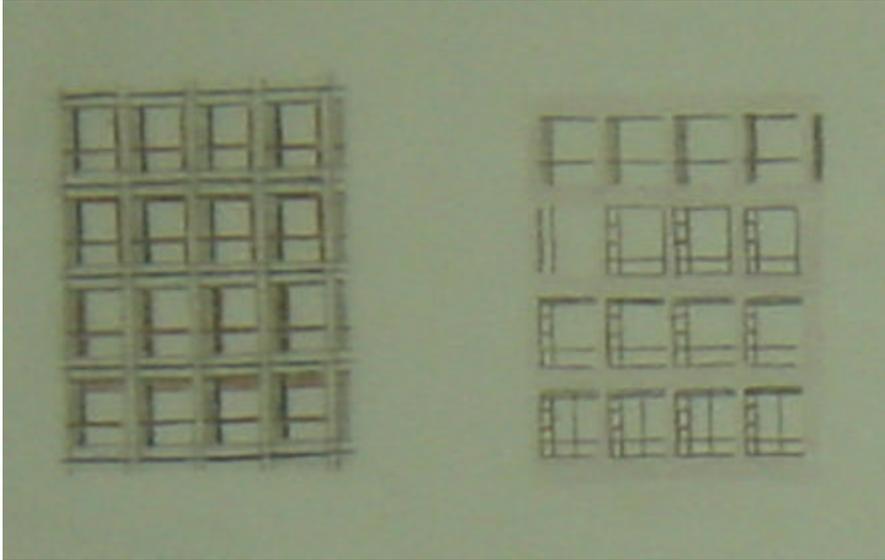


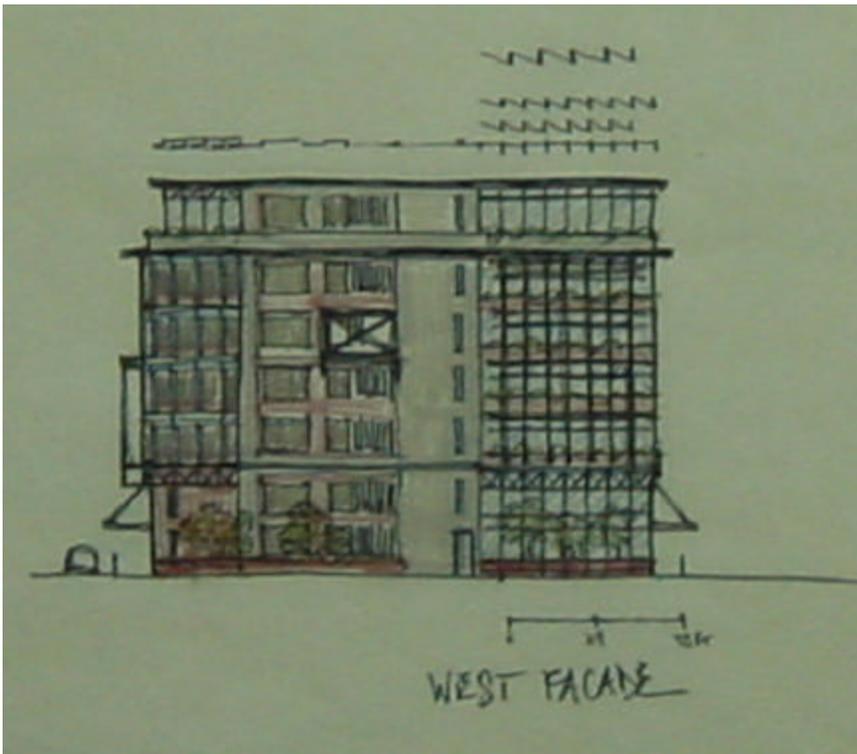
fig. 59: Diagram with Shadow.



figs. 60 and 61: Window Patterns and rhythms.

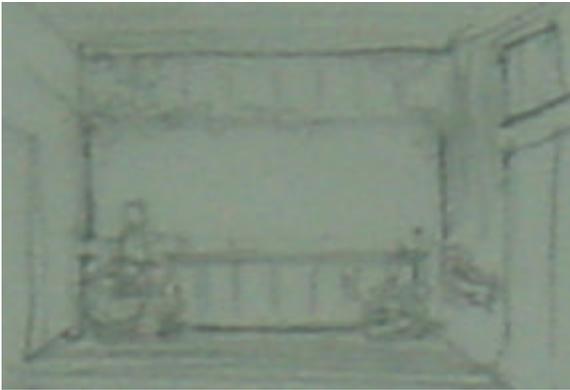
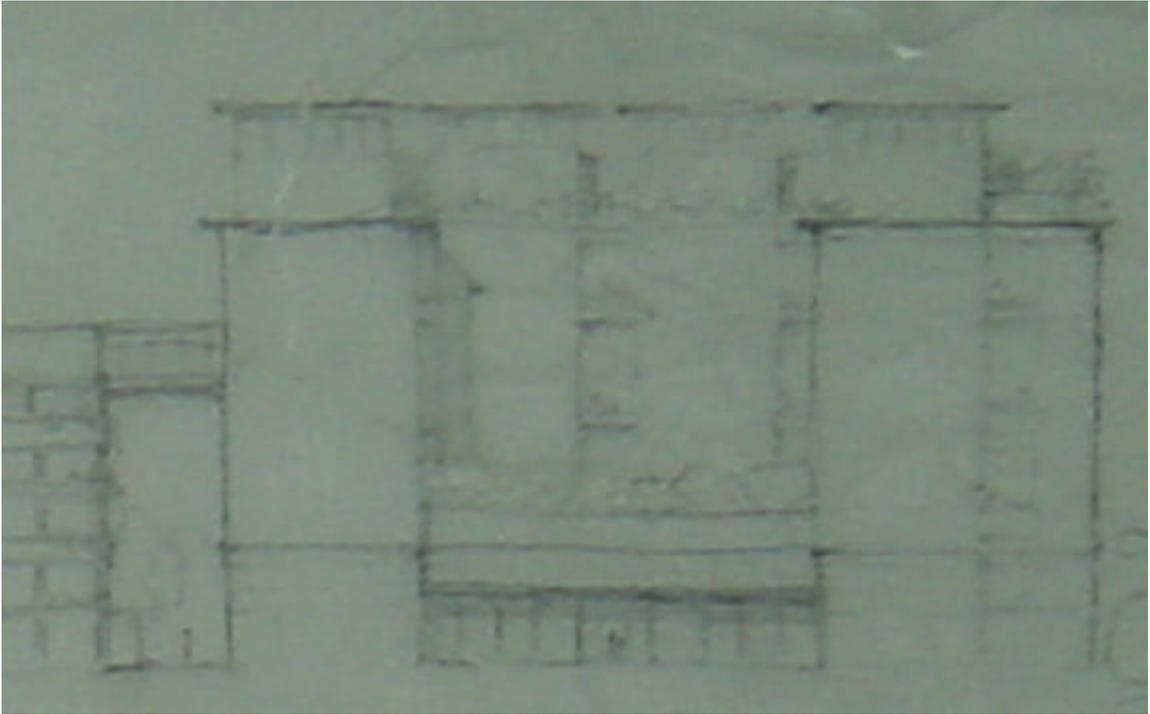


figs: 62 and 63: Exploration of materials.



figs. 64 and 65: Exploration of East and West Facades.

## LANDSCAPE



figs. 66 and 67: Studies were done to enhance spaces through landscape.

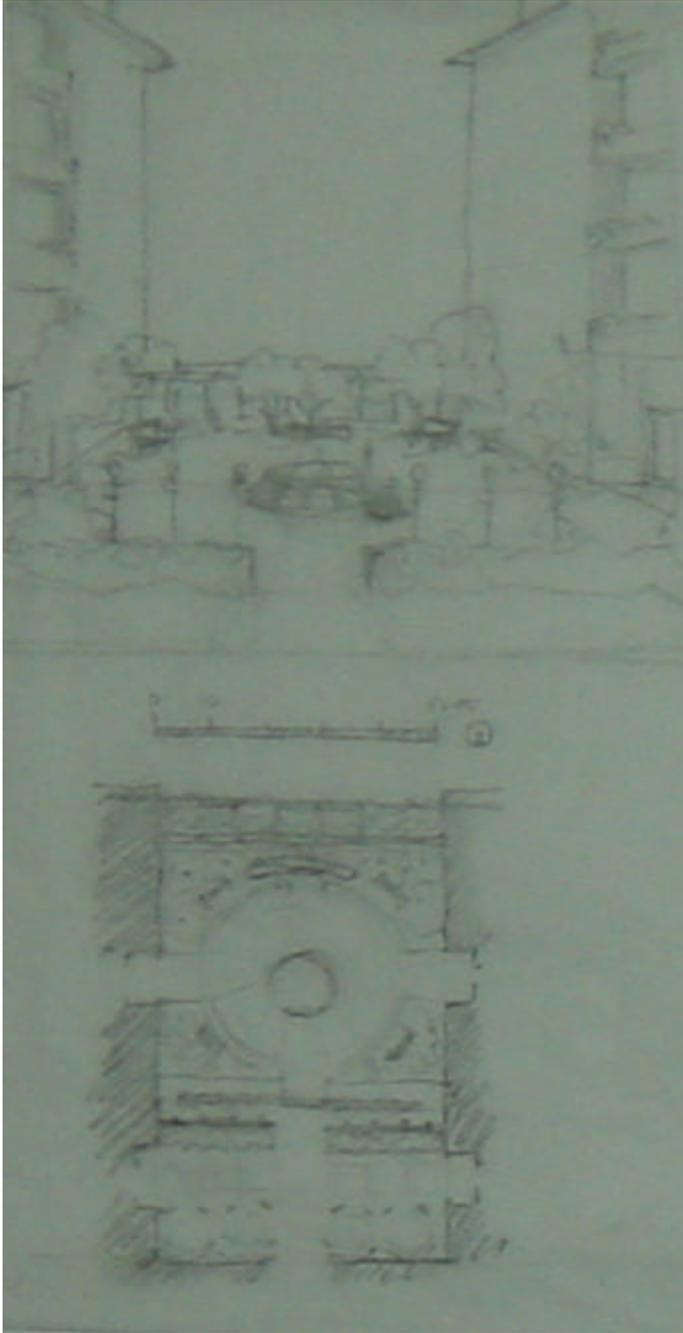


fig. 68. The raised Courtyard was given special attention, as it serves as visual connection for the majority of residential spaces.

CHAPTER VI  
CONCLUSION

The development of this thesis has been an ongoing process. Defining exactly what a residential children's hospice is really all about, and putting it in a built form that doesn't currently exist – that of an urban and highly dense setting – has been a challenge and an adventure.

The original idea that this would be a large scaled house similar in character to that of an English Manor, has been completely abandoned. Simplicity has ruled where character decisions have been made, materials and quality connections have taken priority over fussy details and traditional residential architectural language.

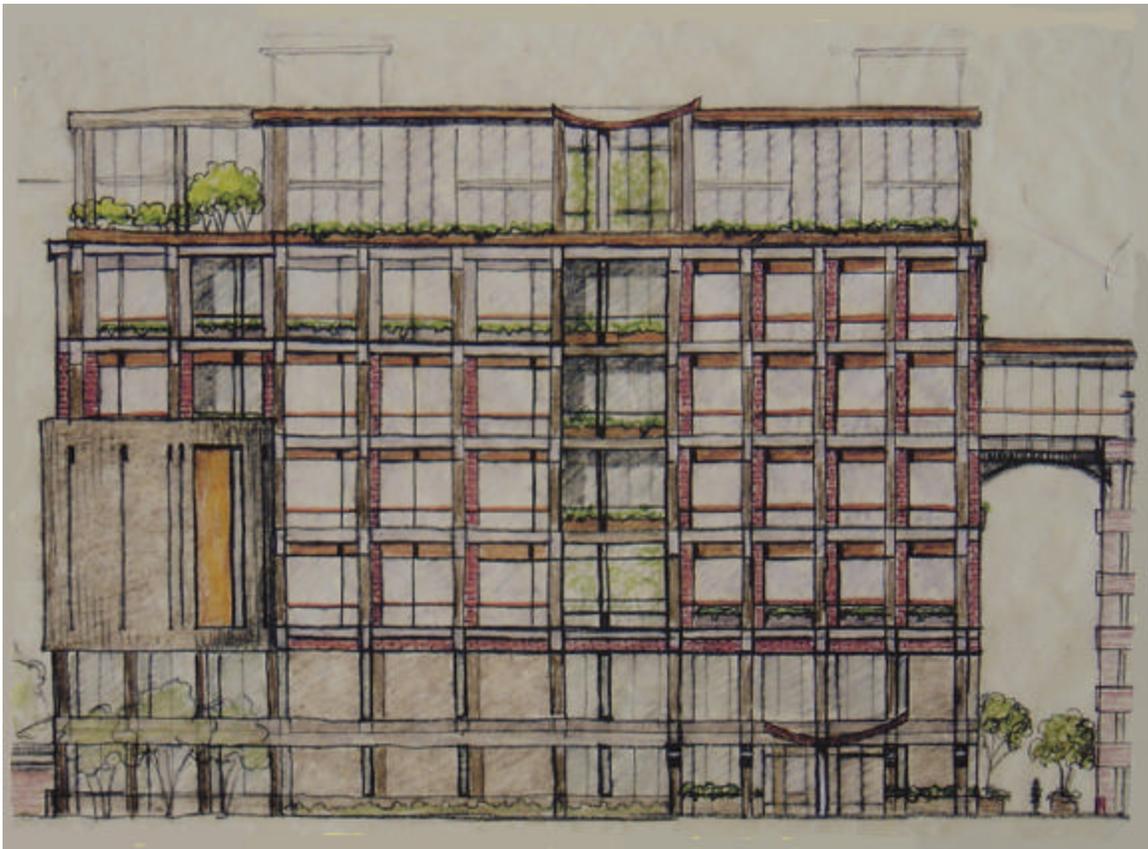


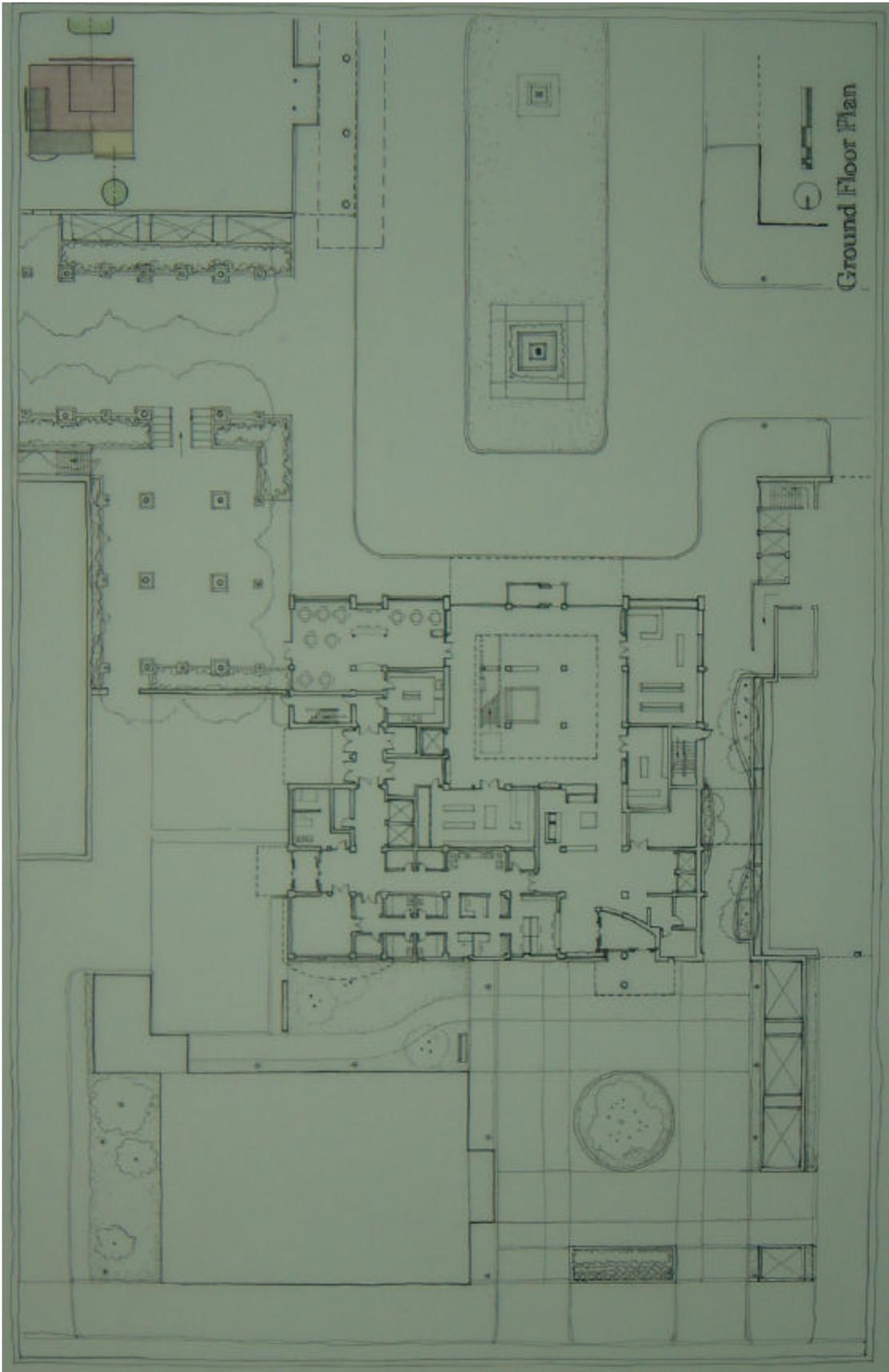
Fig. 69: Residential Façade.

A solution to incorporate both the needs of the residents and the campus has been arrived at through the use of two fronts to the building.



Fig. 70: Campus Façade.

And entry specific to the needs of each user has been met through the use of landscape, centering, and re-centering. (See Fig. 71: Ground Floor Plan below.)



The needs of the campus have been addressed through development of pedestrian path, promenade, landscape, and the definition and creation of public spaces. Additionally, provision has been made to supplement the facilities and amenities available to resident students. The hospice serves not only as a destination and convenience, but as an educational facility – as Hopkins is a teaching university – taking advantage of the mutually beneficial close proximity between patient and medical student.

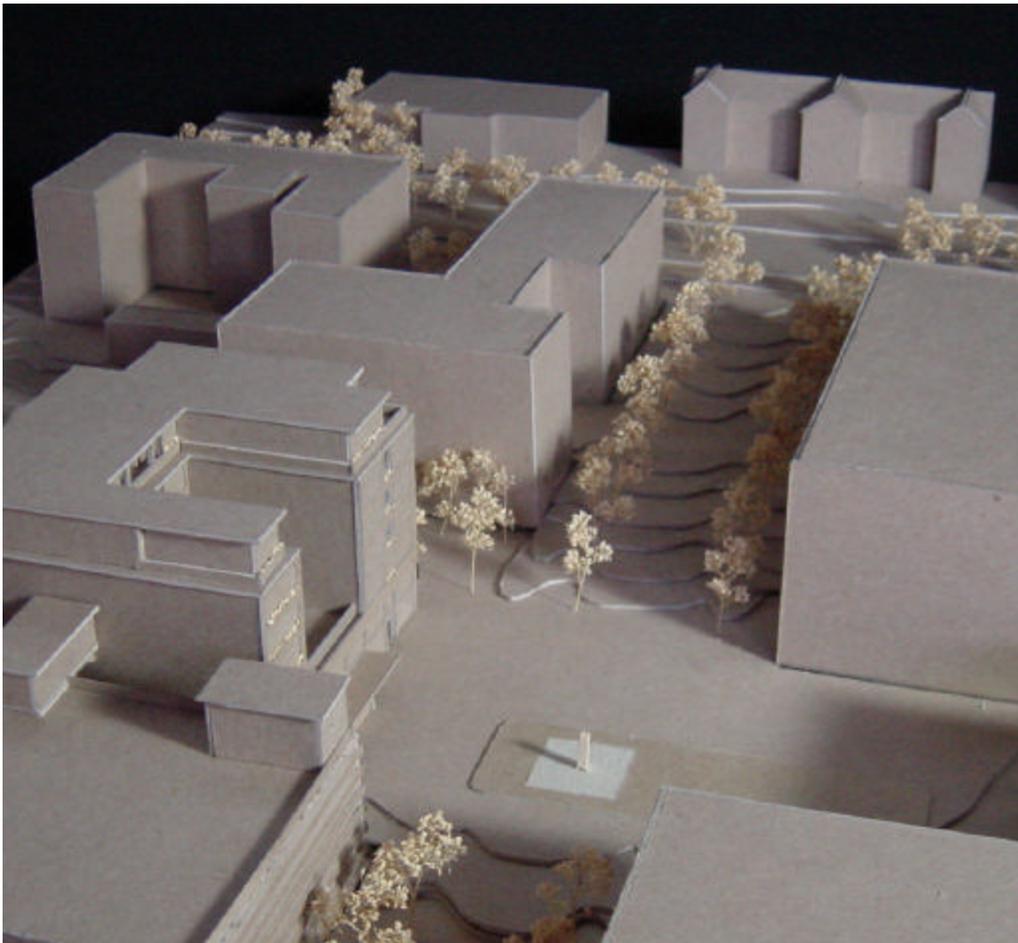
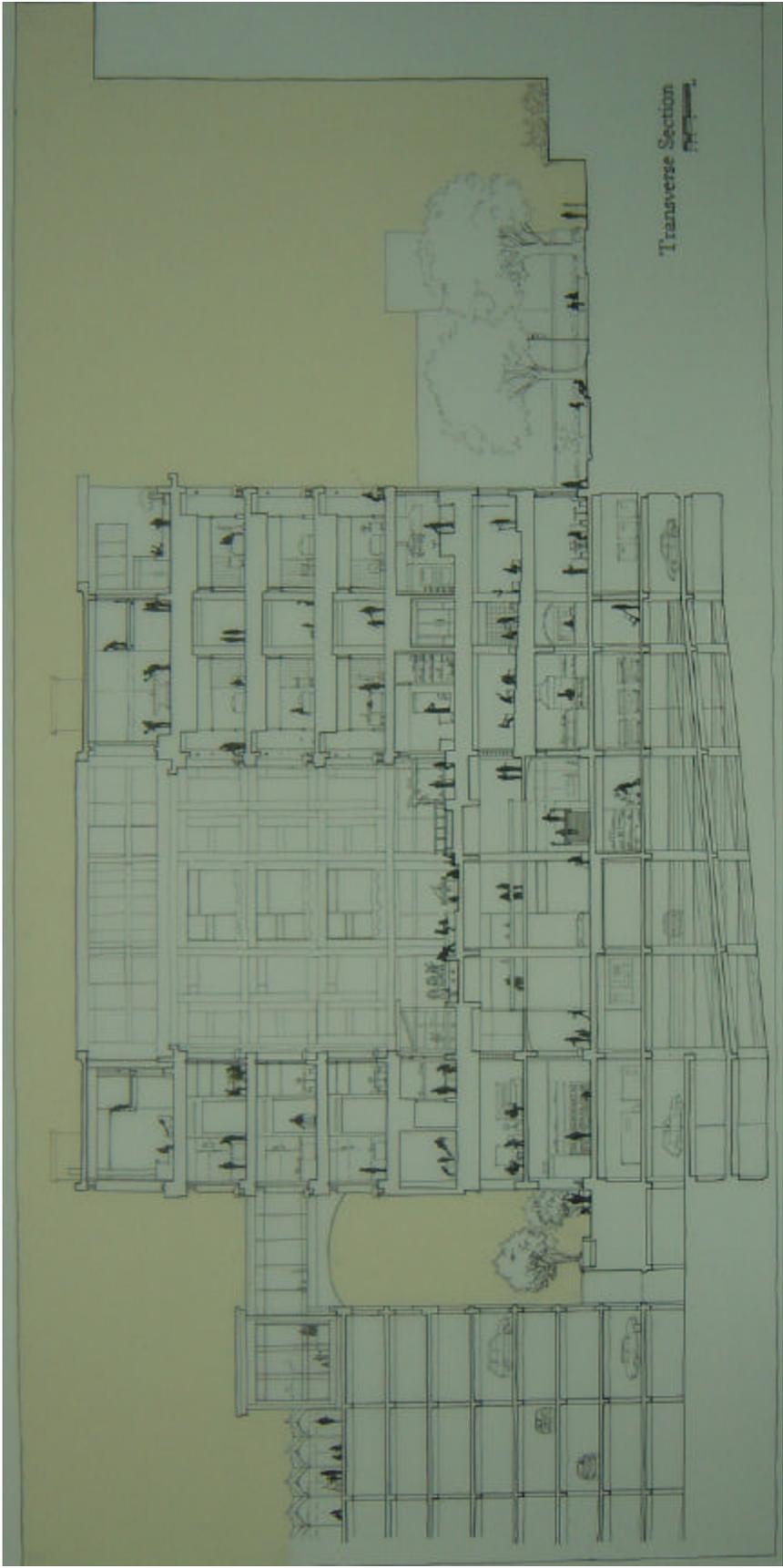


Fig. 72: Axis leading from Hopkins Head Building to Traffic Square and Hospice Site.

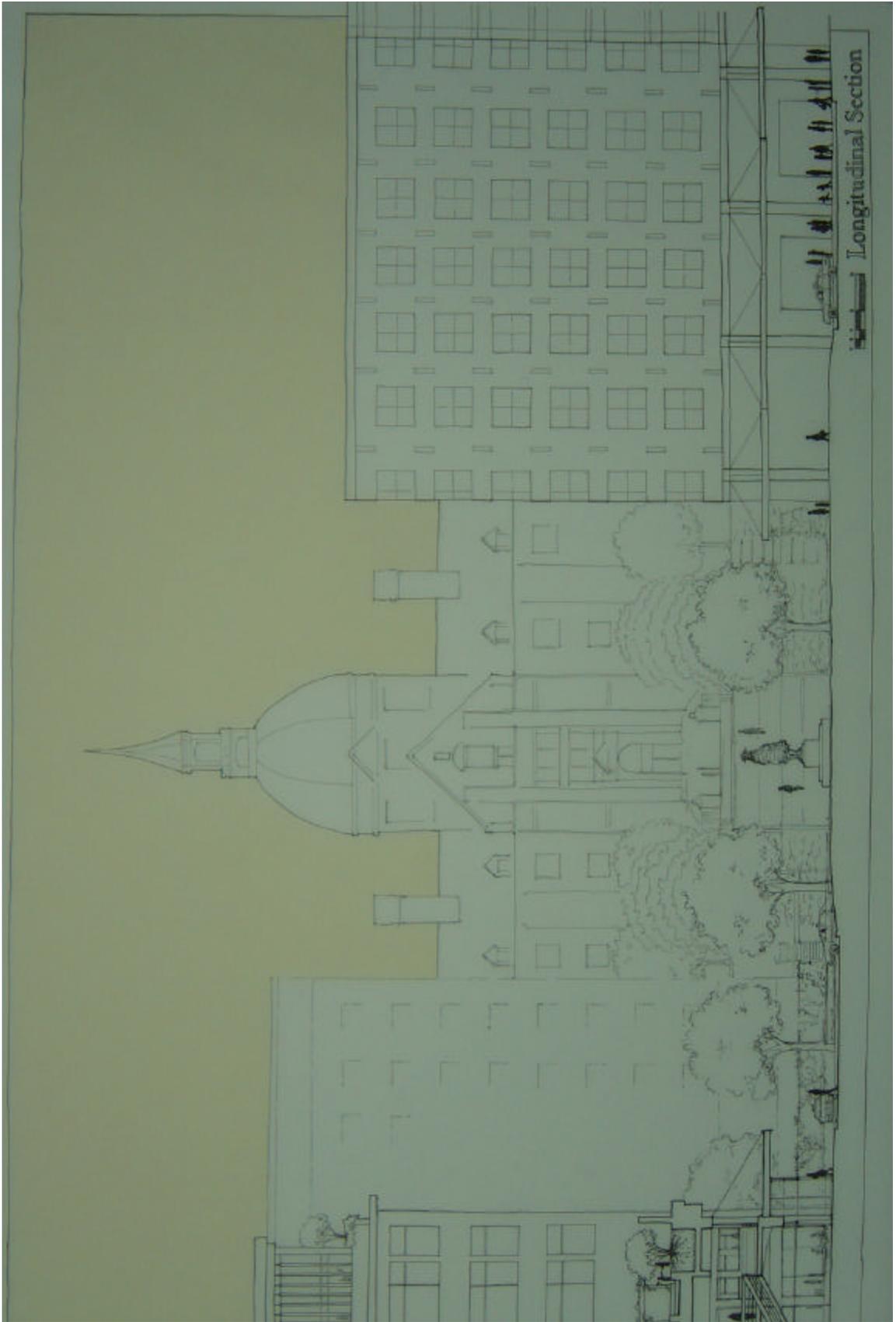


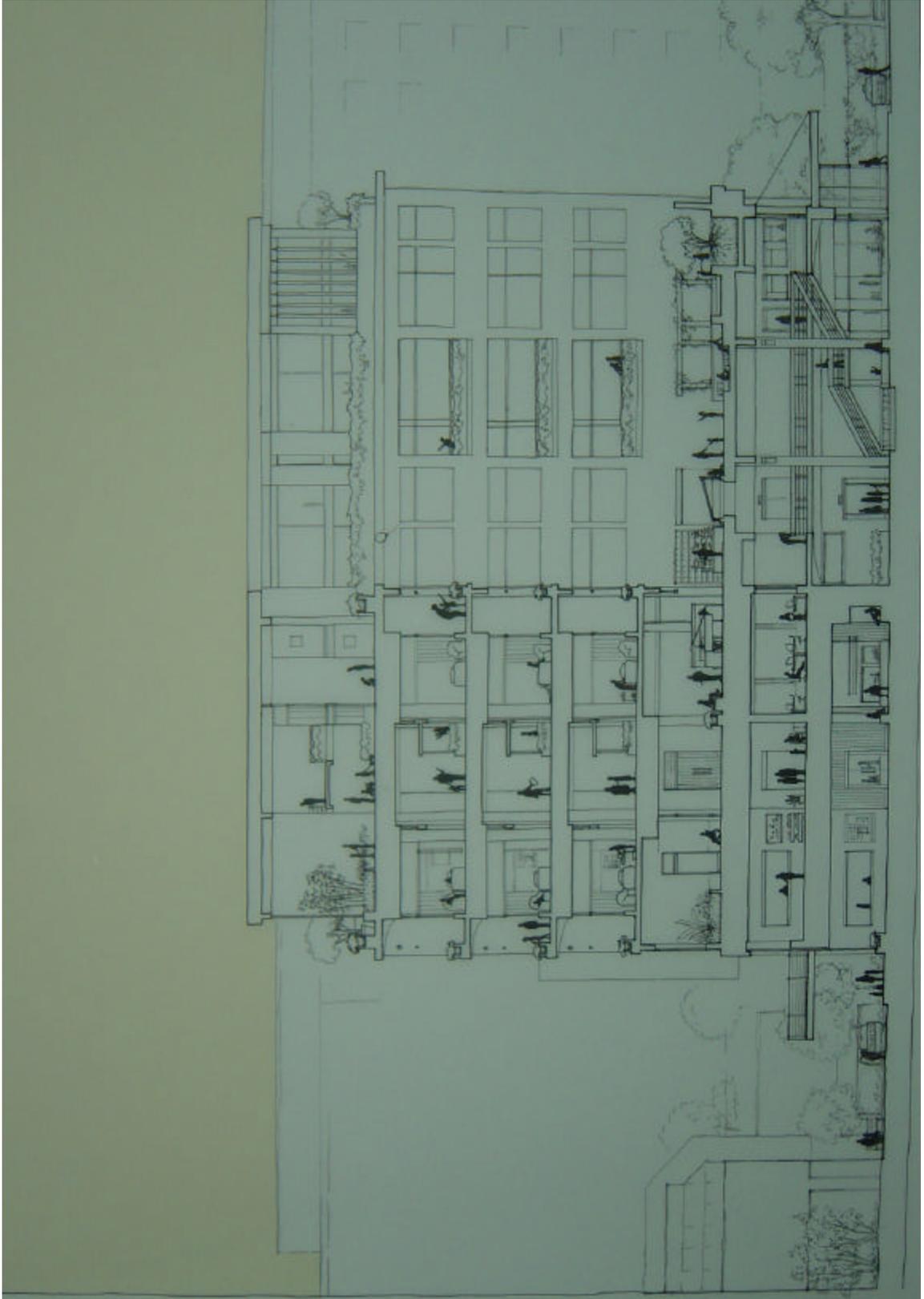
Fig. 73: Defining Public Space. View of campus from North.

Solutions to the organization and zoning of program have been made first sectionally, and then floor by floor through the use of zoning of spaces. The program has been divided by use, and distributed by section, placing commercial and administration offices on the ground floor, medical offices and educational facilities on the second floor, and transitioning through a third floor of public residential spaces, on up to the more private residential spaces in floors 4 through 8. (See Figs. 74 – 76 Building Sections Below.)



Transverse Section  
1/20/1900



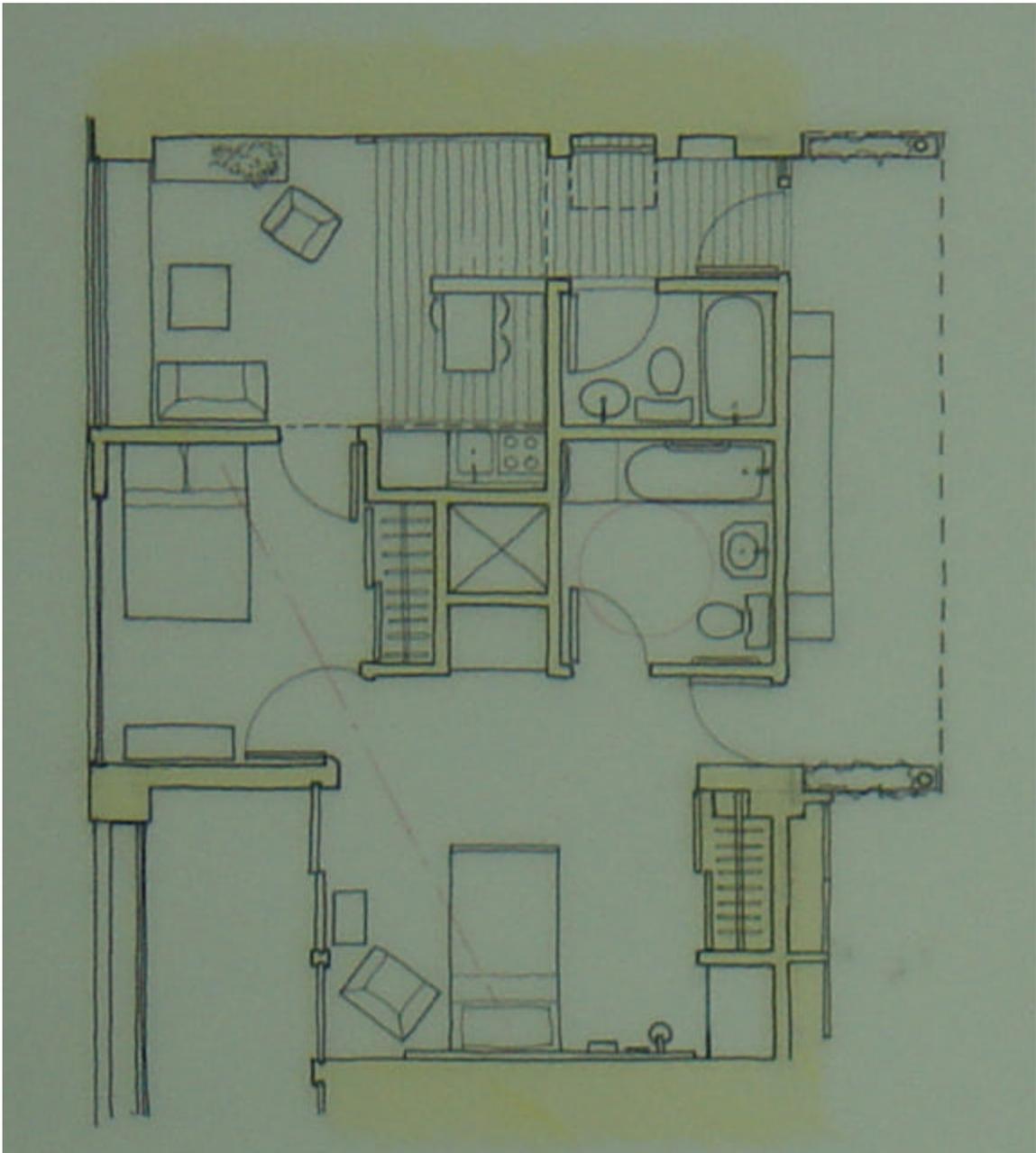


There was an intent to keep the project more economically and sustainably feasible by adhering to a standard grid system for construction. The structure – originally conceived as steel frame – is cast on-site concrete, allowing for the exposure of structure, the monolithic character, the pared down simple appreciation of space to come through..

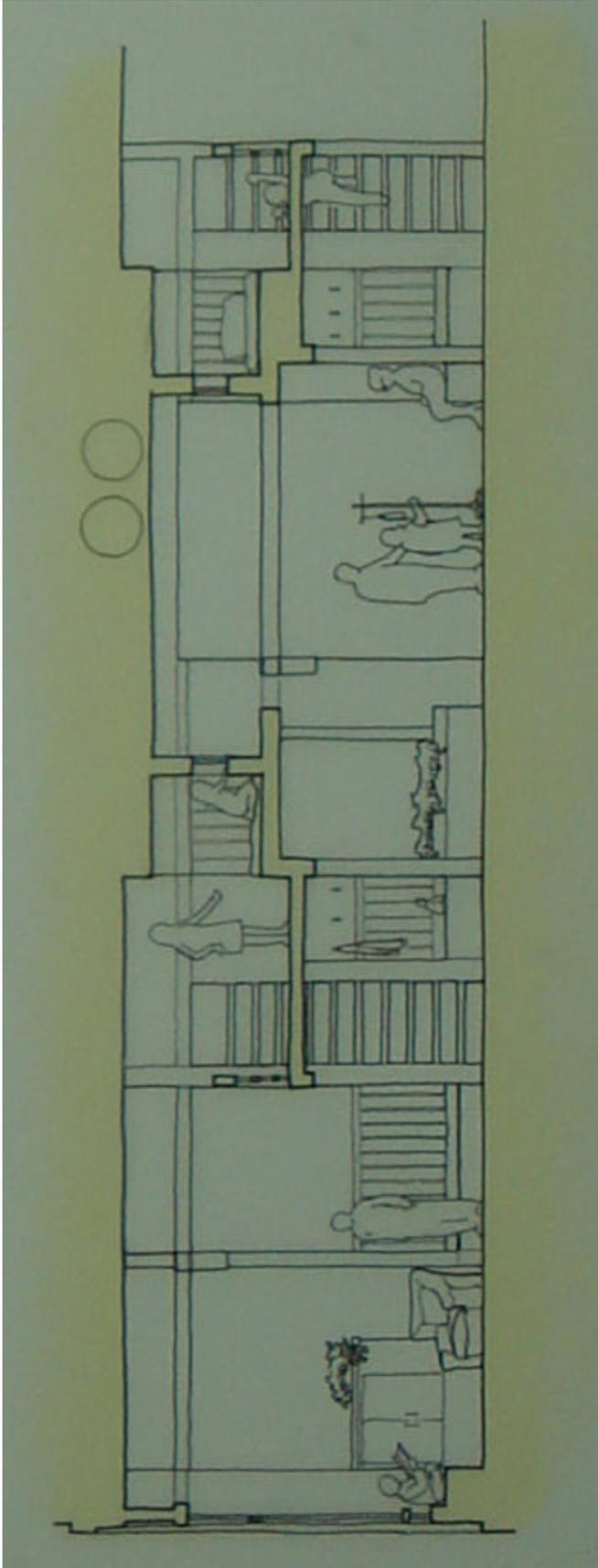


Fig. 77 Wall Section and Elevation Study.

Family needs have been accommodated in various ways, allowing for different family situations to exist. (Some units have more bedrooms, others are simply parent child rooms, in addition to the typical units with one sibling sleeping loft, one parent bedroom and one patient hospital room.)



Figs. 78 and 79: Typical Family Unit Plan and Section. (Below.)



Whenever possible, visual connections were made between spaces through spaces, linking the community. Shared common spaces were placed in highly visible locations, and circulation was worked through these spaces, incorporating street front hallways to serve as neighborhoods, playrooms to serve as playgrounds, and special spaces such as double height 360 degree view rooms to serve as destinations.

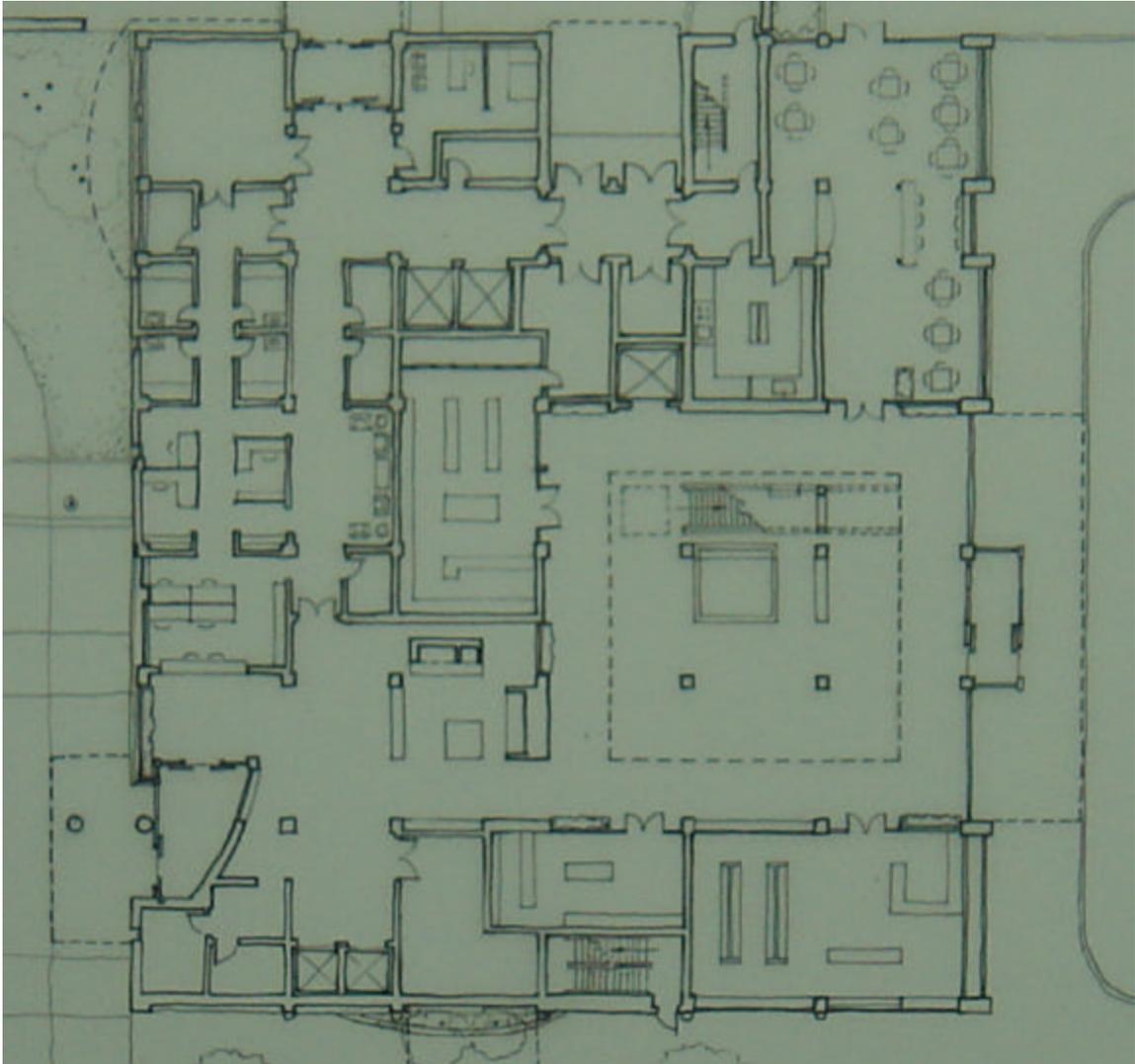


Fig. 80: Ground Floor Plan

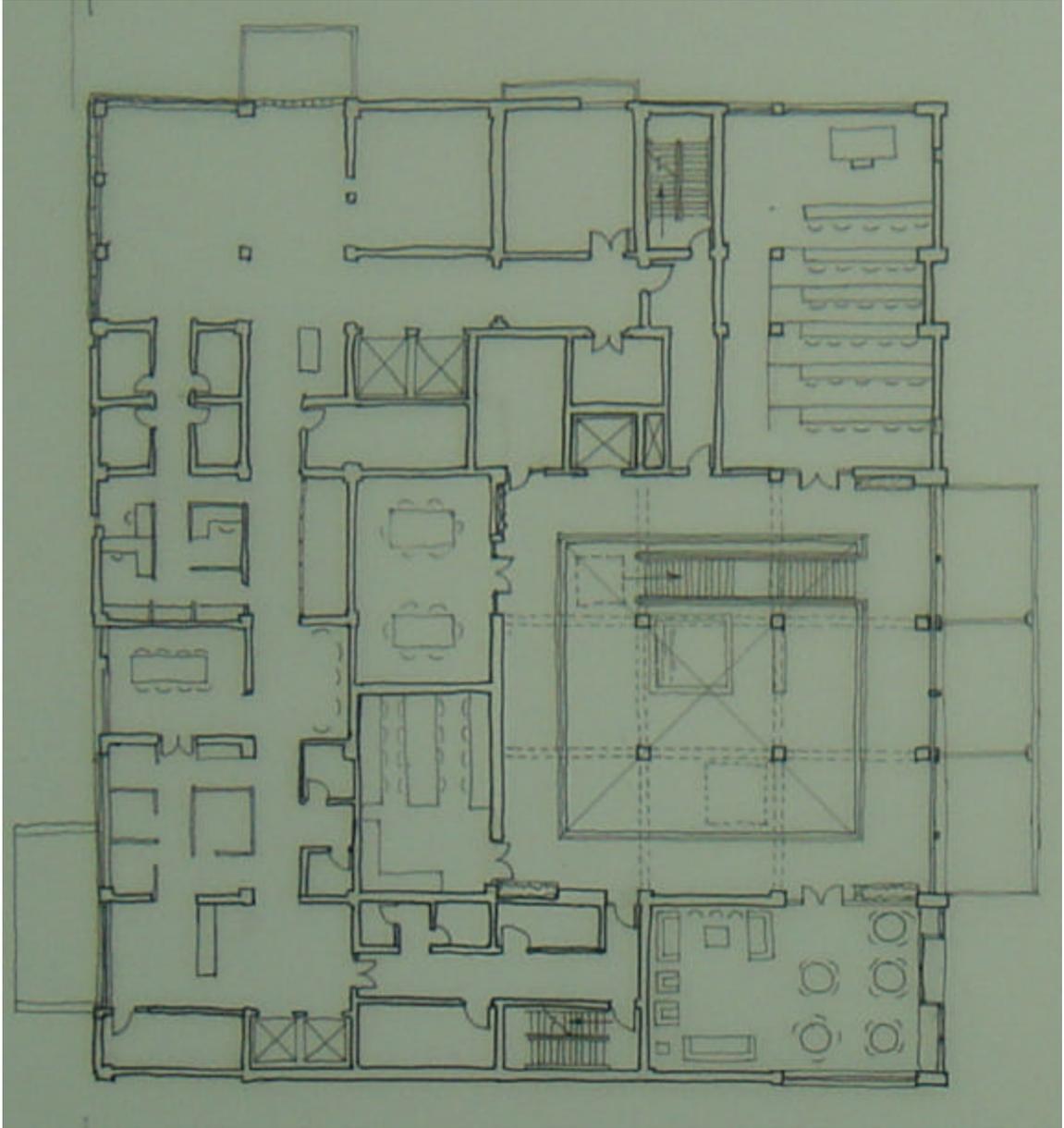


Fig. 81: Second Floor Plan.

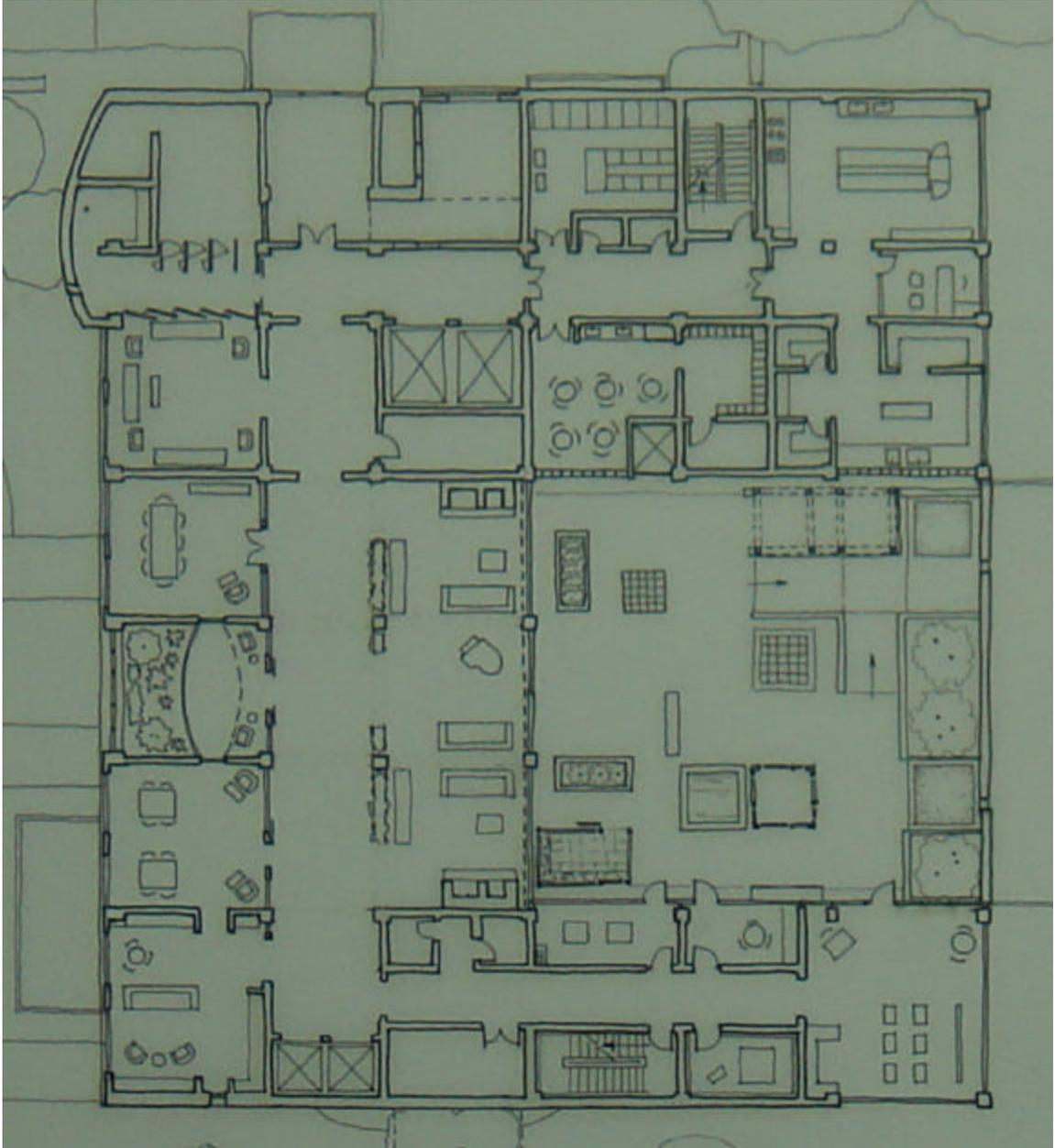


Fig. 82: Third Floor Plan.

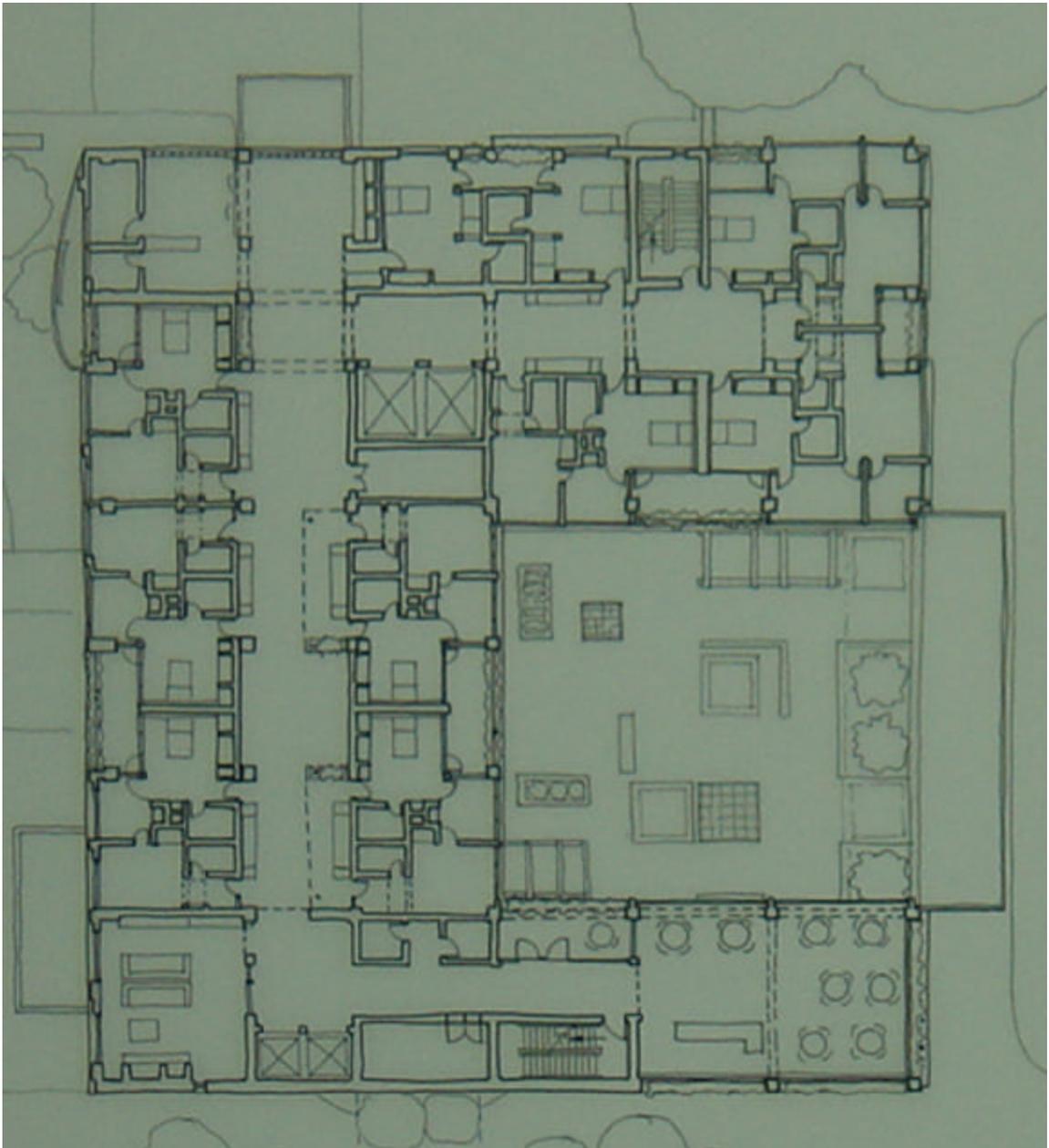


Fig. 83: Fourth – Sixth Floor Plans.

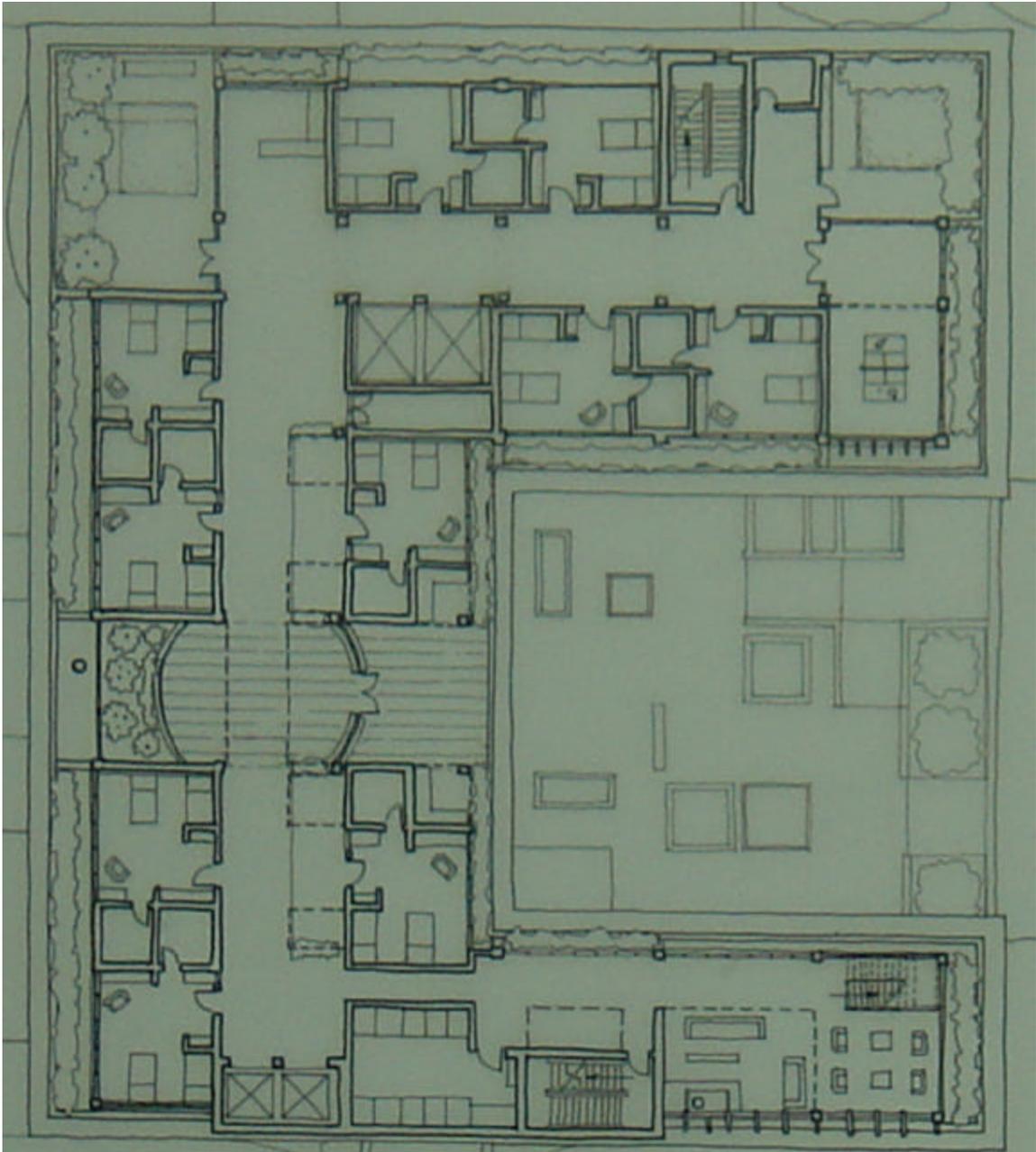


Fig. 84: Penthouse Level Plans.

The inclusion of special program like the Chapel, located on the third floor,

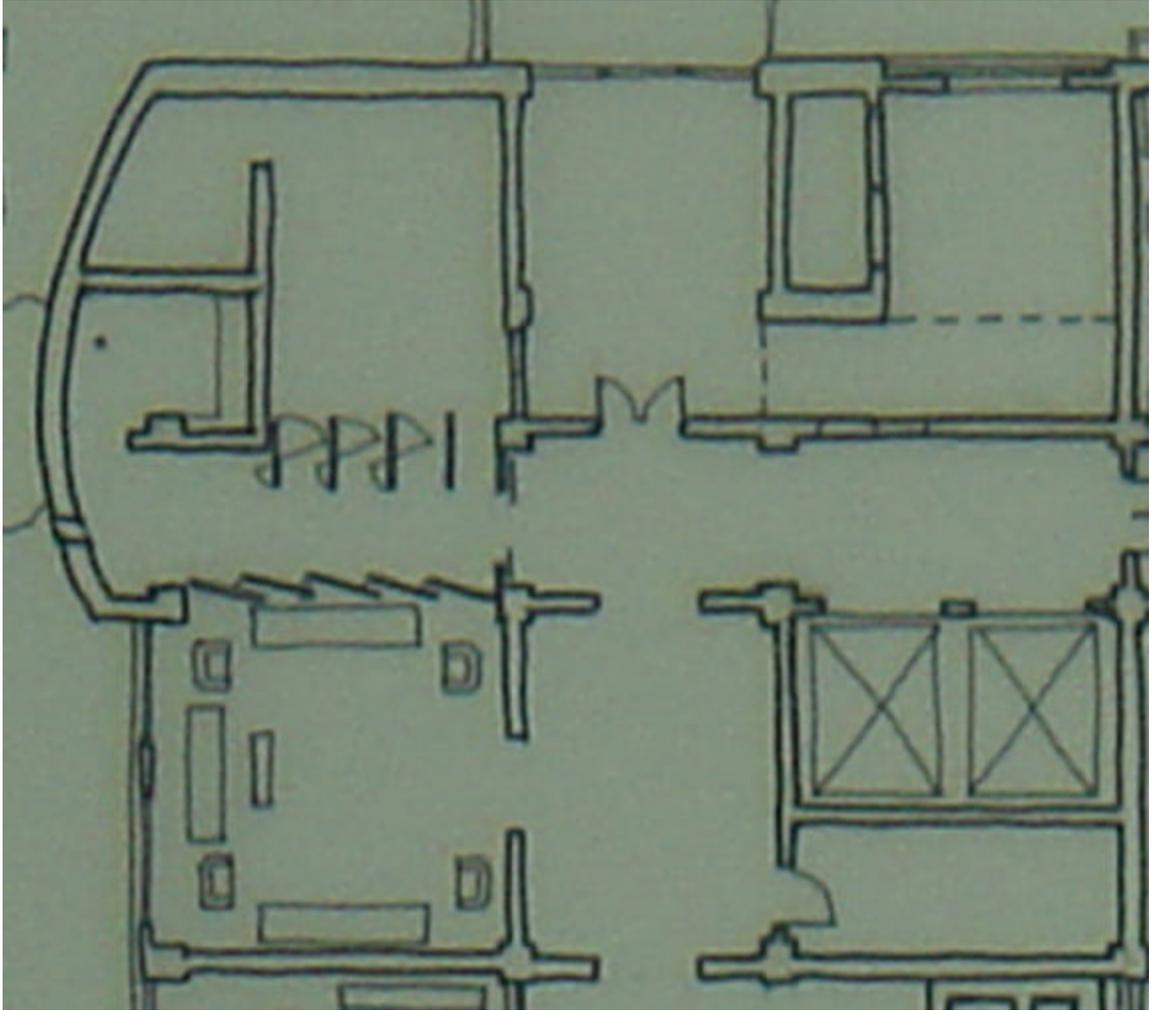


Fig. 85: Sacred Place Program.

The raised courtyard garden,

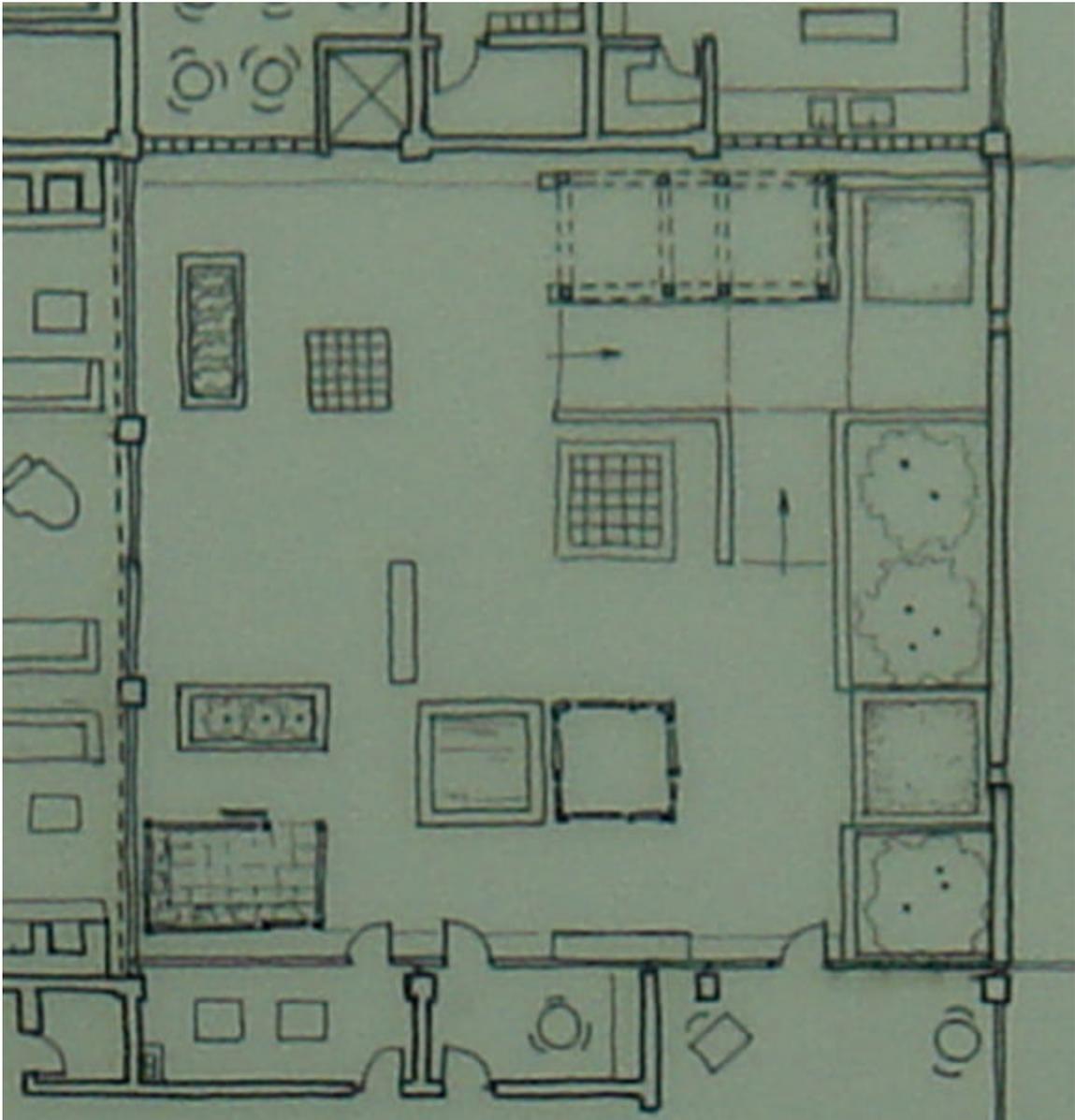


Fig. 86: Courtyard Plan.

and other gathering spaces, all work together to provide a comprehensive environment for families that are sharing similar experiences and in need of the support of peers and community.

Special attention to create comforting and clear spaces, pared down to let the important aspects of life take priority, while also projecting a welcoming atmosphere has been given.

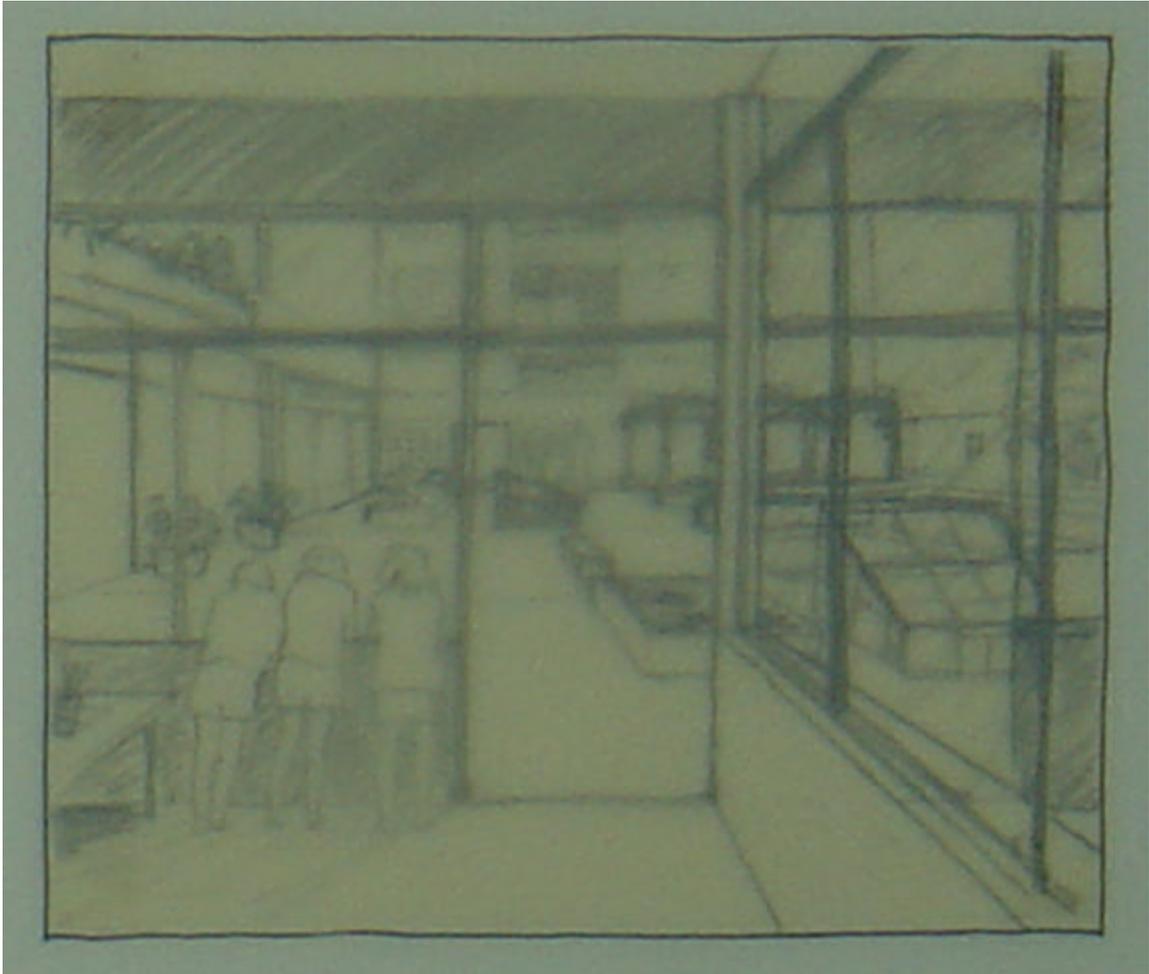


Fig. 87: View from Art room to Courtyard Garden.

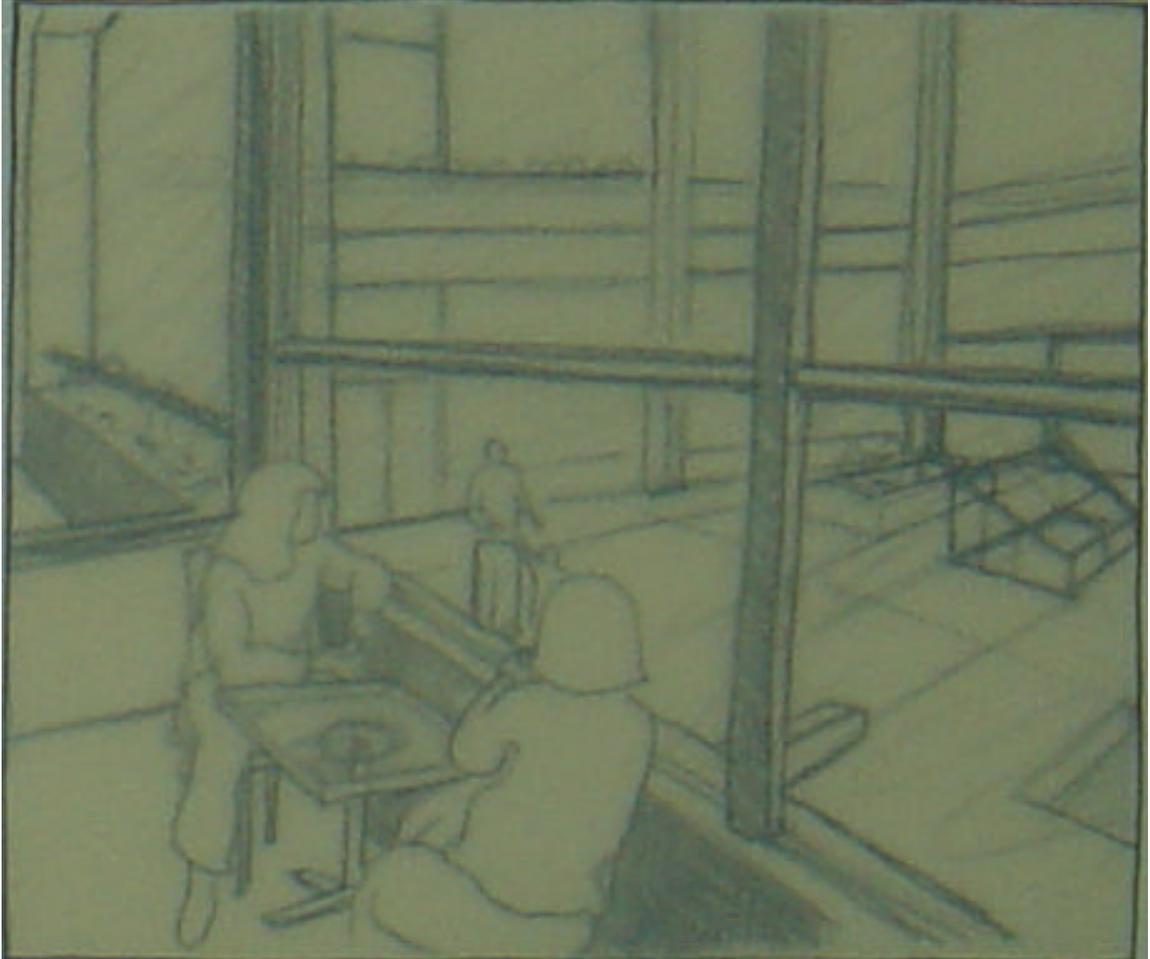


Fig. 88: Balcony Dining view to Courtyard.

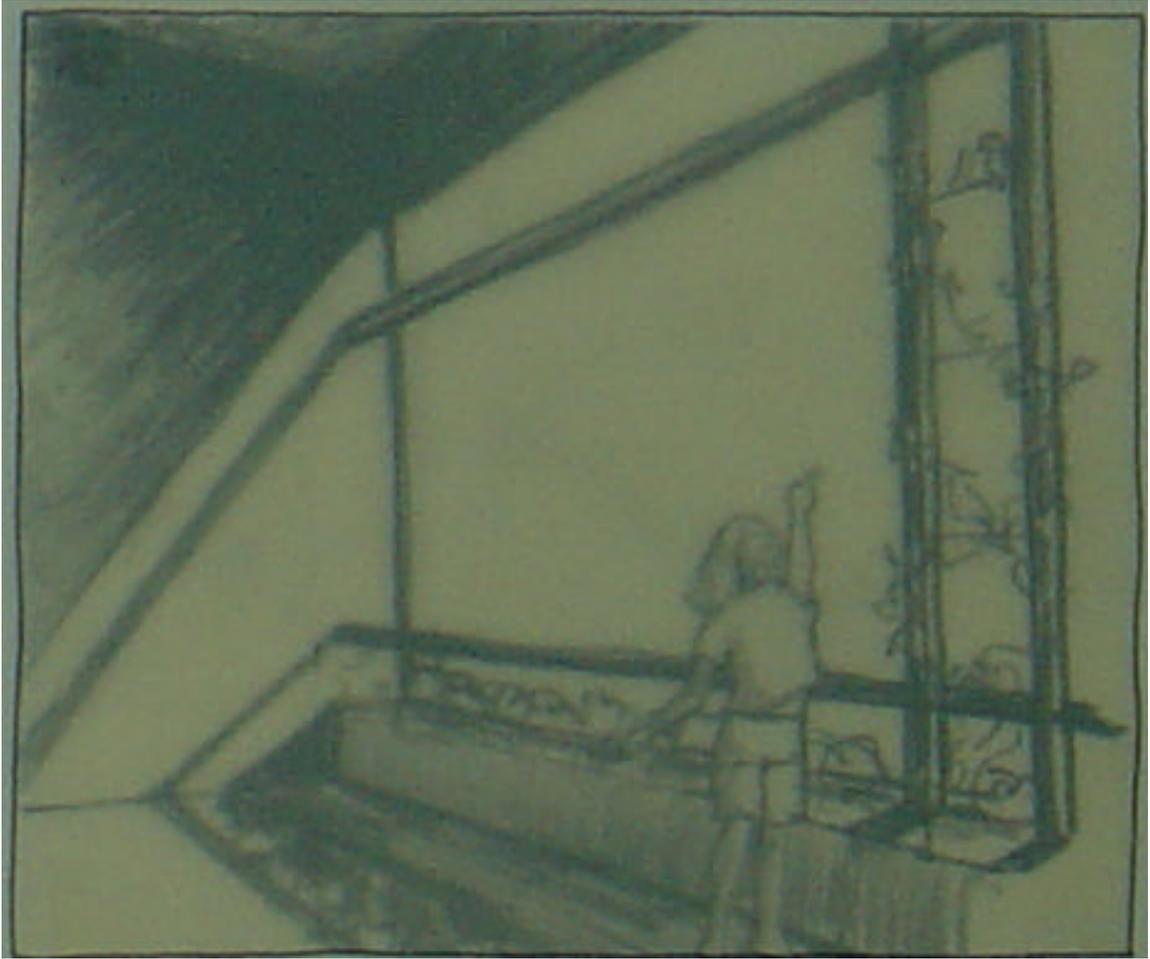


Fig. 89: Patient Balcony with Planters and Birdfeeders.

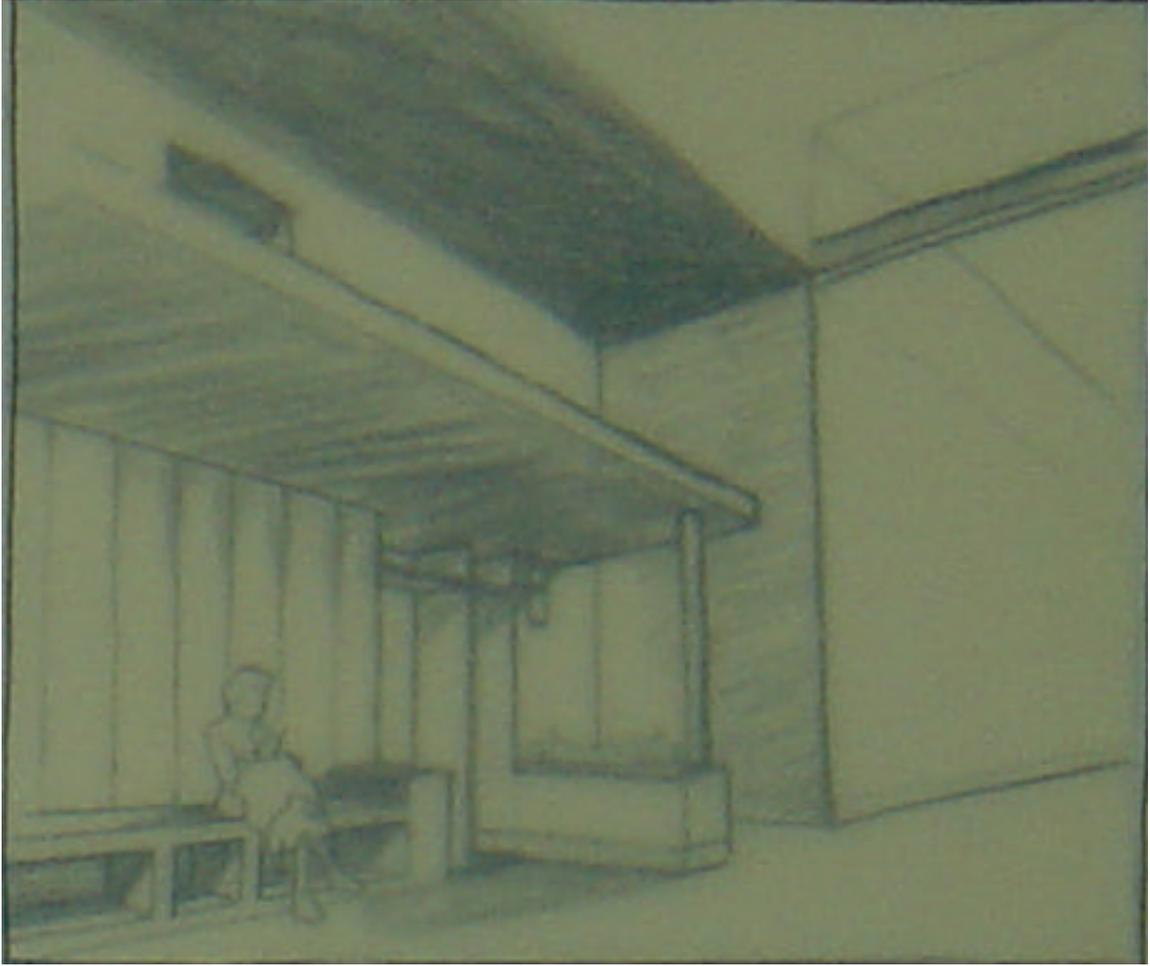


Fig. 90: Front Porch marks entry to Family Unit in Hallway.

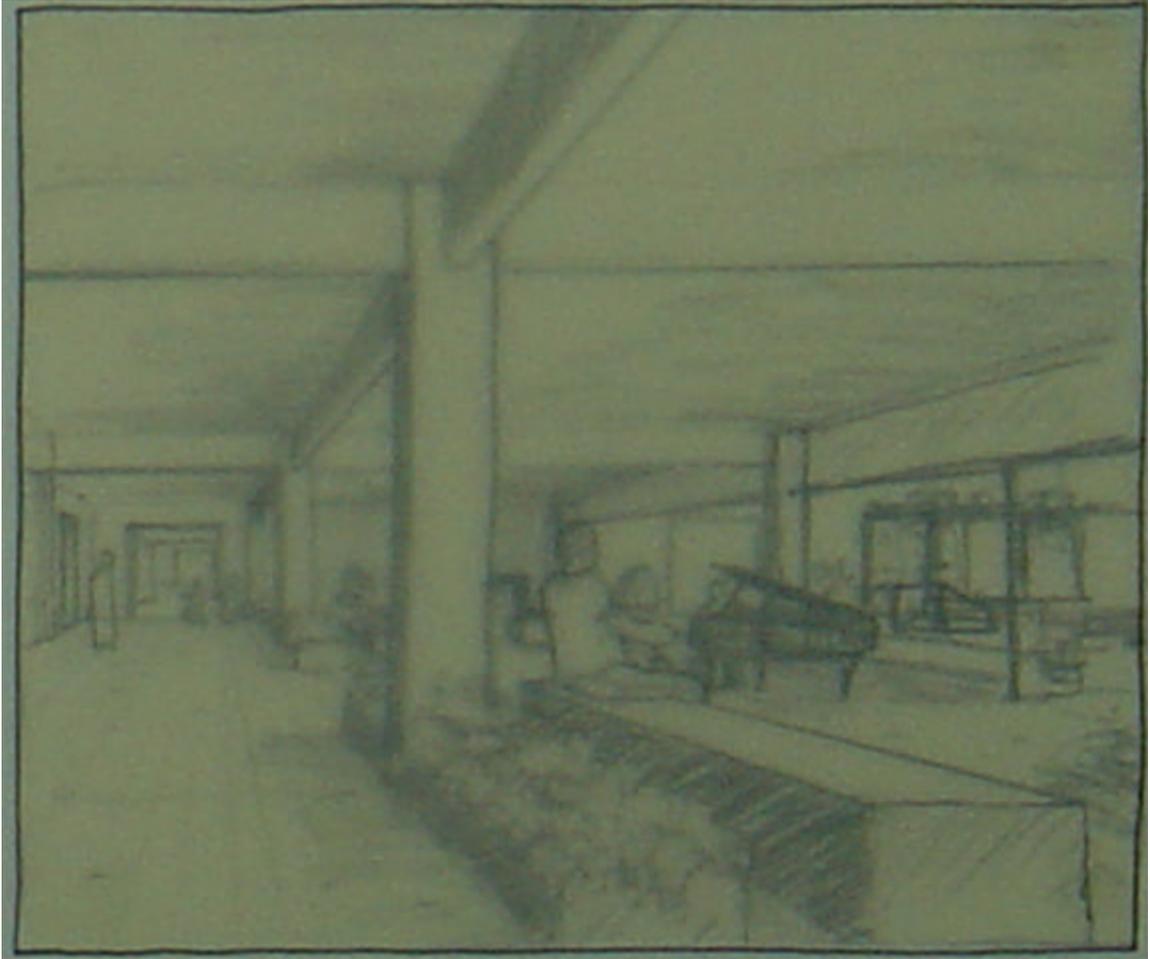


Fig. 91: Great Room serves as gathering space for entire Hospice Community, but is recognizable in smaller spaces for more intimate meetings.

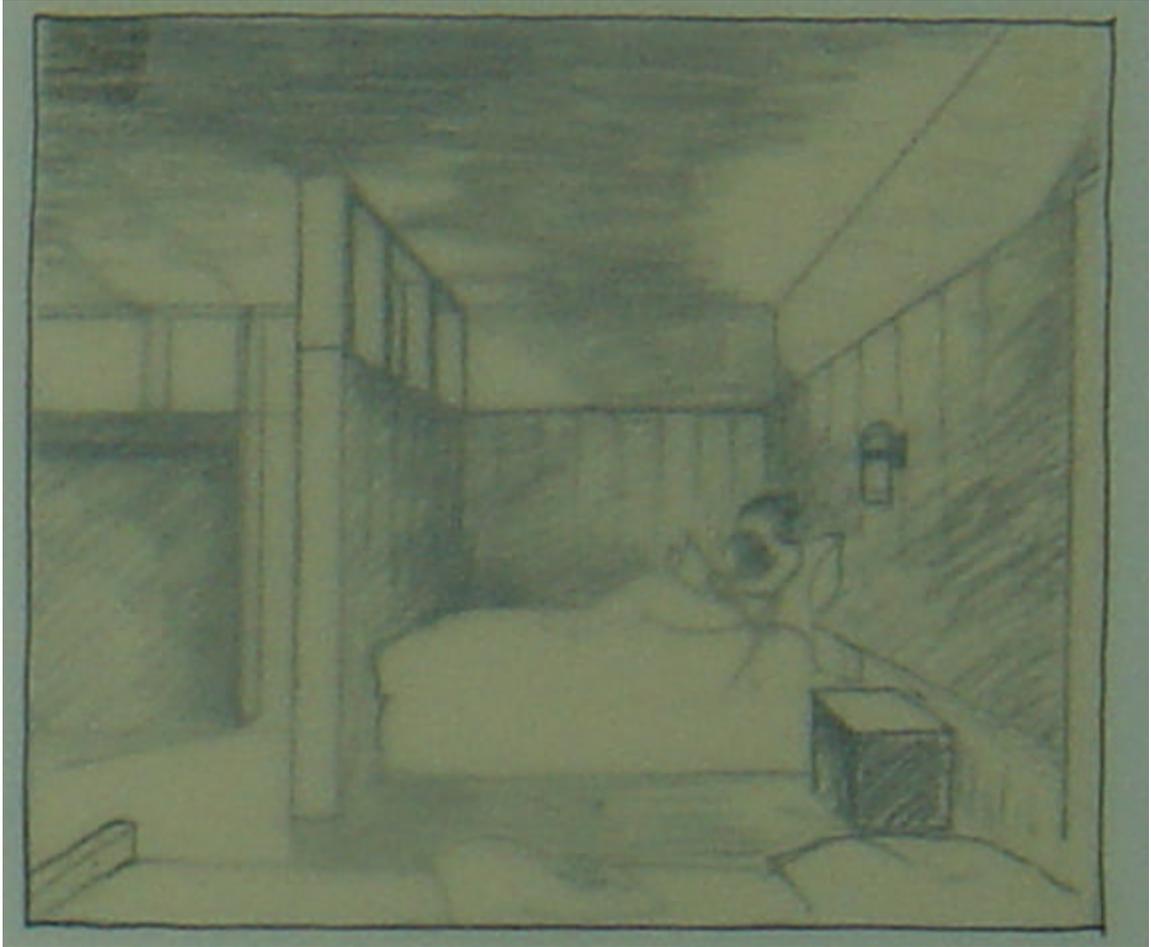


Fig. 92: Parent Child Rooms afford intimacy and comfort by providing bed to bed relationships and cozy alcoves, surrounded by warm materials like wood.

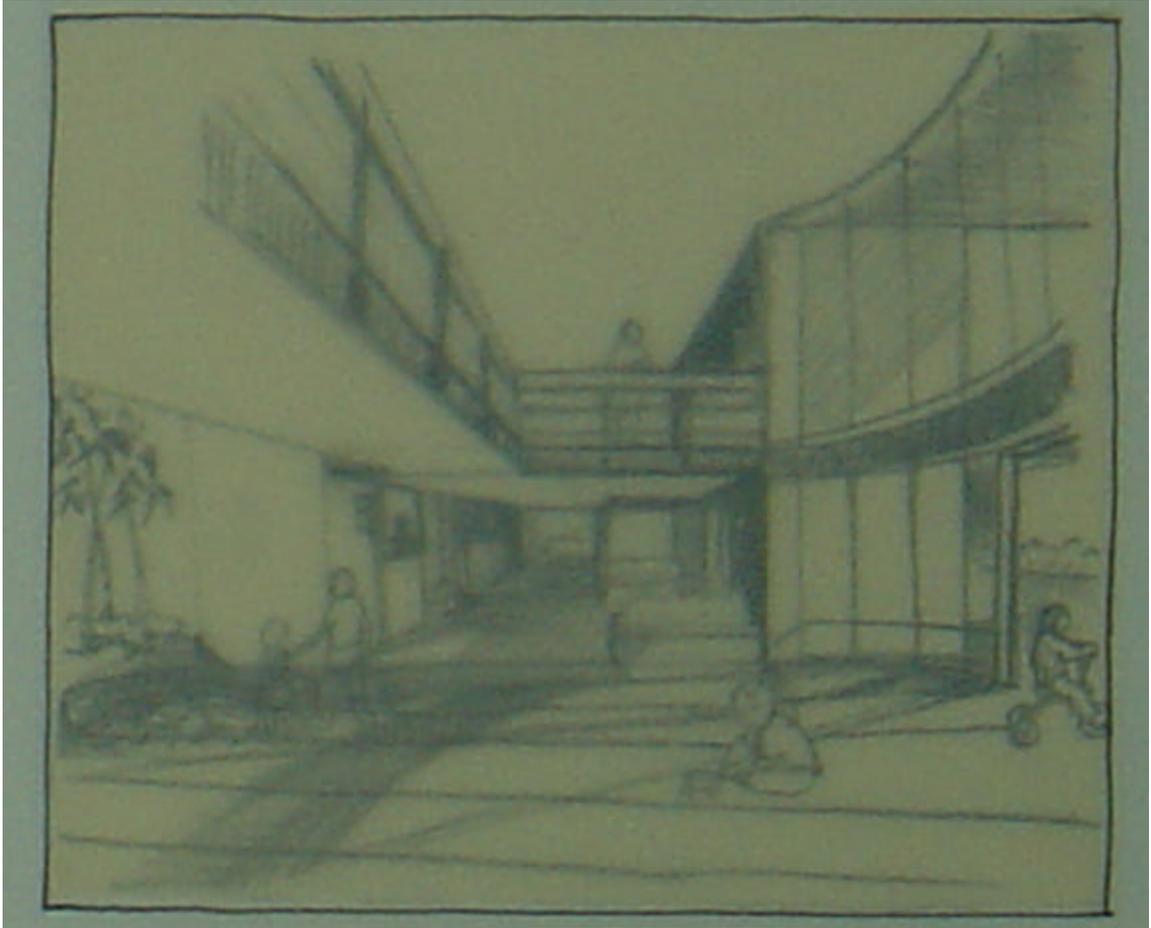


Fig. 93: Penthouse View Court serves as indoor/outdoor play area, with light from both sides, and access to rooftop terrace, promoting play space for children with limited mobility and sensitivity to weather.

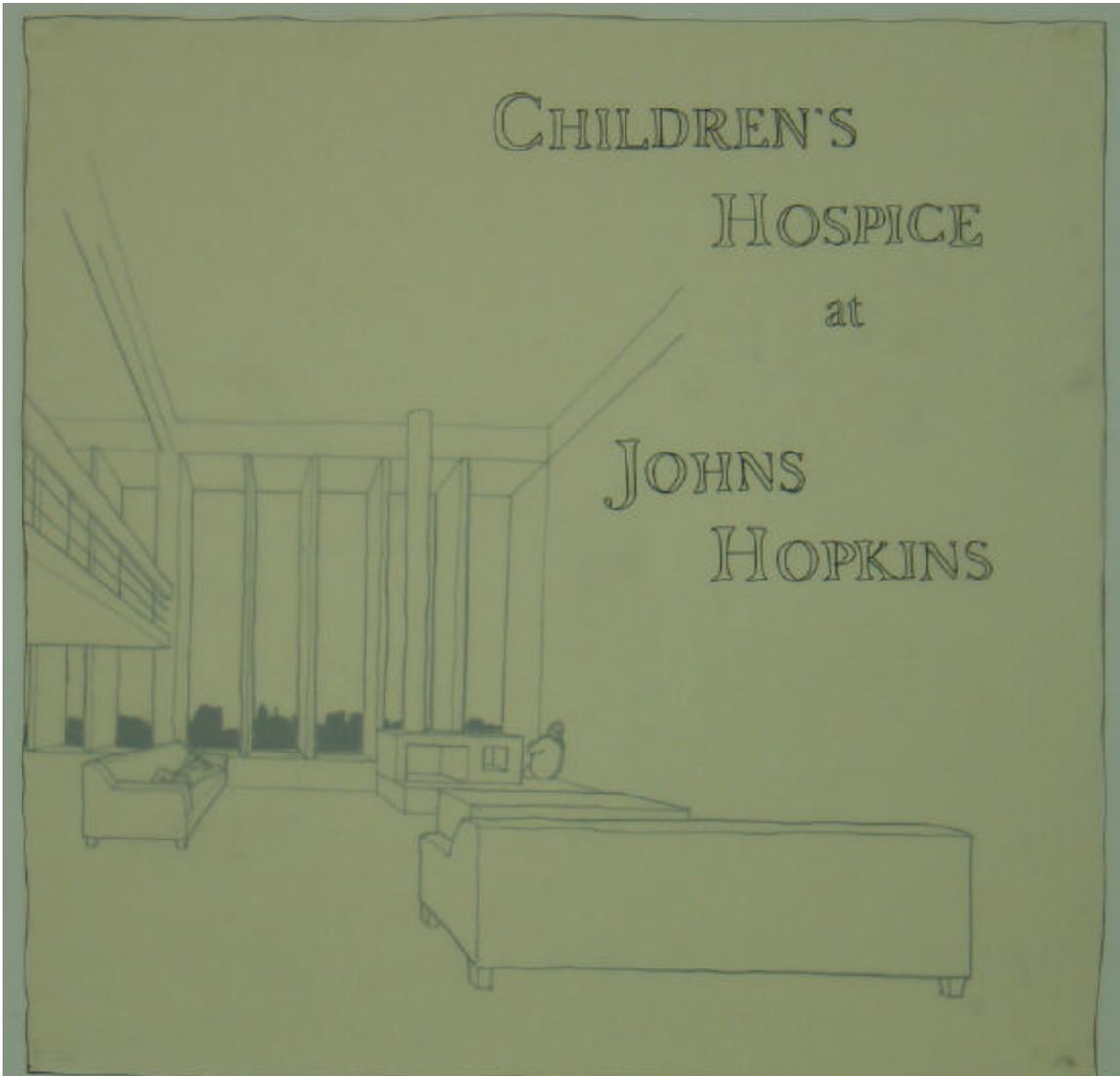


Fig. 94: West View Room affords views of Baltimore's skyline from double height family room with hearth, focusing attention on the simple pleasure of watching the sun set each day.

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