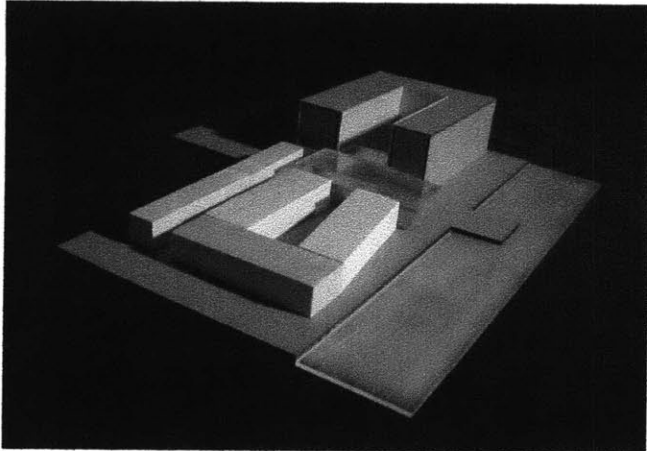


ReWorking the City of Workers: A New Housing Paradigm for the Immigrant City



Britta Erika Butler

A.B. Biological Anthropology
Harvard University, 1996

Submitted to the Department of Architecture in Partial
Fulfillment of the Requirements for the
Degree of Master of Architecture
at the Massachusetts Institute of Technology,
February 2003.

signature of author

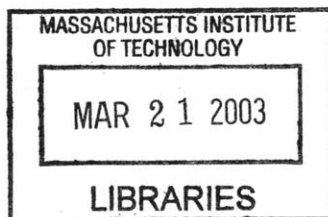
Britta E. Butler
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John E. Fernandez
Assistant Professor of Architecture and Building Technology
Thesis Supervisor

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Bill Hubbard Jr.
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Chairman, Departmental Committee on Graduate Students



ROTCM

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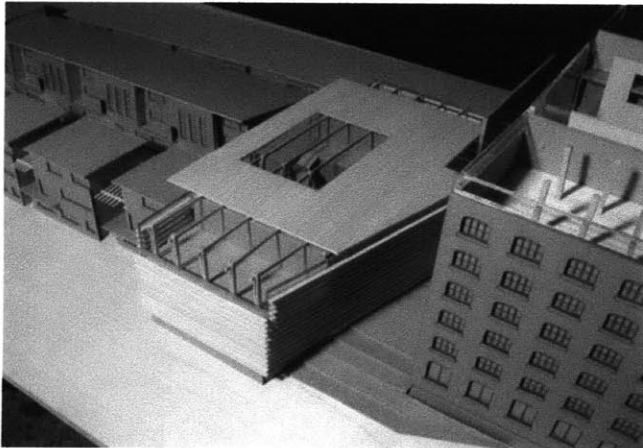


ReWorking the City of Workers: A New Housing Paradigm for the Immigrant City

Britta Erika Butler

Submitted to the Department of Architecture on February 17, 2003 in partial fulfillment of the requirements for the Degree of Master of Architecture.

Abstract

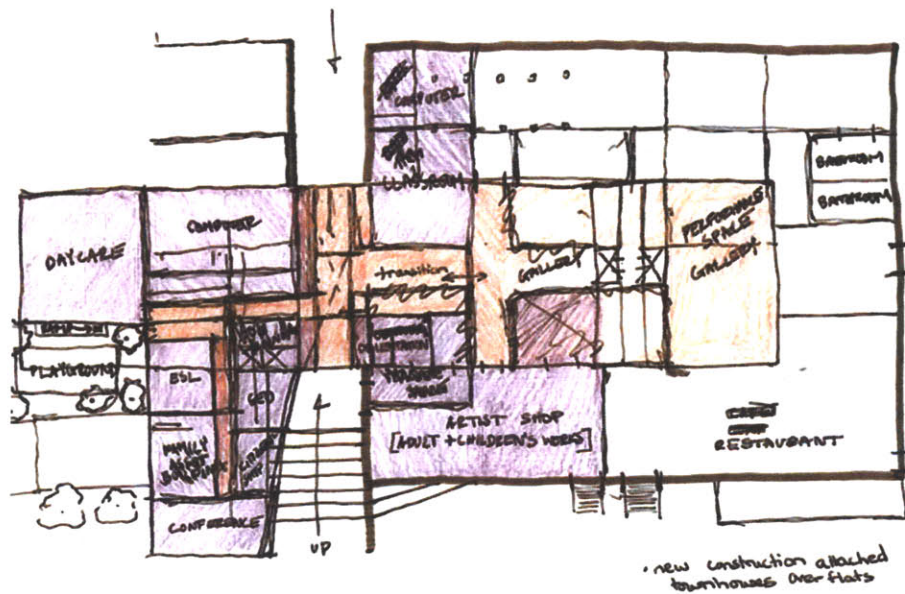


The climate of the reception of immigrants to the United States has soured, and circumstances are becoming increasingly difficult for persons seeking to gain residency. Reasons often given for the reversal in this practice are that immigrants are poor, uneducated, take jobs away from Americans, and use valuable resources otherwise available to the native-born.

This at-best cautionary condition is unfortunate, not only because it decreases diversity in a society already afraid of “the other”, but because the US is the very model founded on foreigners trying to make lives for themselves. In evidence now is a disdain and distrust of foreigners that could eventually affect all people in the US, resulting in an atmosphere of suspicion and negativity toward anyone who is perceived as different.

This design thesis posits that immigrants are important additions to local neighborhoods and economies. If they are supported physically and psychologically during their initial period of arrival, they can more readily become integral members of American society. The design of housing, a learning center, and incorporation of the arts becomes a new means by which immigrants can retain ties to their cultural heritage, while concurrently increasing self-sufficiency, dispelling ignorance, and fostering greater acceptance and knowledge in the community at large.

Thesis supervisor: John Fernandez, Assistant Professor of Architecture and Building Technology



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Abandoned Home in Lawrence, 2002.

Lawrence: Introduction

The city of Lawrence, Massachusetts is located 28 miles north of Boston and five miles south of the border of New Hampshire. Easily accessible by car, it lies at the junction of I-93 and I-495, while it is also serviced by a commuter rail that travels to and from Boston. The train station stop is just a few minutes' walk to the downtown district. In addition, Lawrence is home to over 12 million square feet of mill space, and boasts a substantial historic business and housing stock. On paper, it would seem that the city should be a thriving metropolis, reveling in its bucolic New England setting.

The reality, however, presents a much different picture: Lawrence is the 23rd poorest city in the United States, has the lowest per capita income in Massachusetts, and its levels of unemployment frequently stand at double the MA and US rates (1). A walk around the city, both in the downtown business district and residential streets, quickly illuminates the prevalence of boarded-up buildings, vacant lots, burned-out homes, and litter-strewn plots. The majority of residents rent, not own, their units, and home ownership lies at only 35% in the city (2). Most telling of the struggles of Lawrence, perhaps, is simply its persistently pervasive negative image as downtrodden, crime-ridden, dilapidated, and depressed. The inability to shake this negativity has weighed on the city for years.

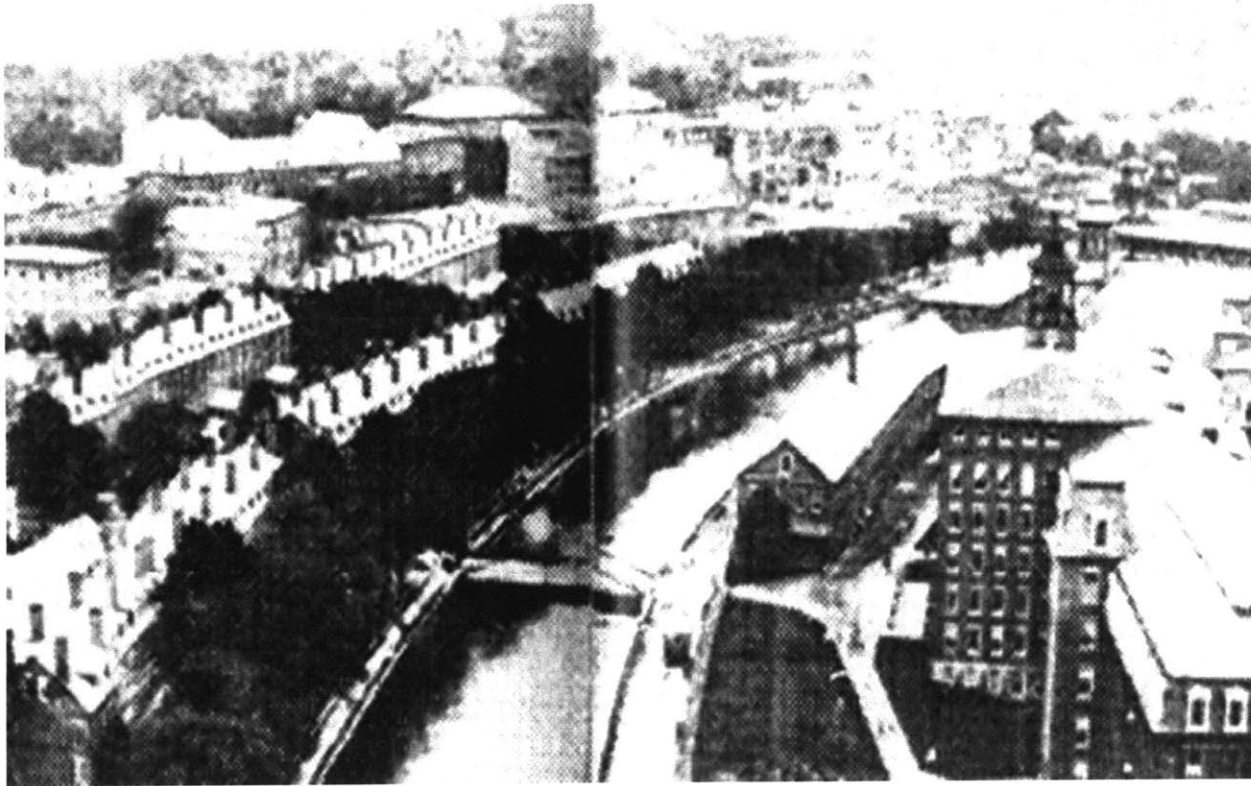


Figure 1: Boarding Houses Along Canal.

Lawrence: History

Founded in 1847, Lawrence was the first planned industrial city in the nation. The location of the city on the Merrimack River was the key to its success, with its waterpower being harnessed by the building of the Great Stone Dam. The creation of a canal funneled this water to enormous mill buildings, forming an entire “Mill Island”, and dictating the E-W orientation of the city. Since its founding, Lawrence has had two monikers: the “City of Workers” and the “Immigrant City.” The former arose out of its inception as an industrial mecca, the latter was a result of the groups who moved to the area in order to gain employment.

The goal of the Essex Company of Boston was the establishment of a working powerhouse based on the textile industry. During the early years, the mills were staffed by unmarried farm girls. They were used partly to settle fears of social and moral corruptions that the industry would bring to the region, and partly because they would eventually return to their homes to marry, and therefore would not disturb the male-dominated agrarian labor pool. The Essex Company built worker housing for the women, where they were expected to live, sleep, and eat together under strict curfew. In exchange, they were paid a wage that would help support their families – while their honor remained intact. The company could boast of its progressive methods in upholding “the moral machine of industry.”

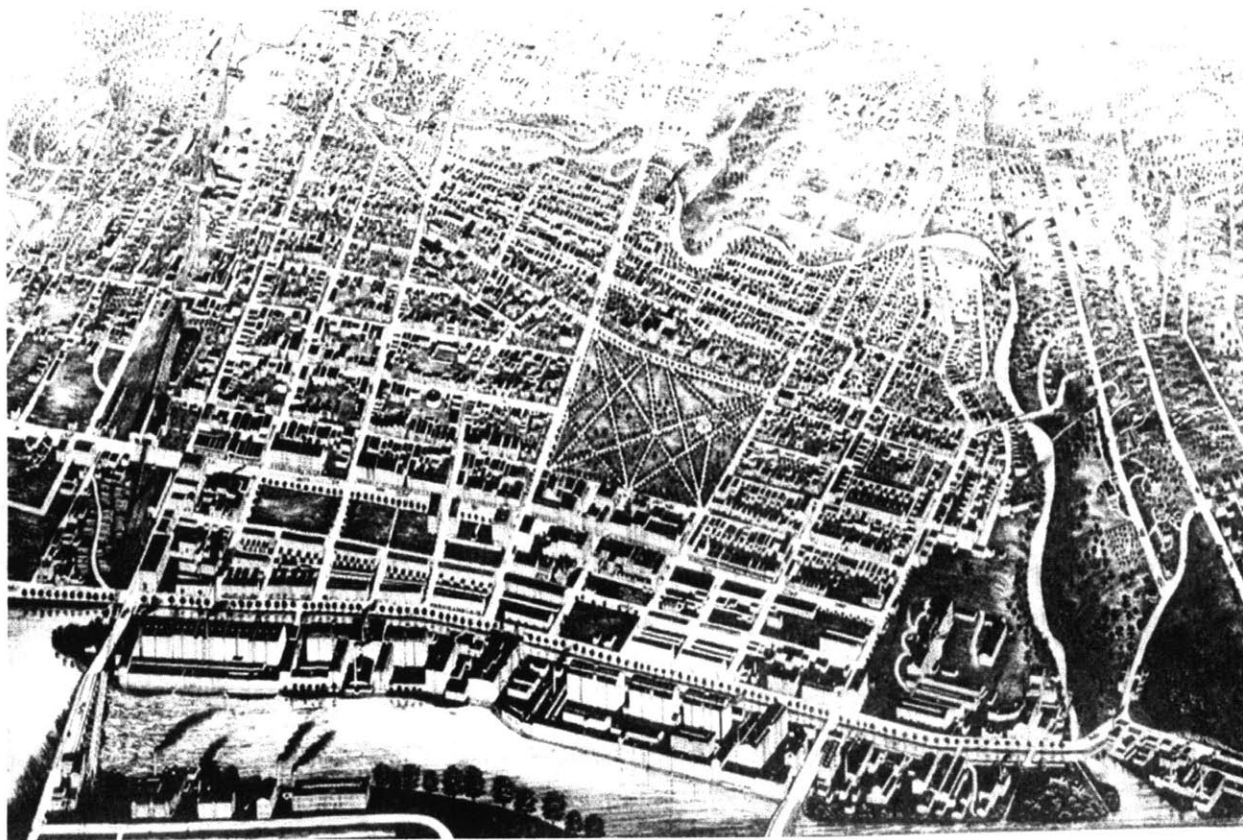


Figure 2: View of Lawrence, 1876.

As Lawrence and its mills grew larger and more numerous, the area began to attract immigrant workers, thus the second title of the “Immigrant City” (one it still holds today). With the Irish, French Canadian, English and German influx of the late 1800's, the mill owners received an almost constant supply of cheap labor. They supplanted the farm girls with the newcomers, and were able to exploit the workforce. The Essex Company began to devote less effort to the pursuit of the model industrial city, in favor of longer hours and cheaper, denser, housing.

By the early 1900's, immigrants from Italy, Poland, Lithuania, and Syria began to arrive in large numbers. The boarding houses along the canal were demolished to build more mills, and their workers moved into tenement houses. The Bread and Roses Strike of 1912, though a major labor movement that garnered national attention, did not change the fact that owners viewed labor from afar, moving to the periphery of the industrial center. In addition, the economic viability of the place by this time had begun to change: in 1920 the population of Lawrence was 94,000, one-third of which was employed in the textile mills earning 65 cents per hour. By 1933, the going rate was 28 cents per hour (3). By the 1940's “two significant trends... began to be of concern to New England textile producers. The first was the growing competition from synthetic fibers... the second... the new regional comp-



Figure 3: View of Essex Street, Turn of the Century.

etition from the southeastern... states" (4). This change in the economic base of Lawrence resulted in the owners' moving their businesses elsewhere, and by the 1940's the textile industry had all but left the area. Lawrence, which once boasted a population of almost 100,000 people, by the mid 1900's had only 67,000 inhabitants (5). Those who remained in the area were mostly relegated to the ranks of the unemployed, thereby drastically undermining the city's economy. Linked to the downturn were other key forces which resulted in the physical and functional change of the city: People continually left in search of jobs, while others made the shift from city to suburban living. Malls began to spring up around the area, and the Essex Street commercial center ceased to be a draw for both outsiders and Lawrencians. The suburban malls and commercial plazas proved too powerful for one downtown shopping street.

The final key force which resulted in the downturn of the city over time was the very thing it had originally relied upon - the constant flow of foreigners into the area: Lawrence had always been a landing point for immigrants, and they necessarily shaped the nature of the city, but for many, by the mid 1900's this ceased to be seen as a positive influence. Today in 2002, the city is predominantly Latino from the Dominican Republic and Puerto Rico. While these groups have brought strong familial and cultural traditions with them,



Figure 4: Sears Block 1918, inset 2002.

“the continuation of a revolving and transient population [has] prevented significant political organization from within [the] large immigrant segment of the population” (6). Without a voice, the needs of the community continue to go largely unheard. The high percentage of foreign-born residents has also perpetuated the view for uneducated outsiders that Lawrence is a city of low-skilled, poor people, with limited options. This has, in turn, negatively affected the growth of the city and the betterment of its inhabitants, as few are willing to give Lawrence a chance.

In real life only diverse surroundings have the practical power of inducing a natural, continuing flow of life and use. Superficial architectural variety may look like diversity, but only a genuine content of economic and social diversity, resulting in people with different schedules, has meaning...and the power to confer the boon of life...”

-Jane Jacobs, *The Death and Life of Great American Cities*.

Lawrence: Demographics and Statistics

The following are 2002 Demographics and Statistics for Lawrence, MA (7) . They are shown not only as indicators of the situation in which the city finds itself, but also as justification for the need for a new type of intervention that can begin to address the issues of housing, safety, health, and education.

Demographics:

Population 72,000
40% foreign born
>10% poverty rate
> 25% child poverty
3.5 average family size
\$28,000 median household income

Housing:

32% Home ownership
35% of housing units built before 1940
< \$100,000 avg. assessed home value
\$1,000 median mortgage payment
\$650 median rent

Health:

20 births per 1,000 population
> 15% of births to women under 20

Education:

33% failure rate 10th grade English MCAS
54% failure rate 10th grade English MCAS
81% students are Hispanic
26% students have limited English proficiency
30% 17-18 yr. olds enrolled in public school
8% residents have college degree or higher

Crime:

highest motor vehicle theft rate in MA
1.5% violent per capita crime rate
4.5% non-violent per capita crime rate



Figure 5: Wide Aerial View of Lawrence, Site in Box.

The Site: Description

Located in Lawrence, Massachusetts, 28 miles north of Boston, the site was selected because of its location at the very heart of the mill district, surrounded by examples of the city's history and past greatness. It was also chosen because of its proximity to downtown businesses and the ten minute walking distance to the commuter rail stop. Its inexpensive property value (\$1-10 per square foot), made it a further logical choice for the placement of an affordable housing design, and the canal presented an opportunity for a reuse strategy of the water (8).

The site is comprised of an empty lot on which worker housing once stood, and a vacant mill building first used to store worsted wool. The entire site is bounded to the south by the canal that once powered the mills. To the west is the Lawrence Heritage State Park and Museum, converted from mill worker housing, and an upscale restaurant in a building once used by a textile company. To the north is the downtown business district, and to the east are various other smaller -scale buildings still in use.

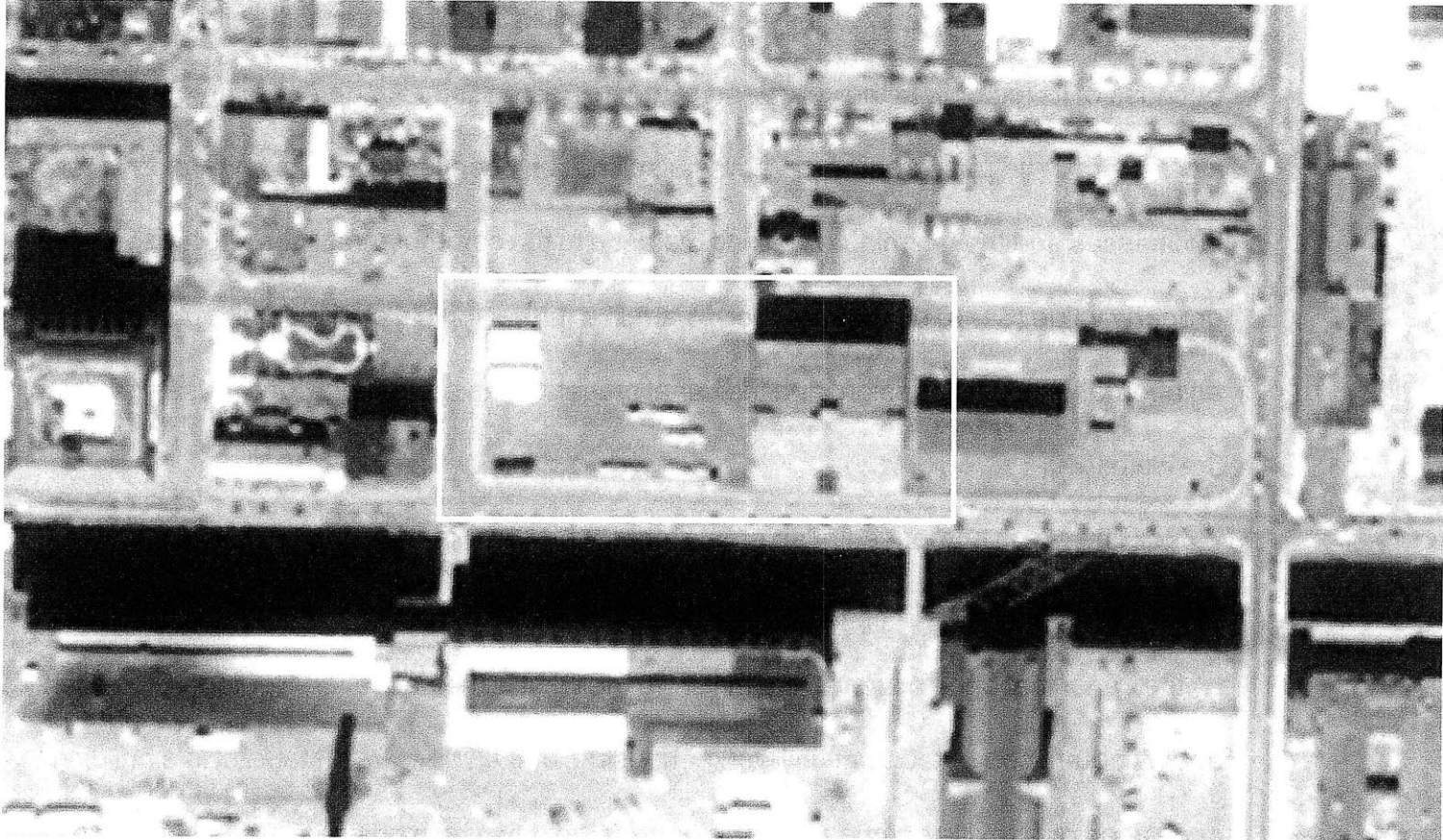
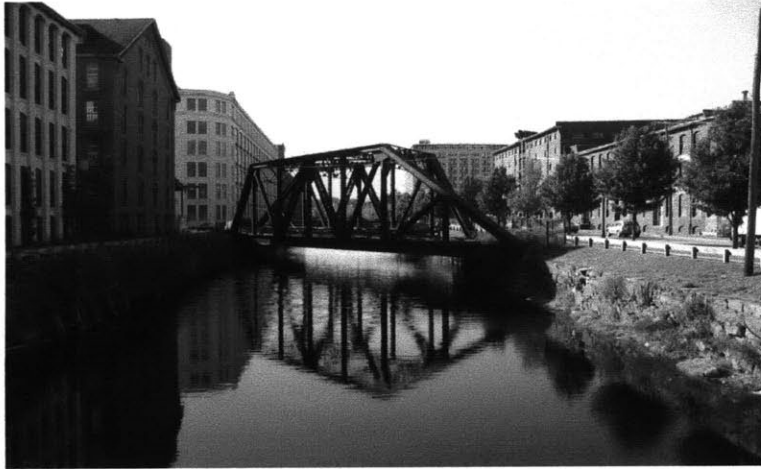


Figure 6: Aerial View of Site, Close.

The Site: Documentation

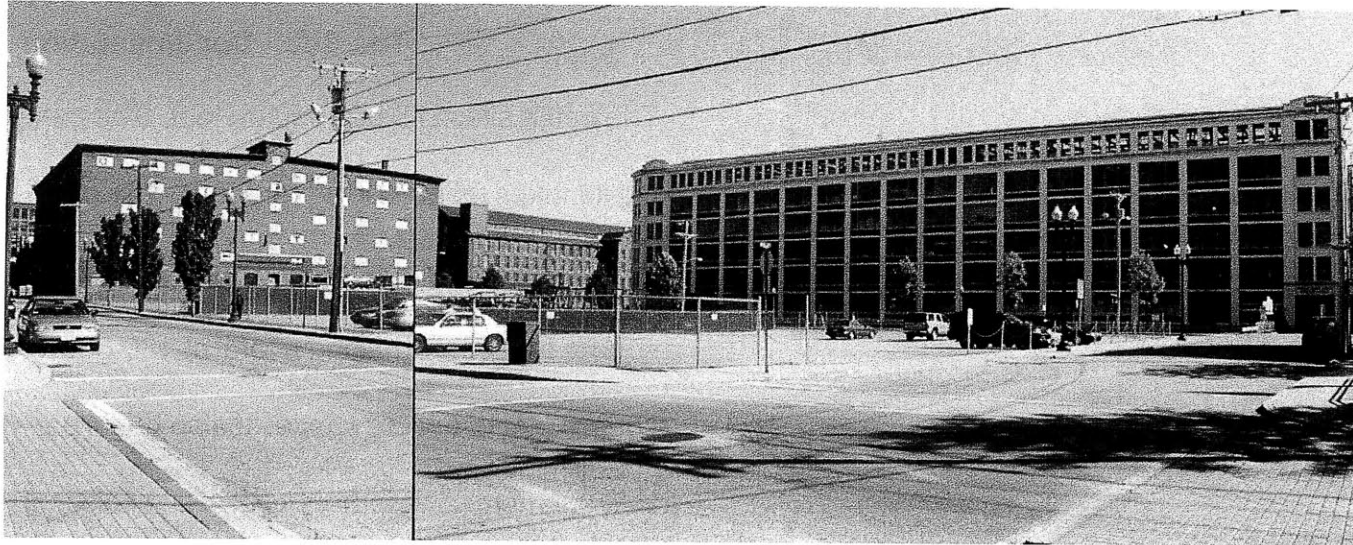
The entire site is 78,800 square feet. The parking lot takes up 50,400 square feet. The existing building is comprised of 6 stories, 21,750 square feet each, making a total of 130,500 square feet of usable space. It also has a partially submerged basement level of an additional 21,750 square feet.



Canal View leading to Site on Right.



Panorama of Site.



Northwest View of Site.



Southwest View of Site.



Existing Mill Building Exterior.



Existing Mill Building Interior.



Canal Views looking West and East.



We need to build roads, and sidewalks and parks and homes and all, but we also need to be preparing Lawrence families to take advantage of the future, through learning, saving, awareness, skill building and leadership development.

- Reviviendo! 2002 Neighborhood Summit Participant.

Final Design Scheme: Description

The thesis project began as an investigation into affordable housing design, its parameters, participants, shortcomings, and successes. The scope became more broad when it was made clear that there existed a real need in Lawrence for a program that encompassed not only housing, but other services as well. The design was developed to step in at the immigrants' point of arrival in the city, providing educational resources, a place to live, access to the arts, and most importantly, an identity for its occupants and users. It was meant to be a symbol for the diversity of Lawrence - a positive response to the negativity that abounded.

The scheme is a combination of family housing, artists' areas, and educational intervention. It is made up of both rental and owned units, artist live/work space, and classrooms. There are larger site moves: reinsertion of a previously existing axis with an extension down to the canal, using the canal as a backdrop for artistic expression and pedestrian promenade, narrowing the street along the water and allowing traffic flow in an east-west direction only, and using the architecture of the learning center as a beacon to be seen both during the day and at night from afar.

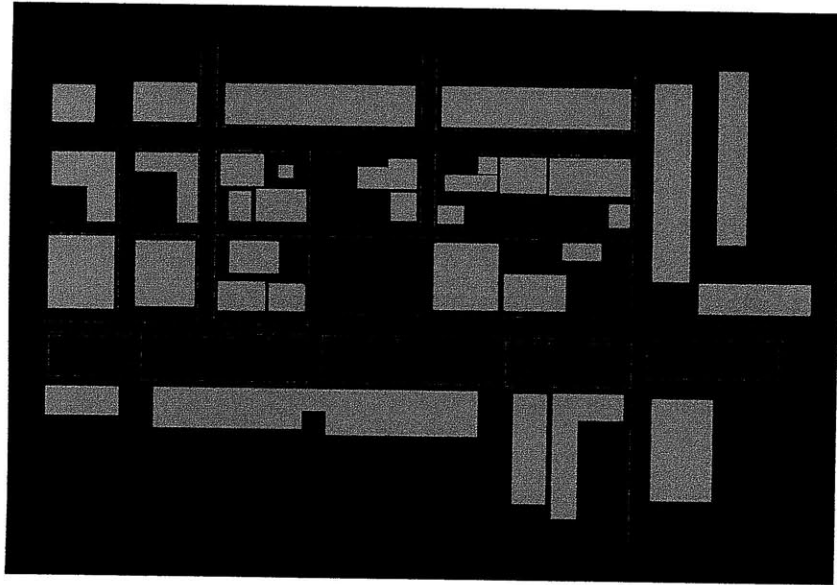


Figure Ground, Existing.

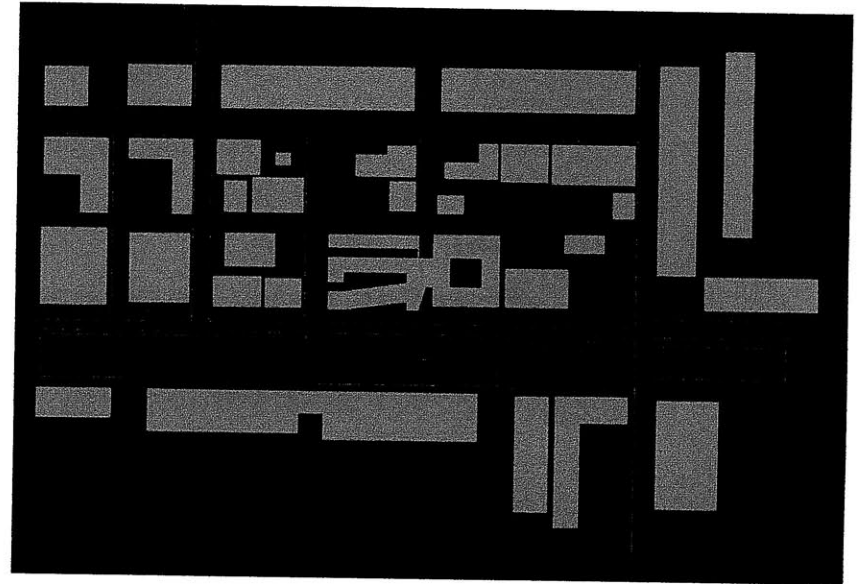
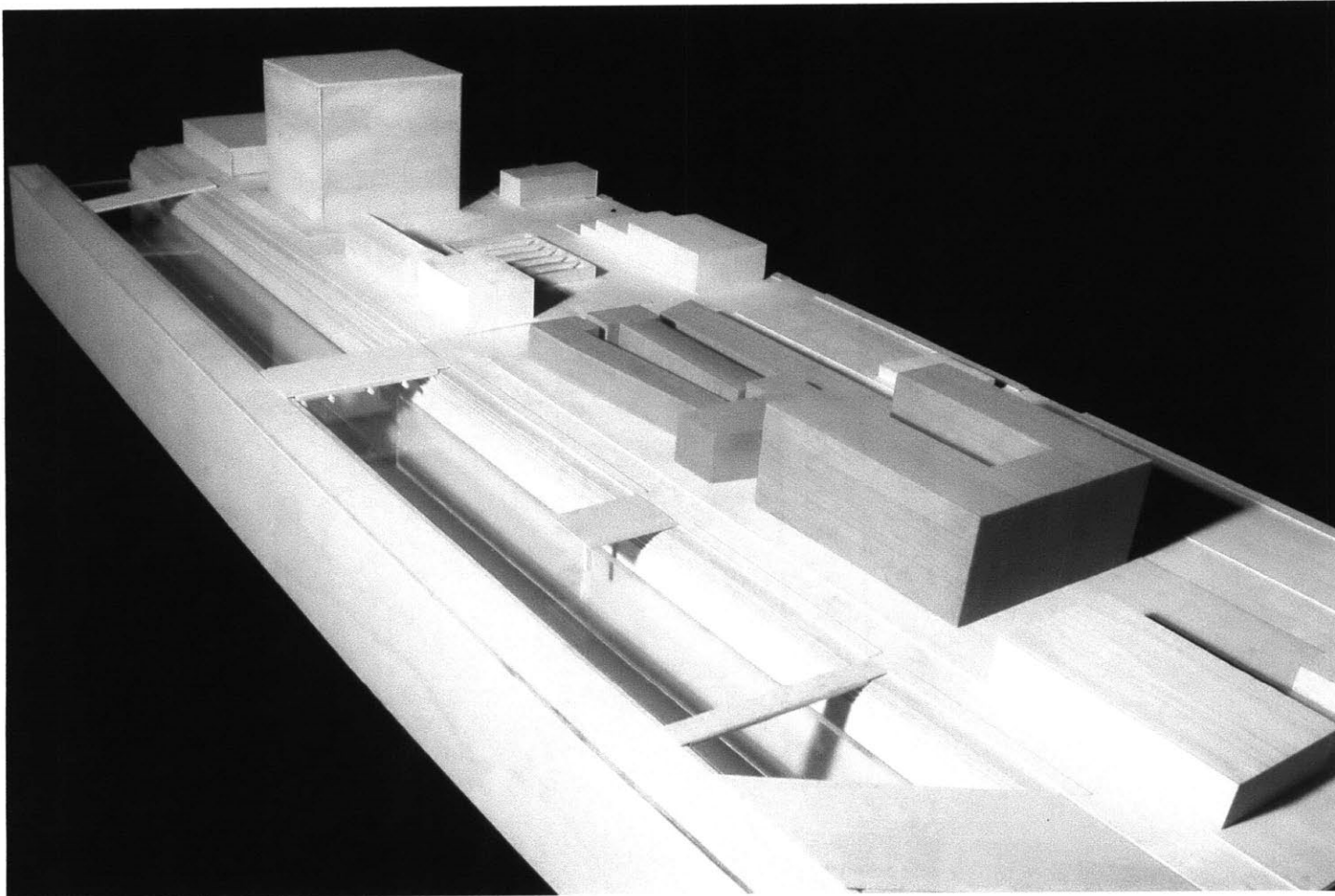
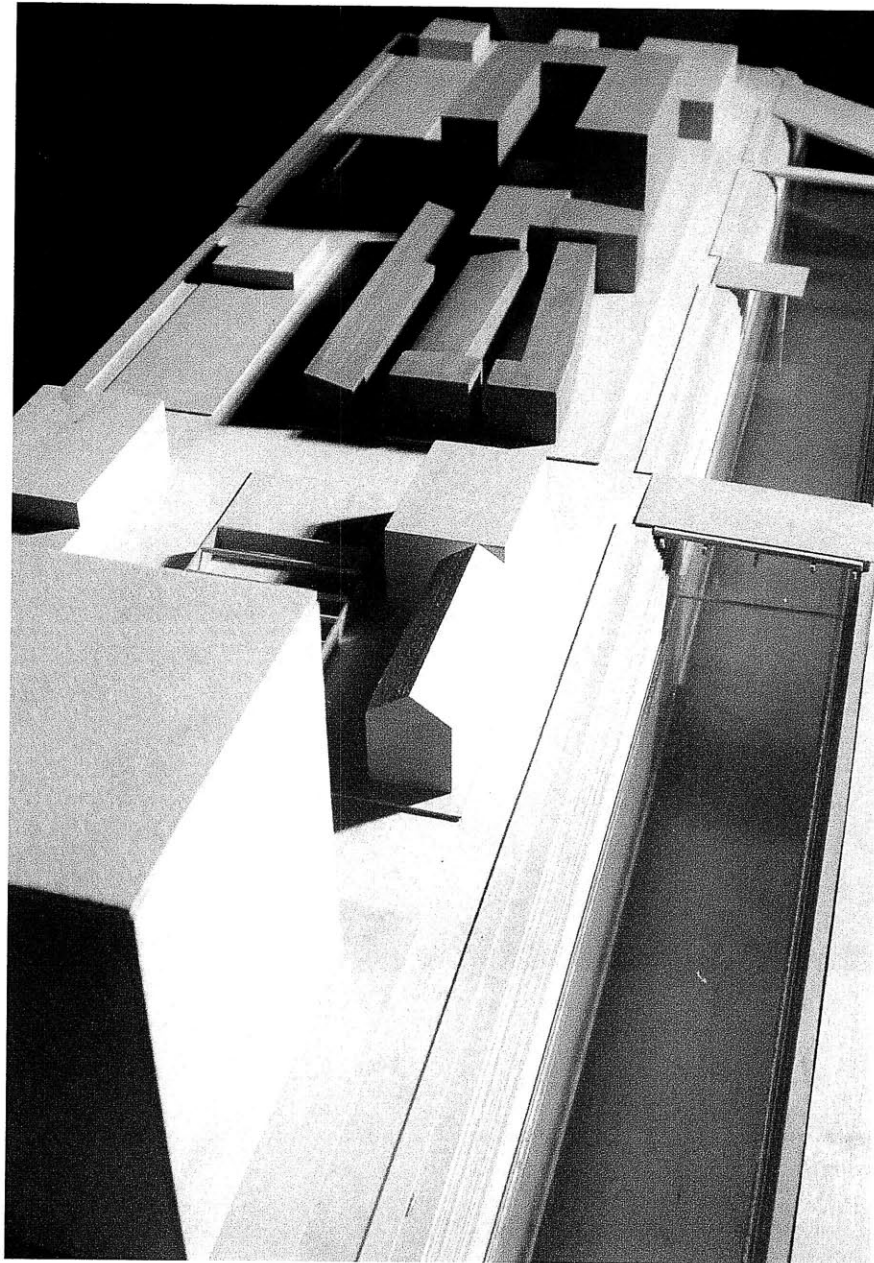


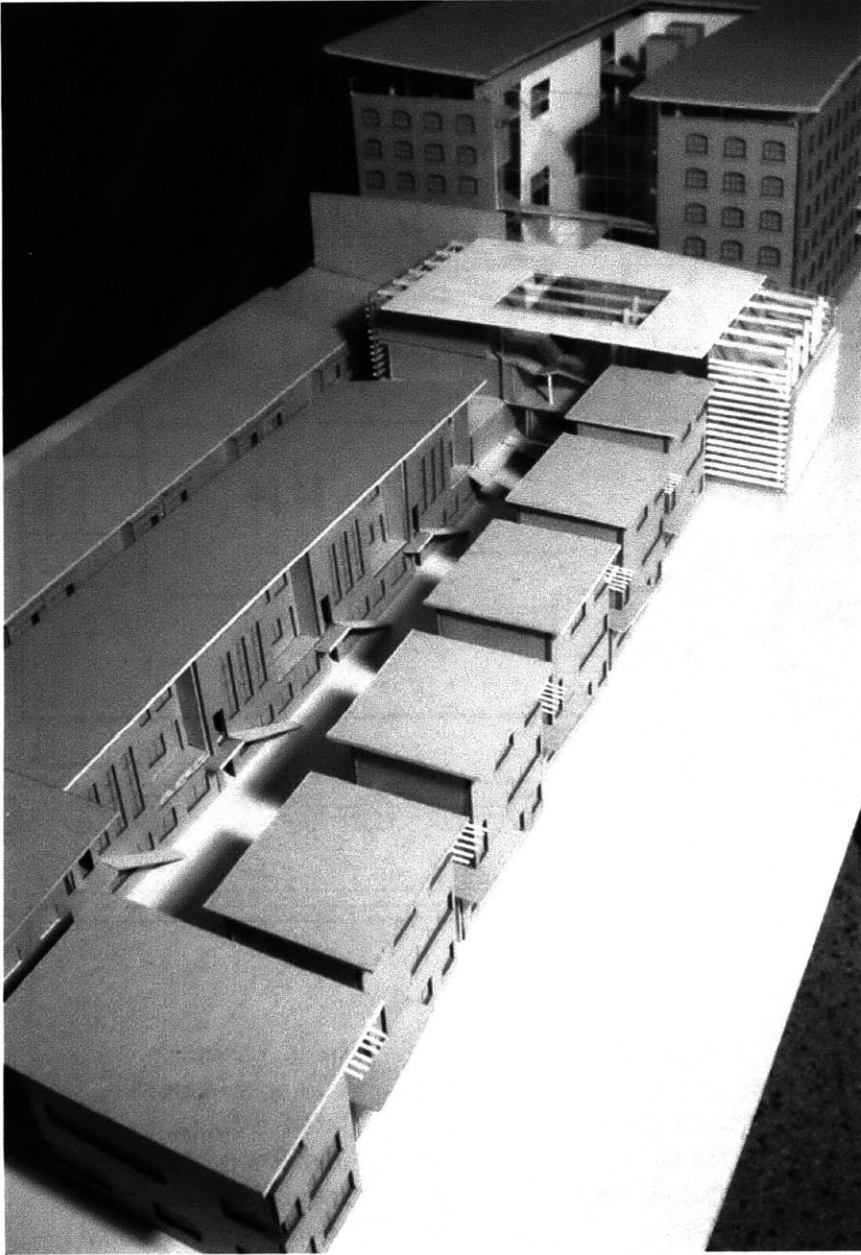
Figure Ground, with New Design.



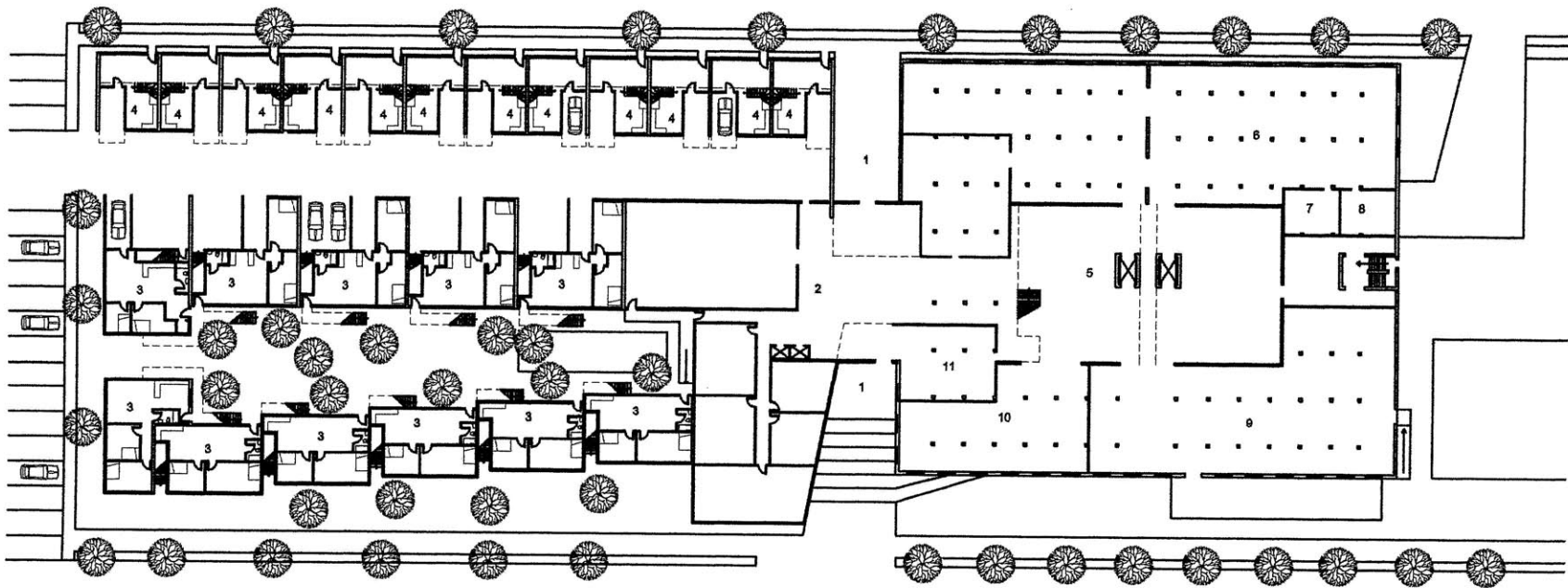
Site Model View from Southeast.

Site Model View from Southwest.





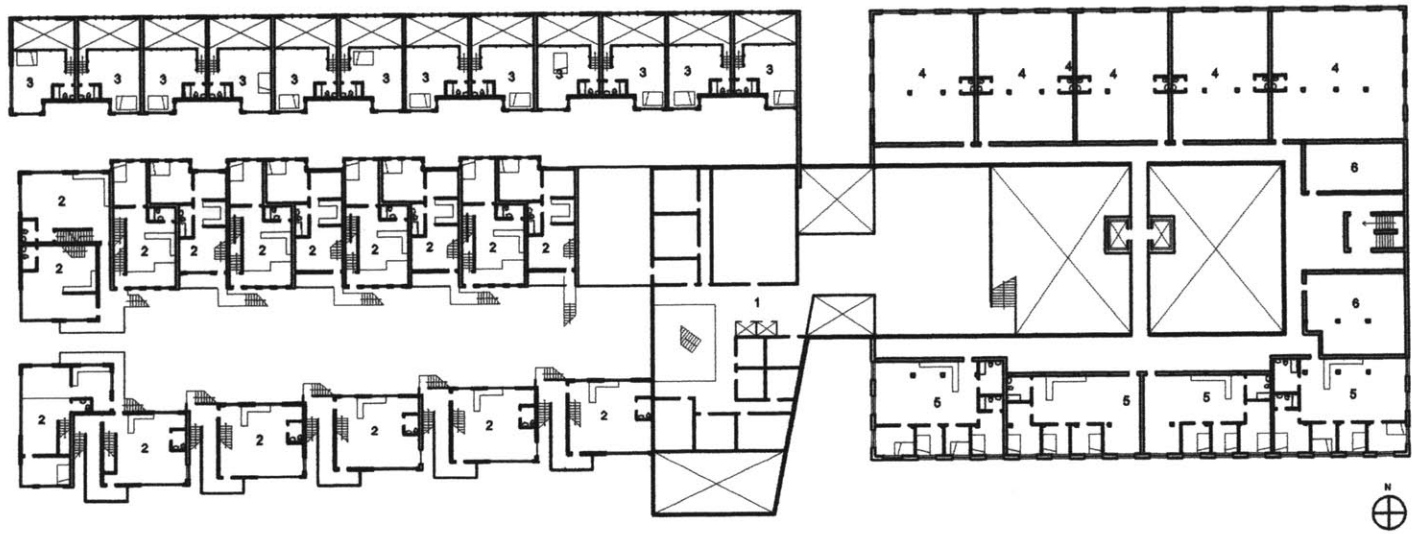
Model View from Southwest.



First Floor Plan:
Scale 1/64" = 1'0"

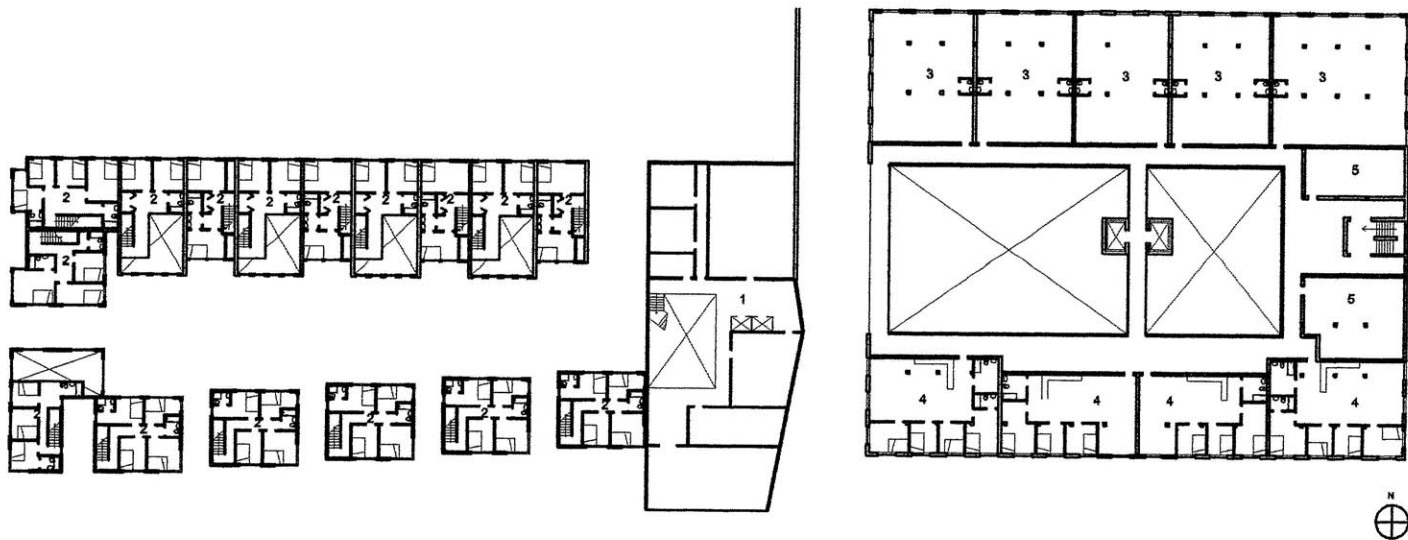
32 | description

- | | | | |
|---|---------------------------|----|----------------------|
| 1 | Public Entry | 7 | Men's Room |
| 2 | Learning Center | 8 | Women's Room |
| 3 | Family Owned Housing | 9 | Cafe/Restaurant |
| 4 | Artist Live/Work Housing | 10 | Artist Shop |
| 5 | Gallery/Performance Space | 11 | Orientation |
| 6 | Visiting Artists' Gallery | 12 | Extension Over Canal |



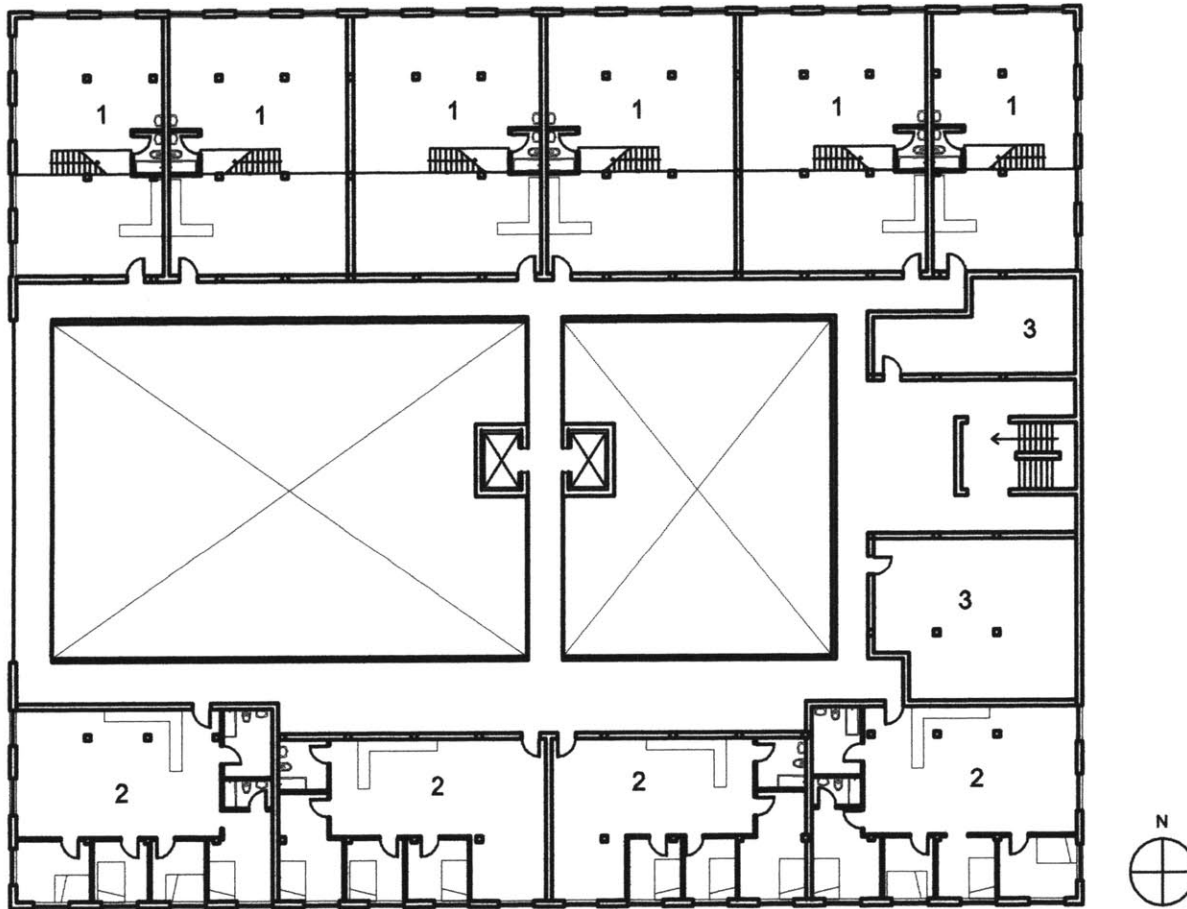
Second Floor Plan:
Scale 1/64" = 1'0"

- 1 Learning Center
- 2 Family Owned Housing
- 3 Artist Live/Work Space
- 4 Artist Studio Rental Space
- 5 Family Rental Units
- 6 Laundry/Storage



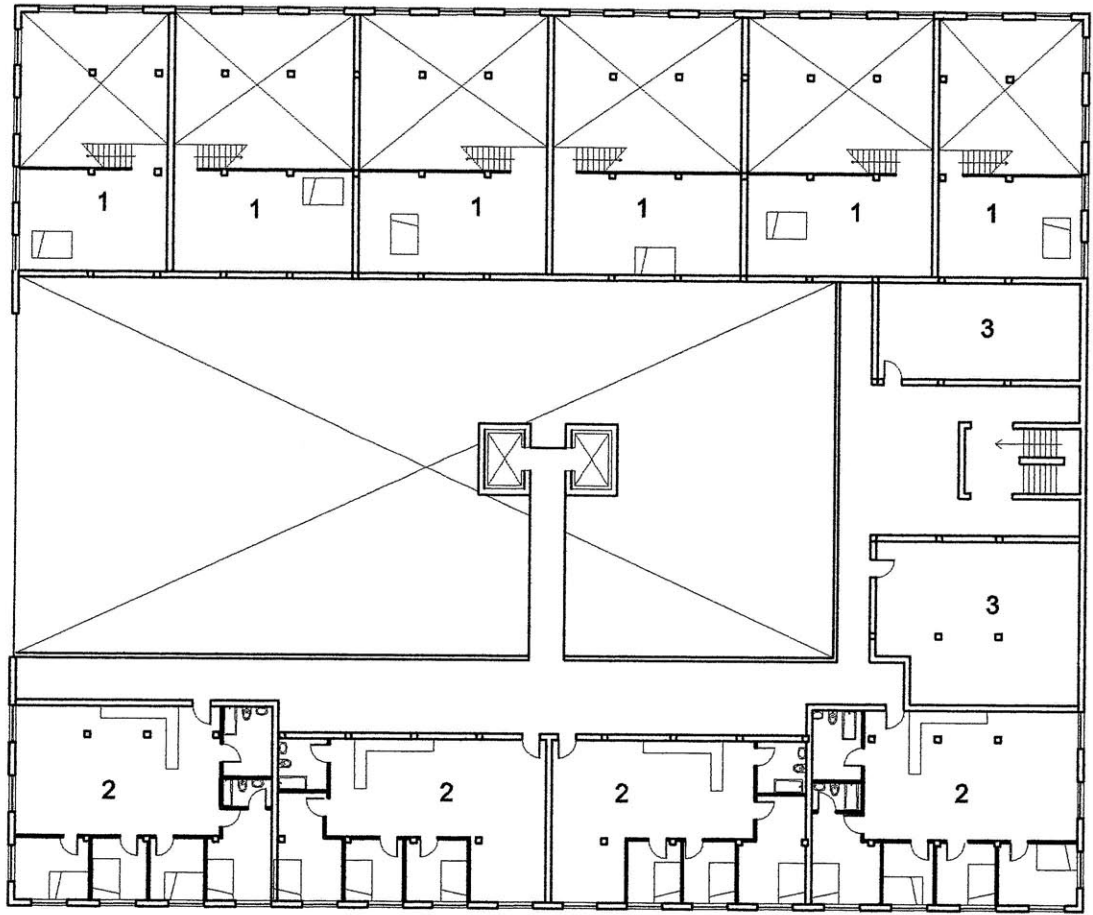
Third Floor Plan:
Scale 1/64" = 1'0"

- 1 Learning Center
- 2 Family Owned Housing
- 3 Artist Studio Rental Space
- 4 Family Rental Units
- 5 Laundry/Storage



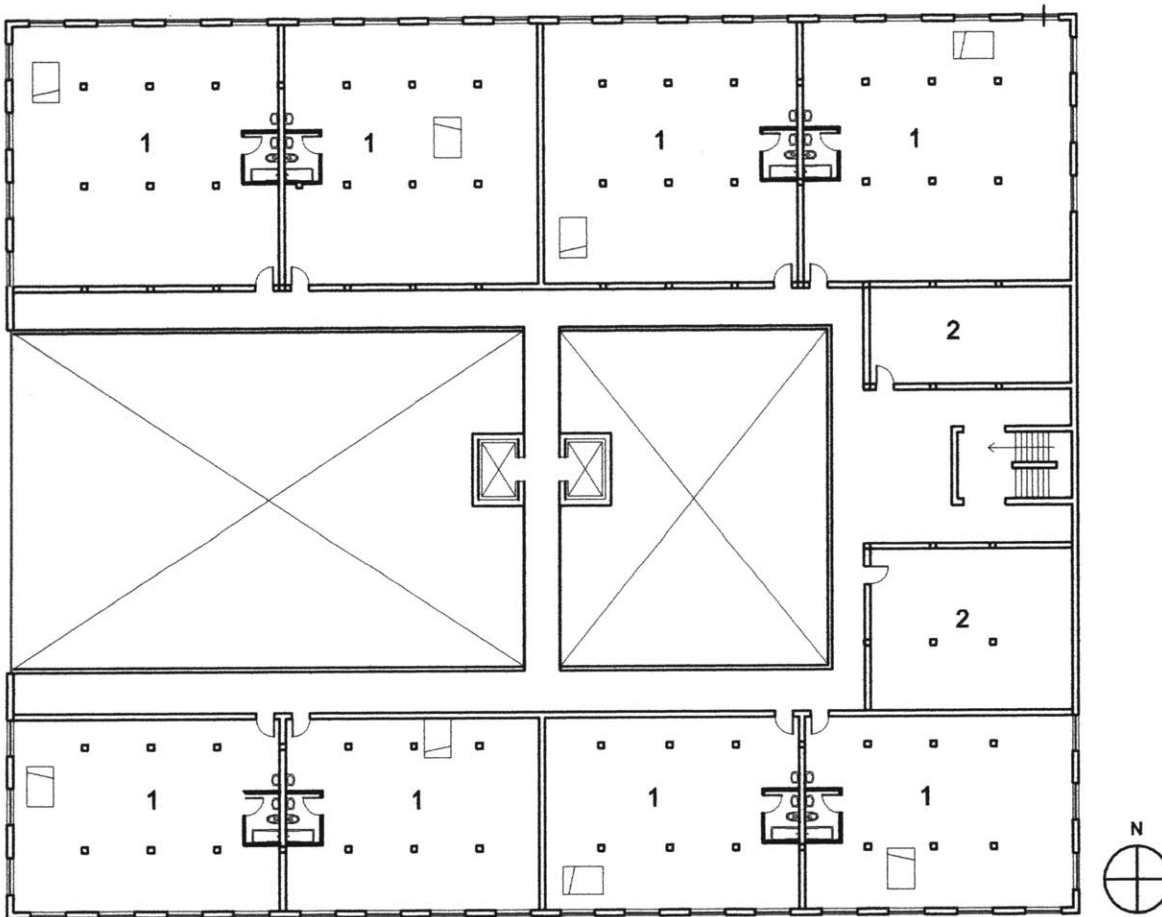
Fourth Floor Plan:
Scale 1/32' = 1'0"

- 1 Visiting Artist Duplexes
- 2 Family Rental Units
- 3 Laundry/Storage



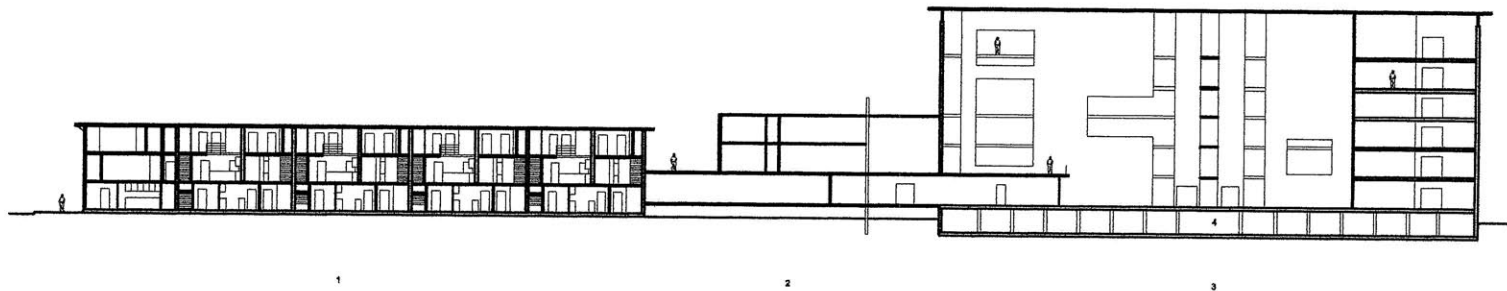
36 | description

Fifth Floor Plan:
 Scale 1/32" = 1'0"
 1 Visiting Artist Duplexes
 2 Family Rental Units
 3 Laundry/Storage



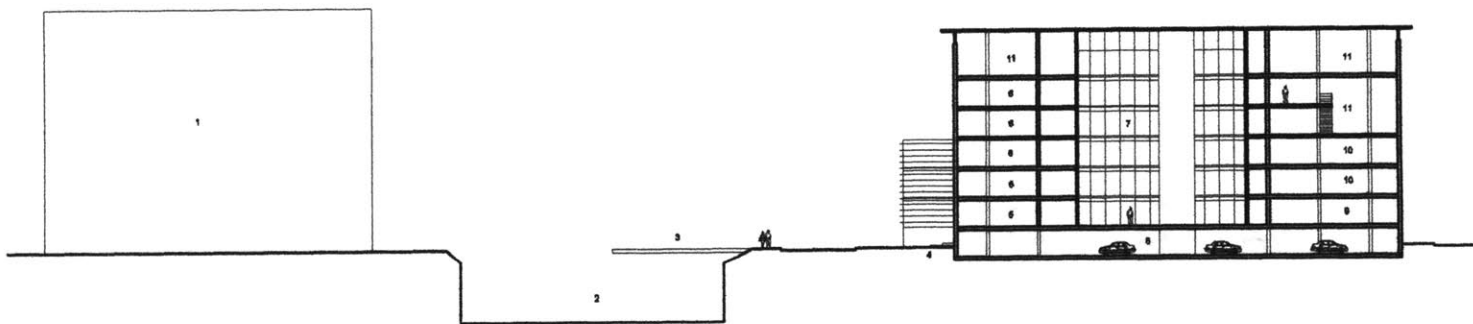
Sixth Floor Plan:
Scale 1/32" = 1'0"

- 1 Visiting Artist Units
- 2 Laundry/Storage



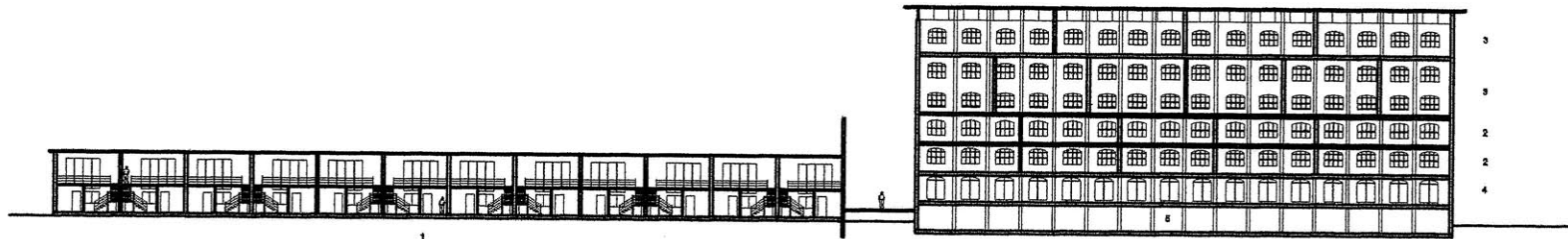
Longitudinal Section (West-East)
Scale: 1/64" = 1'0"

- 1 Family Owned Housing
- 2 Learning Center
- 3 Atrium Space
- 4 Underground Parking



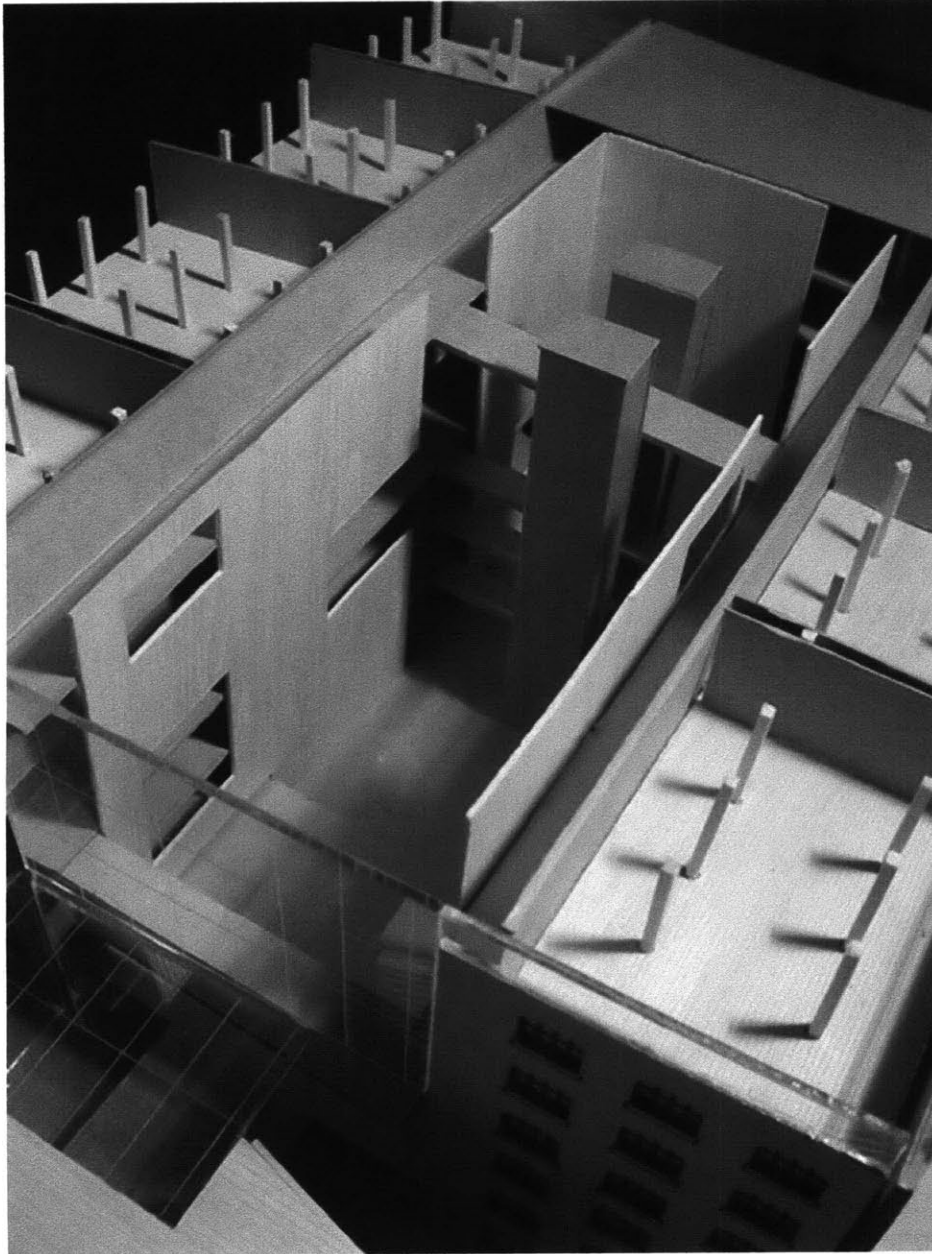
Cross Section (South-North)
Scale 1/64" = 1'0"

- | | | | |
|---|------------------------|----|----------------------------|
| 1 | Existing Mill Building | 6 | Family Rental Housing |
| 2 | Canal | 7 | Atrium |
| 3 | Extension of Axis | 8 | Underground Parking |
| 4 | Learning Center | 9 | Gallery Space |
| 5 | Artist Shop | 10 | Artist Studio Rental Space |
| | | 11 | Visiting Artist Housing |

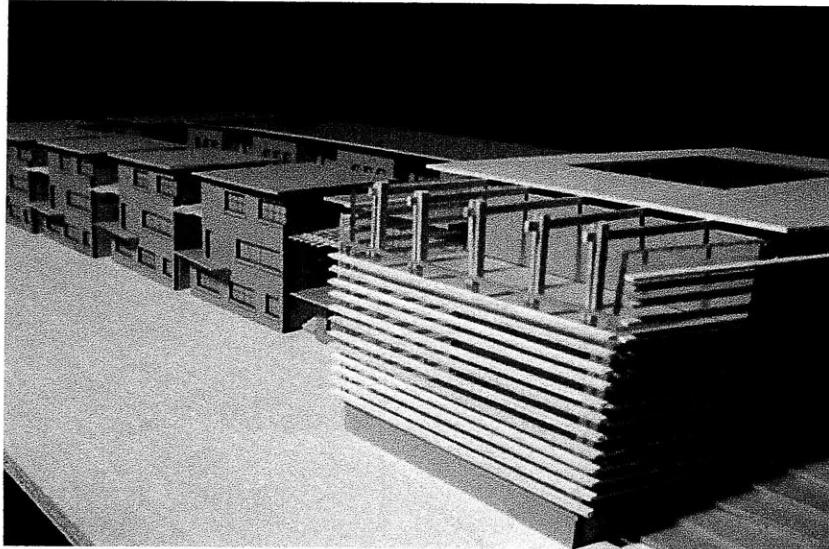


Longitudinal Section (North Side):
Scale 1/64" = 1'0"

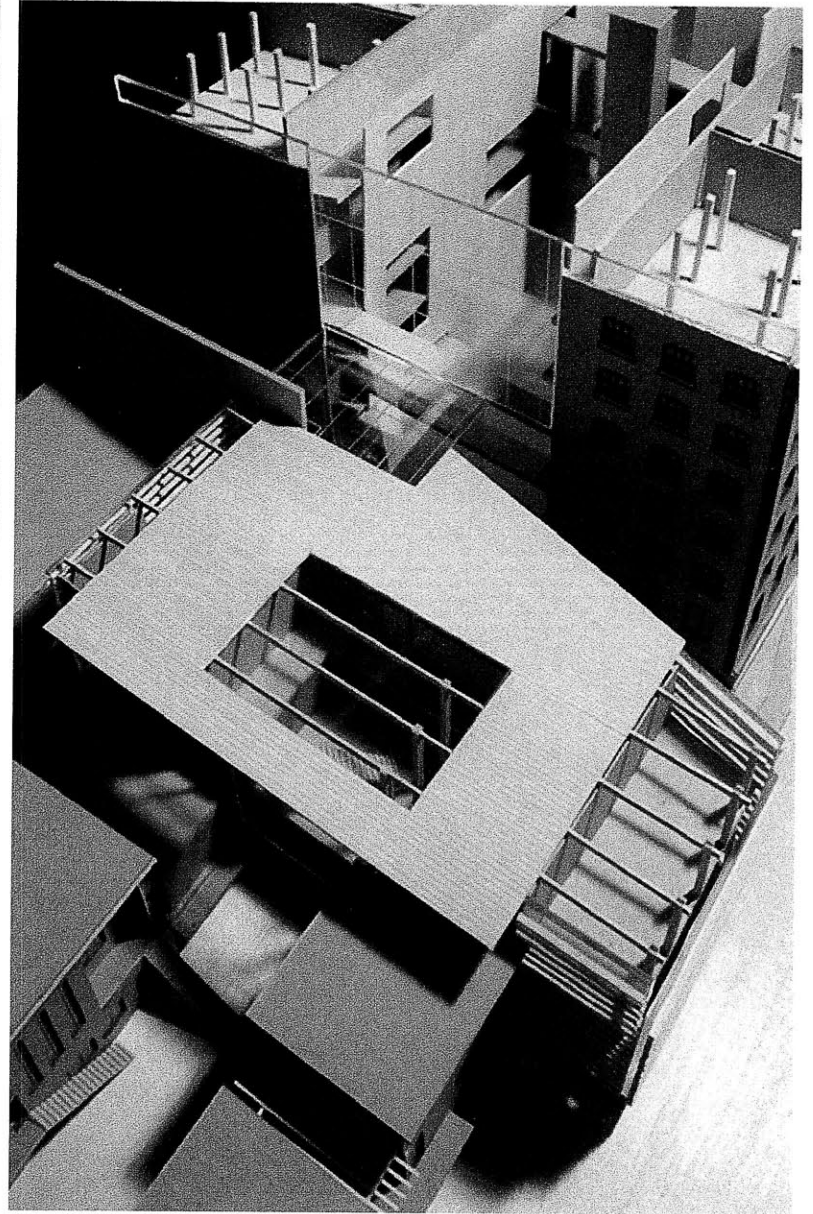
- 1 Artist Live/Work Homes
- 2 Artist Studio Rental Space
- 3 Visiting Artist Units
- 4 Gallery Space
- 5 Parking



View of Atrium with Sculptural Wood Wall.



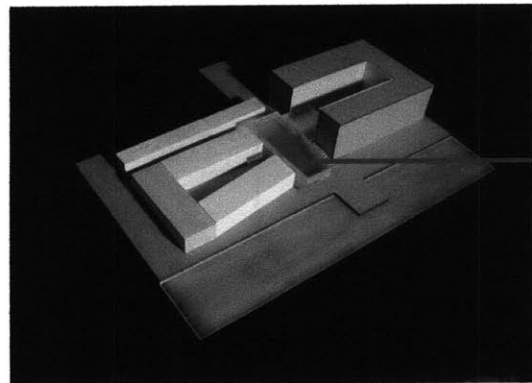
Louvers and Protrusion of Learning Center Facade.



Model View of Learning Center Intervention
from the Southwest.

Learning Center

The heart of the project is the Learning Center. This is new construction, inserted into the converted mill building. It extends out beyond the facade of existing and new housing units, making its presence felt along the waterway. The Center also serves to reinforce the north-south axis, and the reinsertion of the passageway down to the canal. The exterior is made of wooden louvers that provide both privacy for the classes going on inside, and visual interest on the facade for pedestrians. An exterior roof deck on the south side is used for functions. At night, the Center becomes a glowing glass box that acts as a beacon and symbol for the educational services inside.

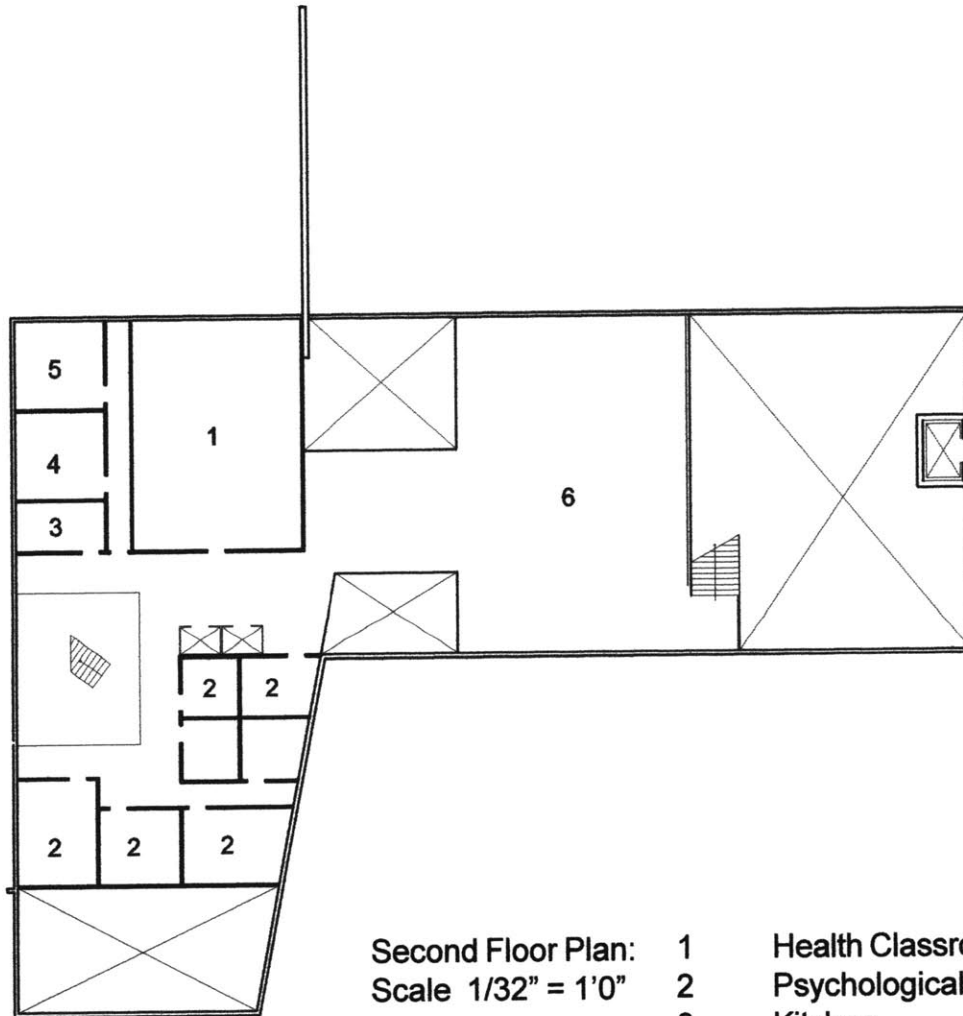


Learning Center Component



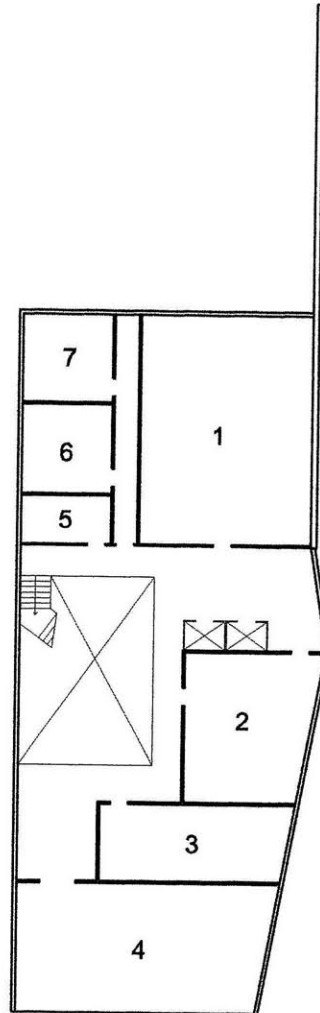
First Floor Plan:
Scale 1/32" = 1'0"

- | | | | |
|---|-----------------------|----|----------------------------|
| 1 | GED Classroom | 6 | Daycare Center |
| 2 | Citizenship Classroom | 7 | Computer Classroom |
| 3 | Conference Room | 8 | Adult/Children Artspace |
| 4 | Family Asset Building | 9 | Gallery/Performance Space |
| 5 | ESL Classroom | 10 | Orientation/Administration |
| | | 11 | Artist Shop |



Second Floor Plan:
Scale 1/32" = 1'0"

- 1 Health Classroom
- 2 Psychological Counseling
- 3 Kitchen
- 4 Women's Room
- 5 Men's Room
- 6 Atrium Lounge Space

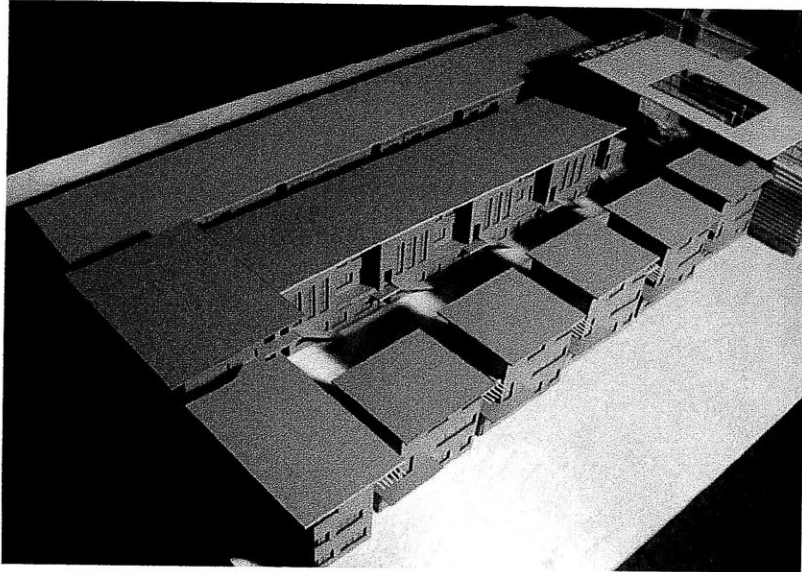


Third Floor Plan:
Scale 1/32" = 1'0"

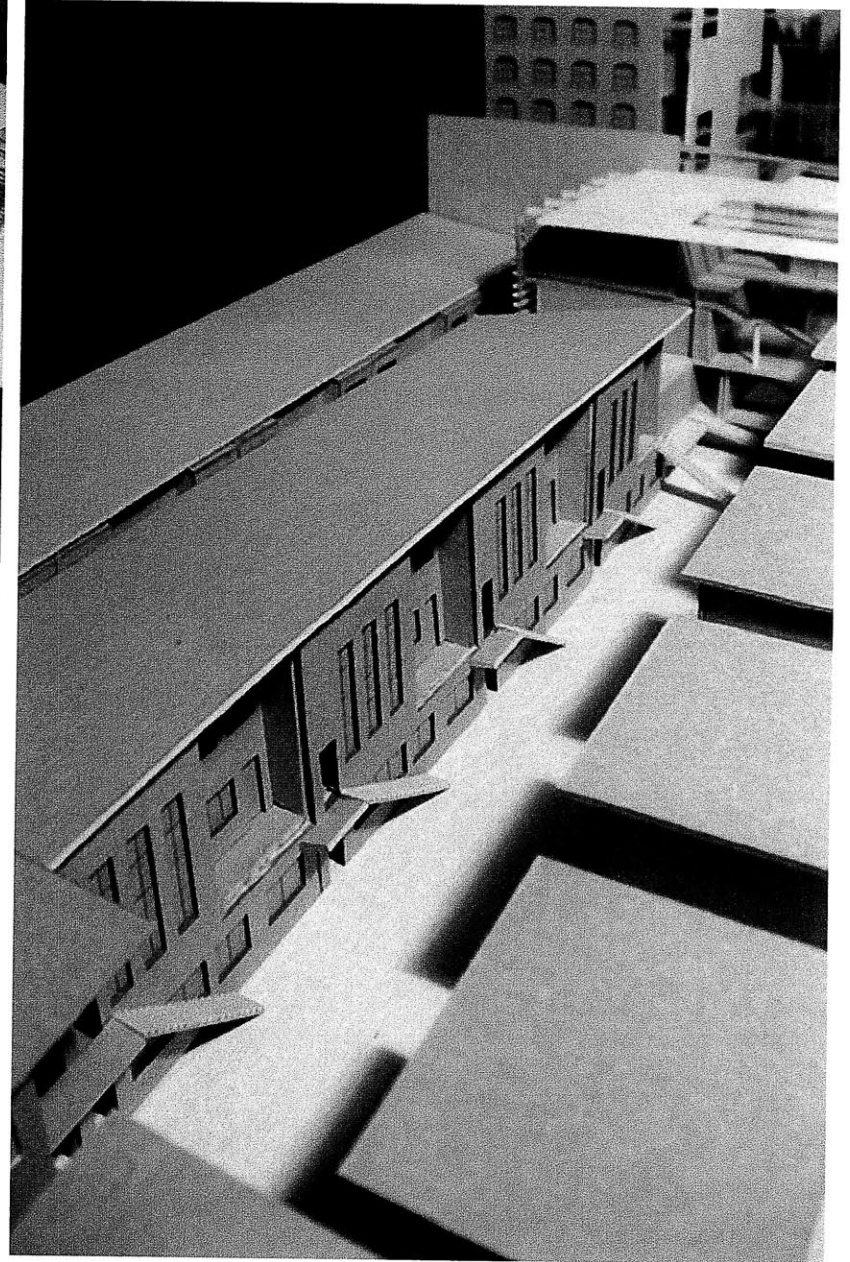
- 1 Learning Center Administration
- 2 Housing Office
- 3 Artist Selection Office
- 4 Roof Terrace
- 5 Kitchen
- 6 Women's Room
- 7 Men's Room



Views of Learning Center Interior from Housing Courtyard.



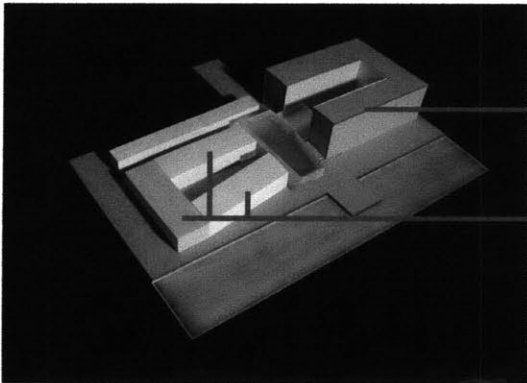
Model View of Family Housing.



Model View of Owned Housing Courtyard.

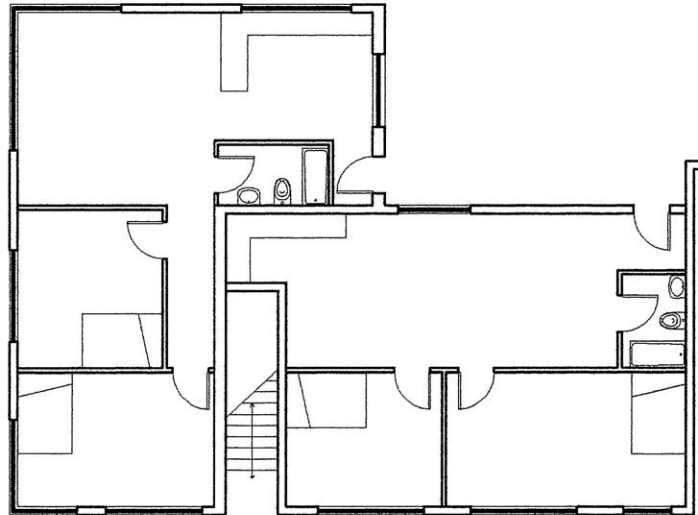
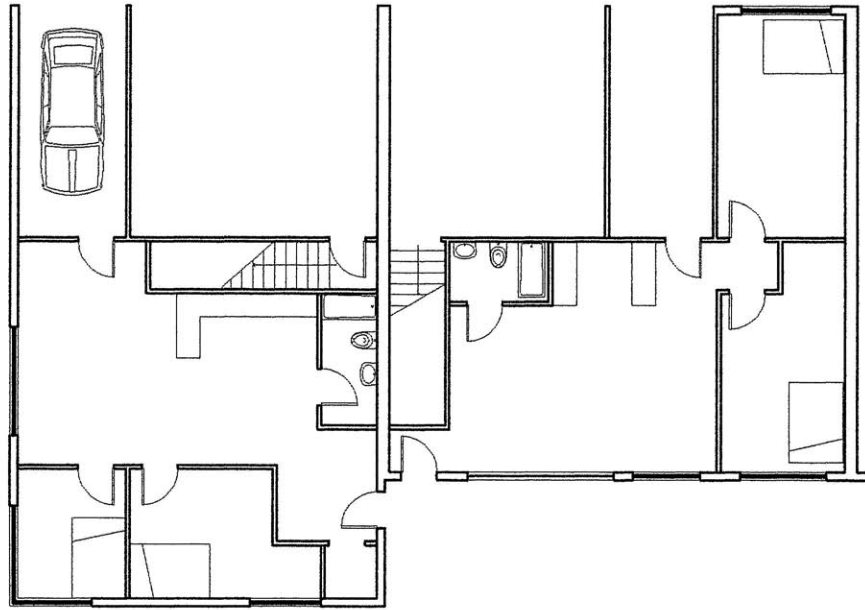
Family Housing

Family Housing takes on two roles - rental and ownership. Within the mill conversion, there are eight 3-bedroom rental units, and eight 4-bedroom rental units. These are provided specifically for large families first starting out. On the empty lot, townhouses stacked over flats are owner-occupied. The ten 3-bedroom townhomes and seven 4-bedroom townhomes are situated around an exterior courtyard designated for their private use, creating a neighborhood feel. The 11 ground floor flats are rented out by the owners to provide an additional source of income. There is parking both on the street and tucked under several units. The owned housing is presented as the example of the successes of the learning center graduates in family asset building and finance.



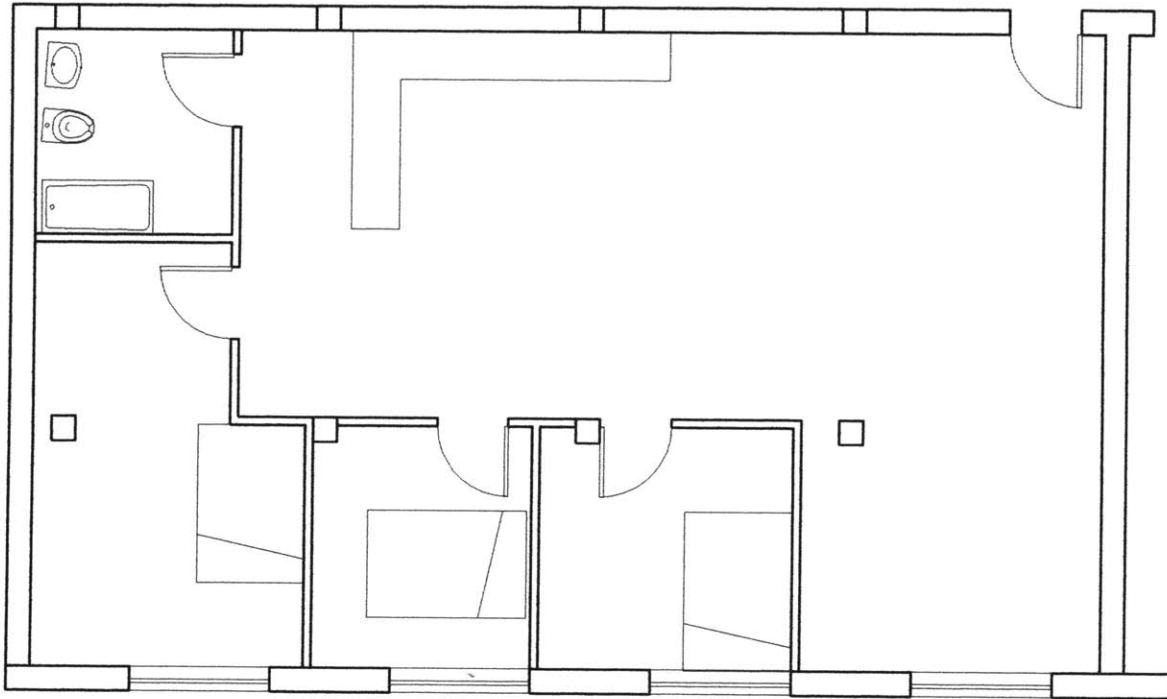
Family Rental Housing

Family Ownership Housing

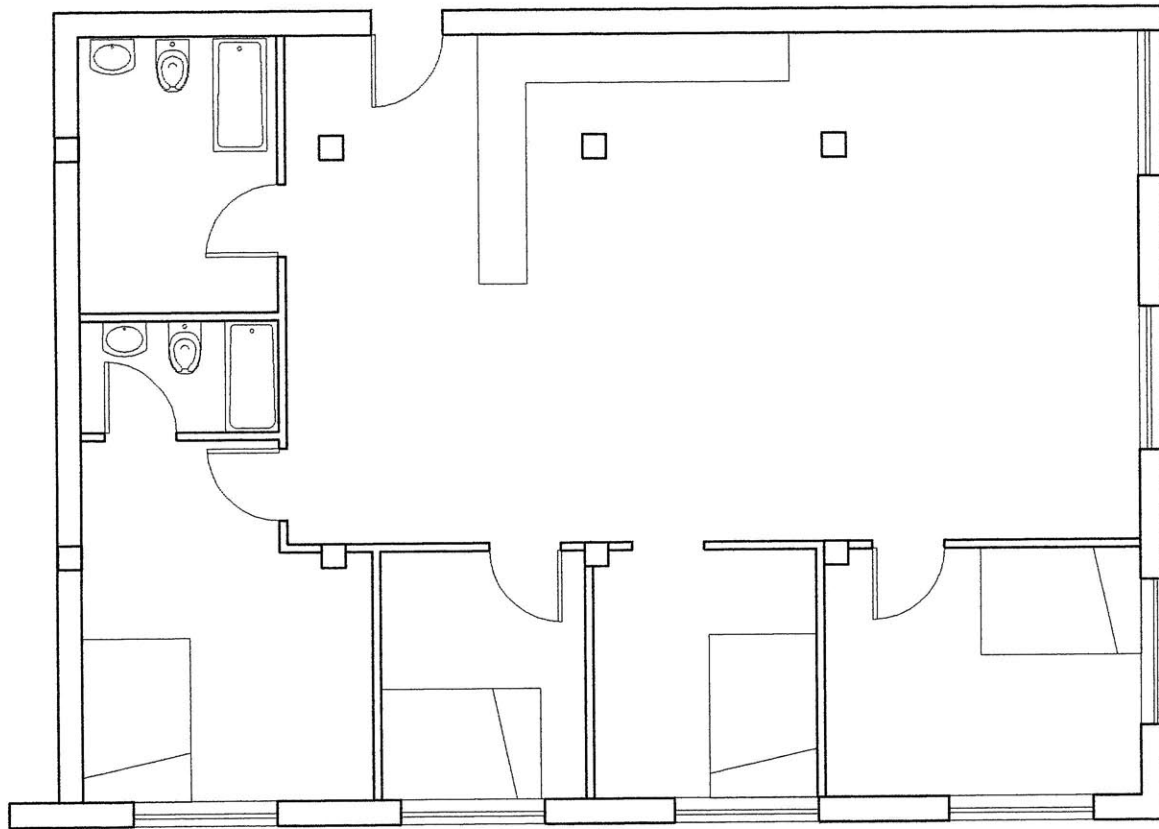


50 | family housing

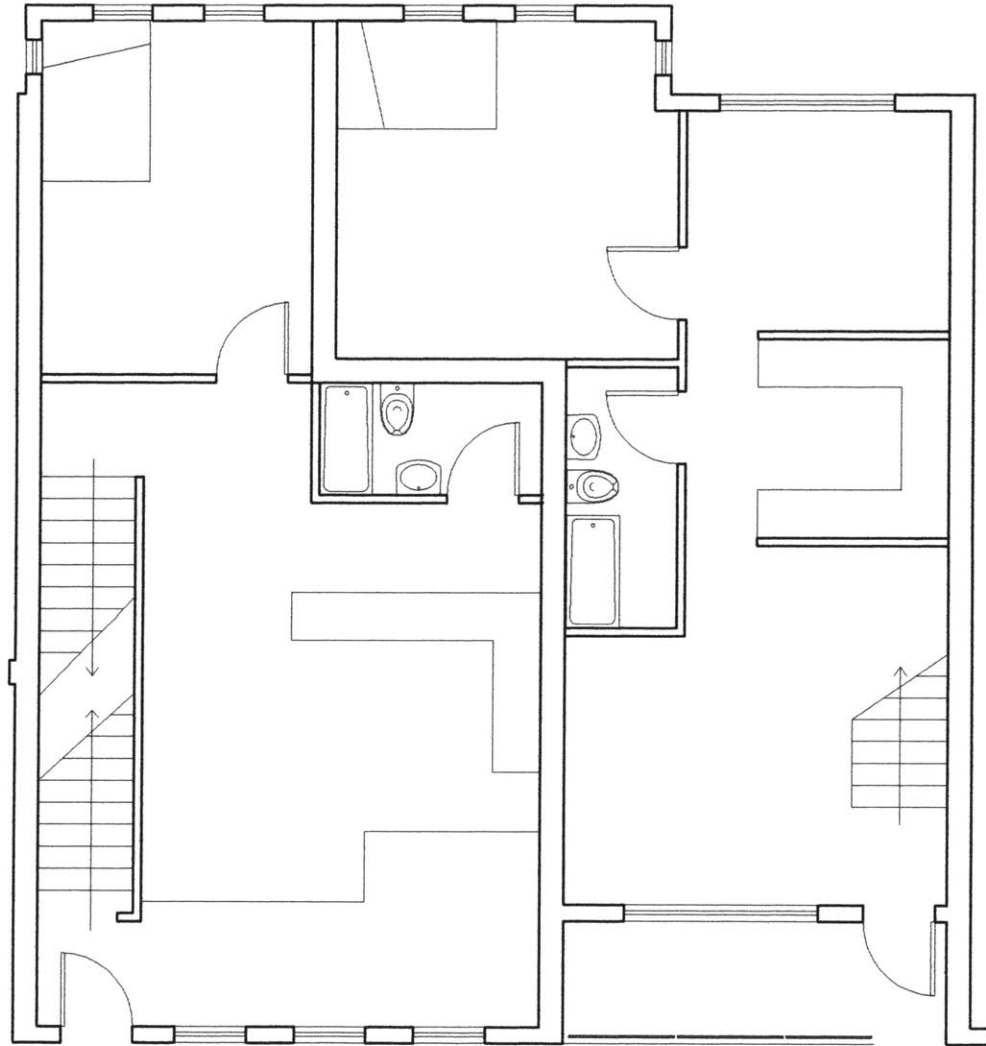
2-Bedroom Rental Unit Plans:
Scale 1/16" = 1'0"



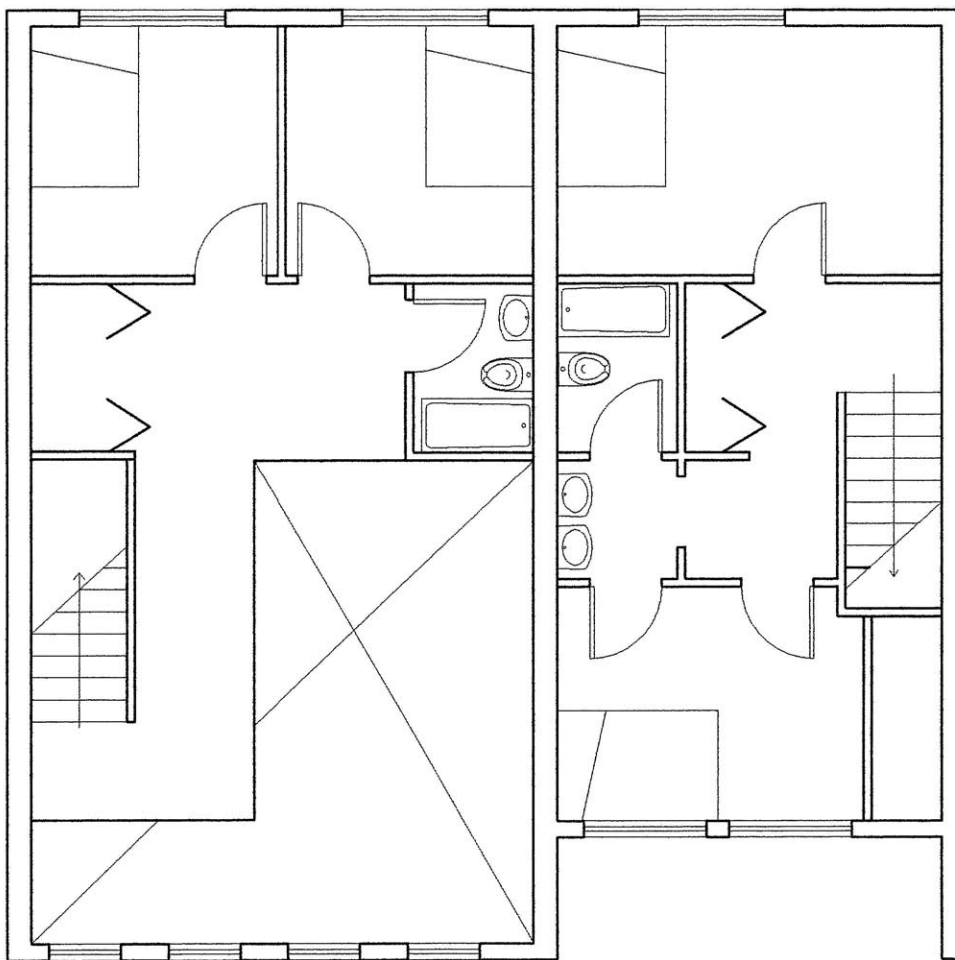
3-Bedroom Rental Unit Plan:
Scale 1/8" = 1'0"

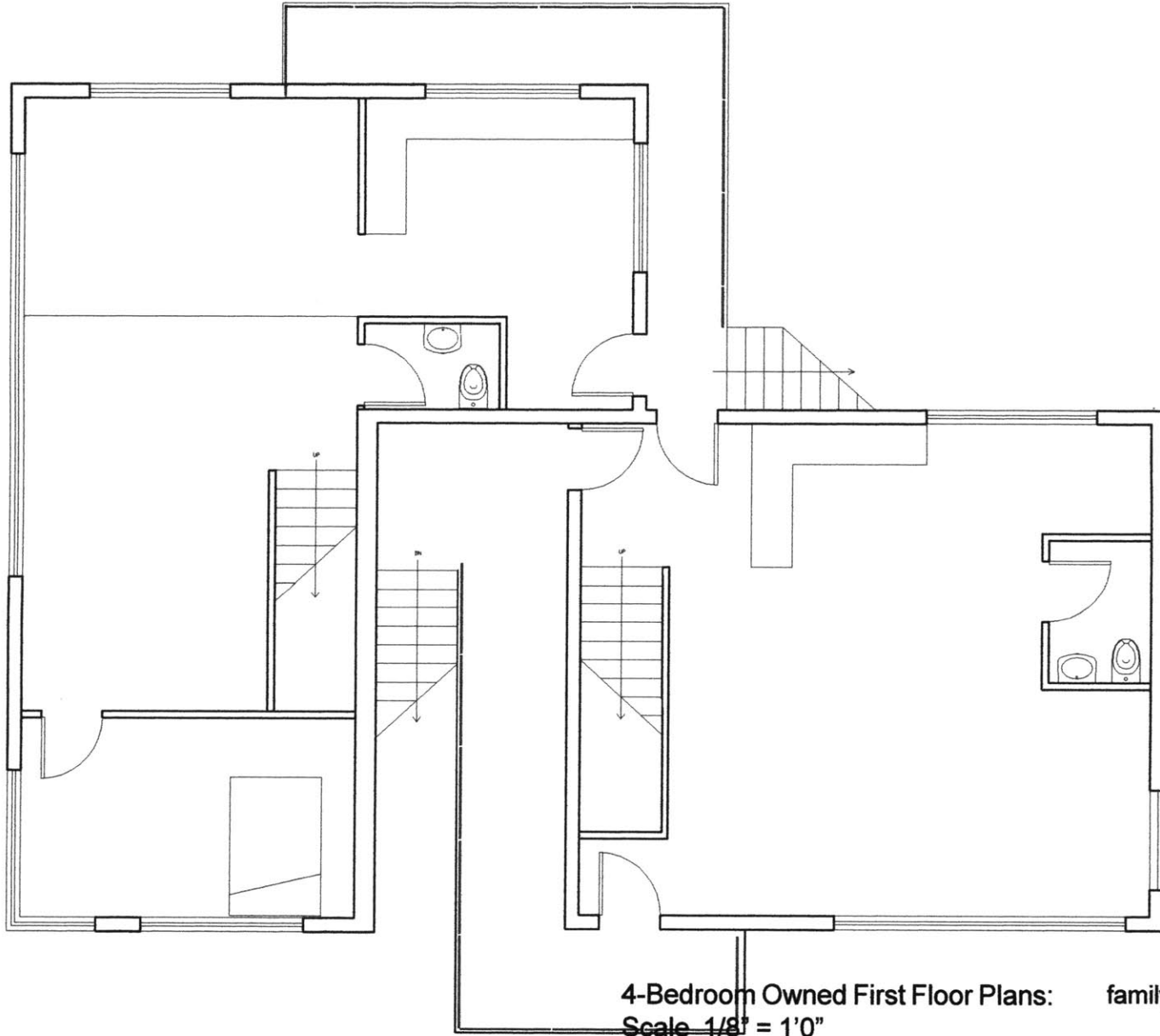


4-Bedroom Rental Unit Plan:
Scale 1/8" = 1'0"

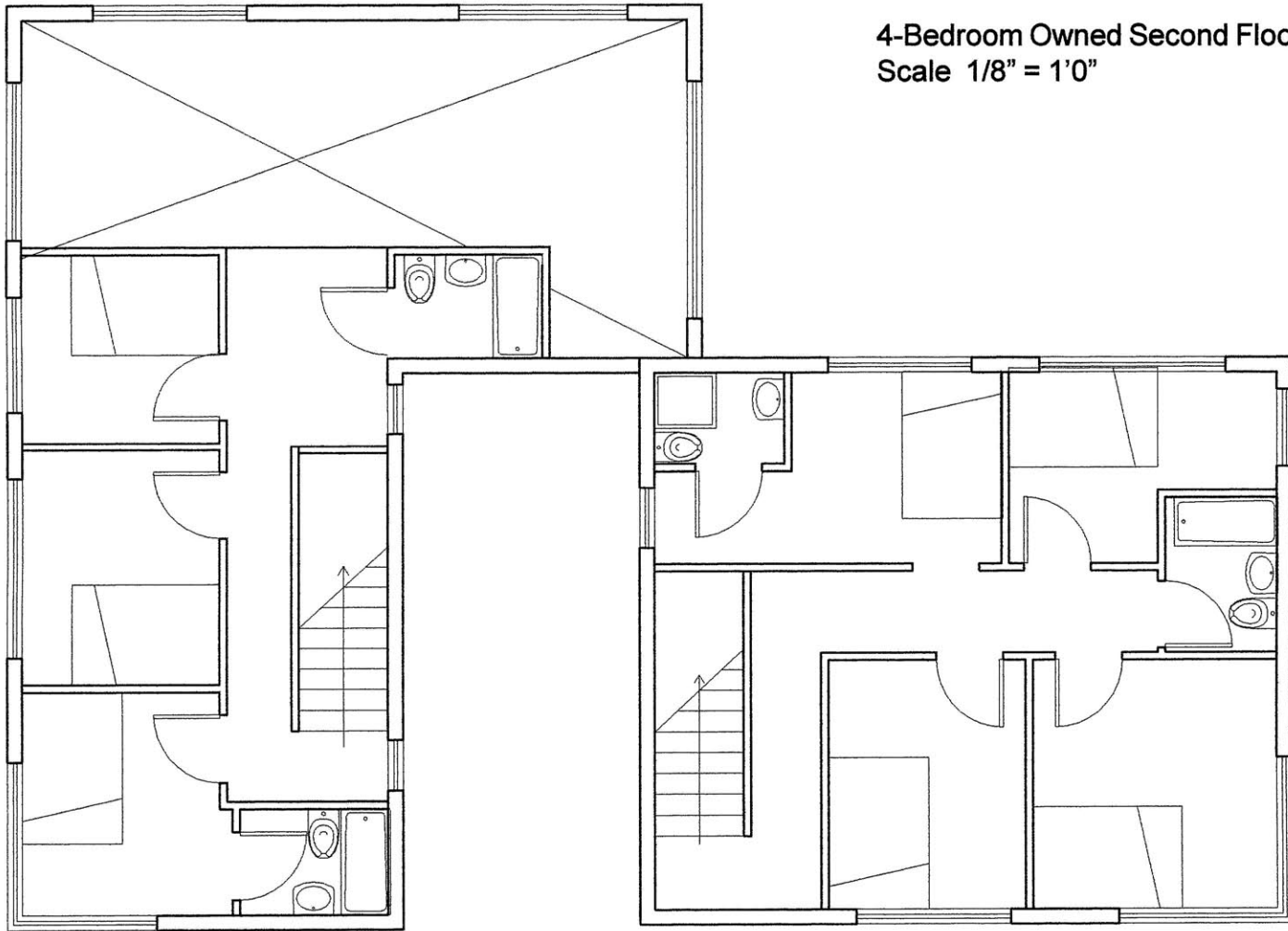


3-Bedroom Owned First Floor Plans:
Scale 1/8" = 1'0"

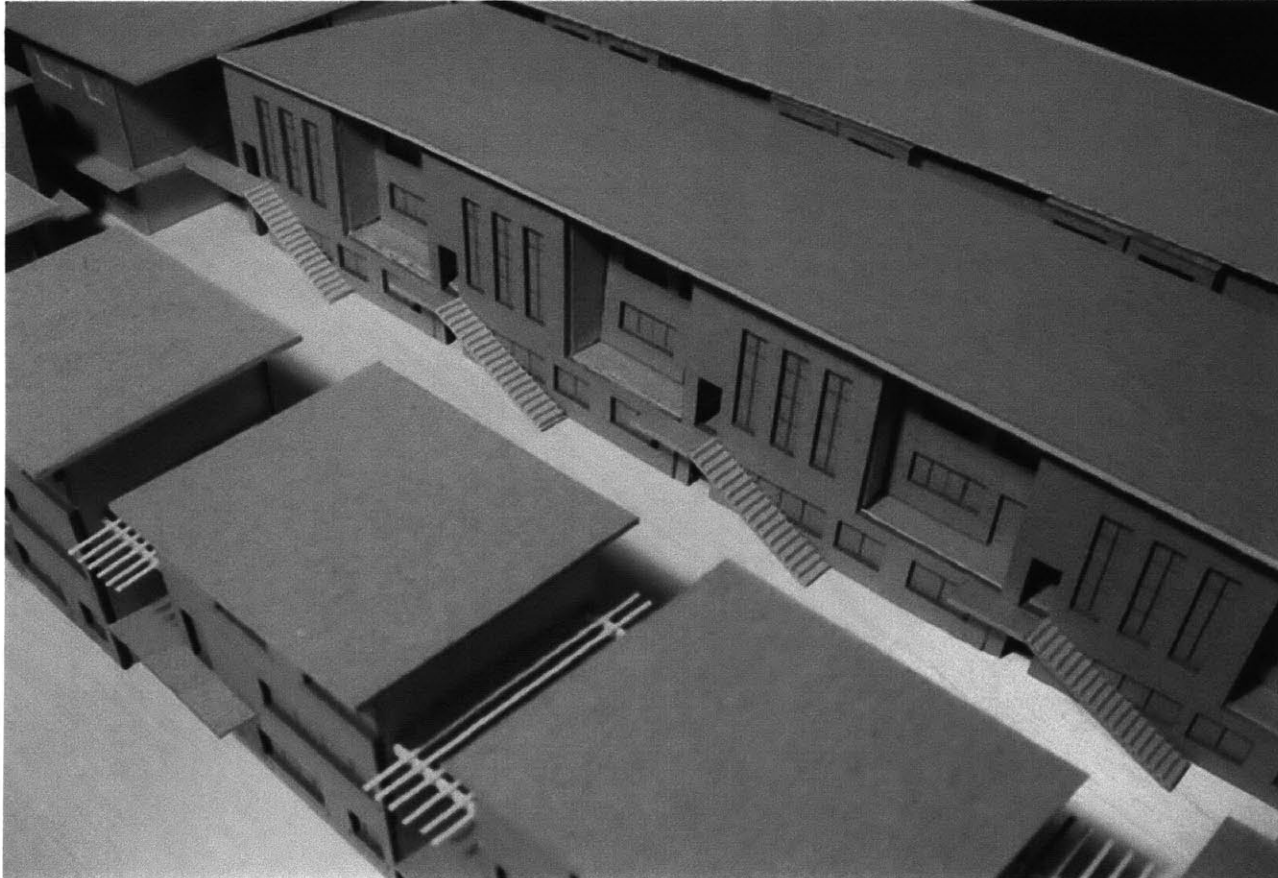




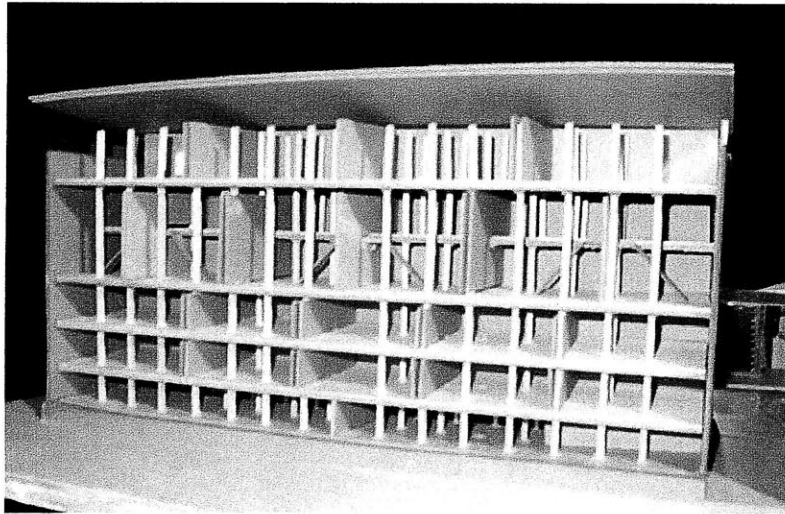
4-Bedroom Owned First Floor Plans: family housing | 55
Scale 1/8" = 1'0"



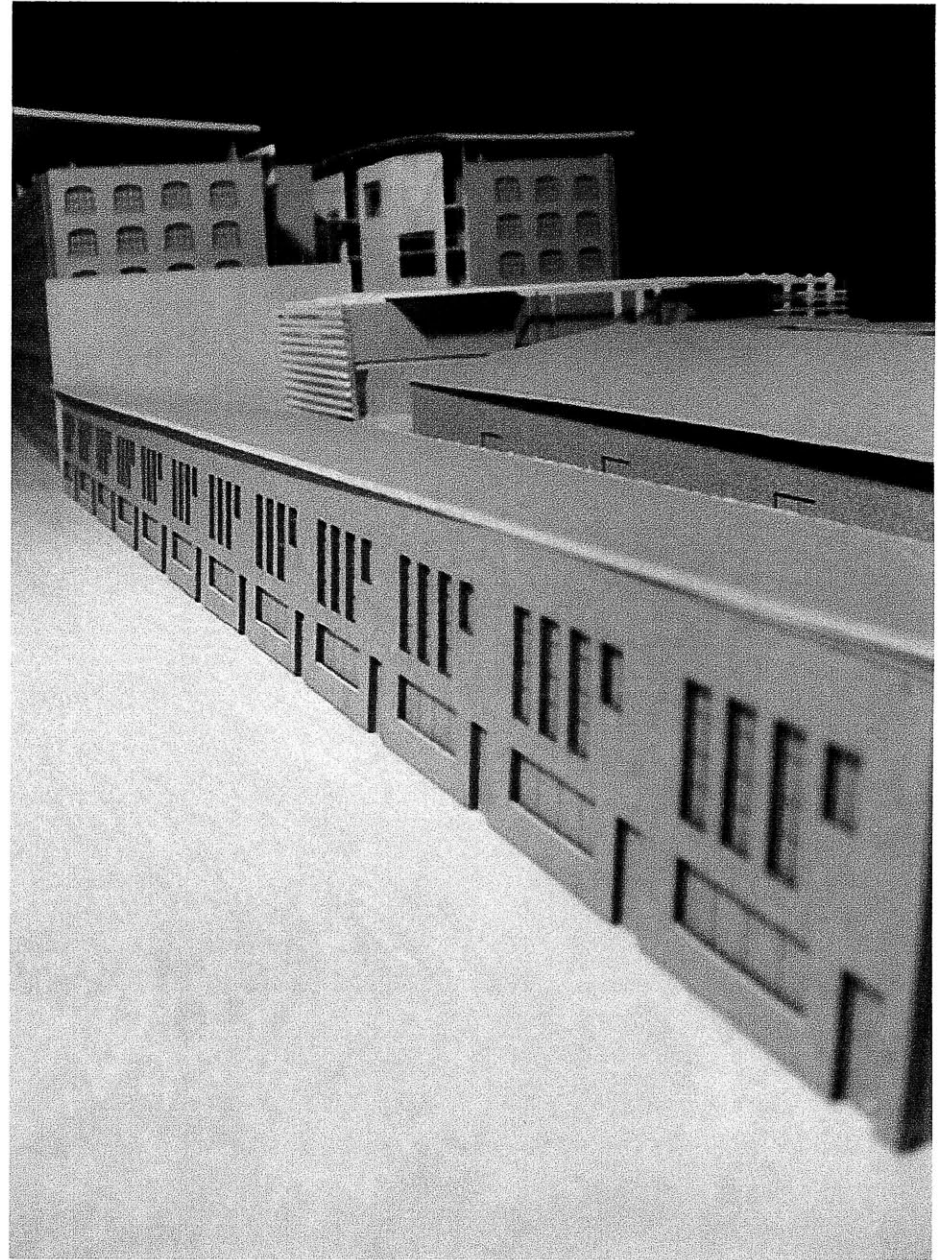
4-Bedroom Owned Second Floor Plans:
Scale 1/8" = 1'0"



Model View of Family Housing Looking Northwest



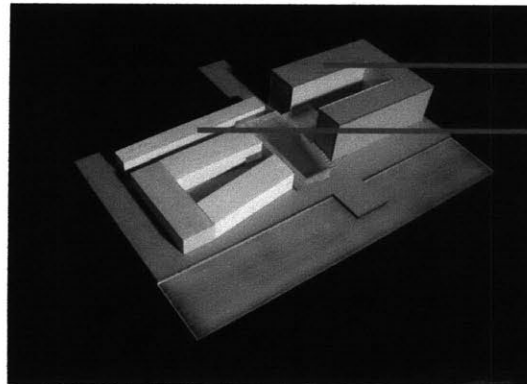
Cutaway Model of Converted Mill Building,
Artist Housing on Upper Floors.



Artist Live/Work Homes on North Side of Site.

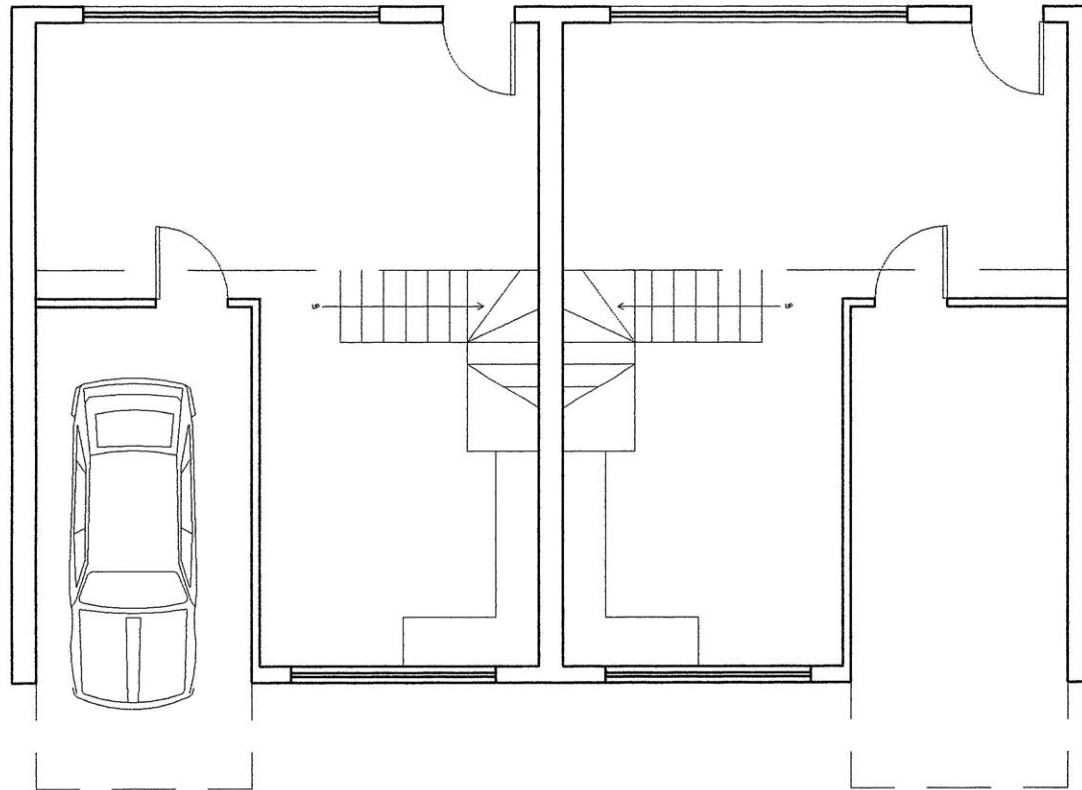
Artist Housing

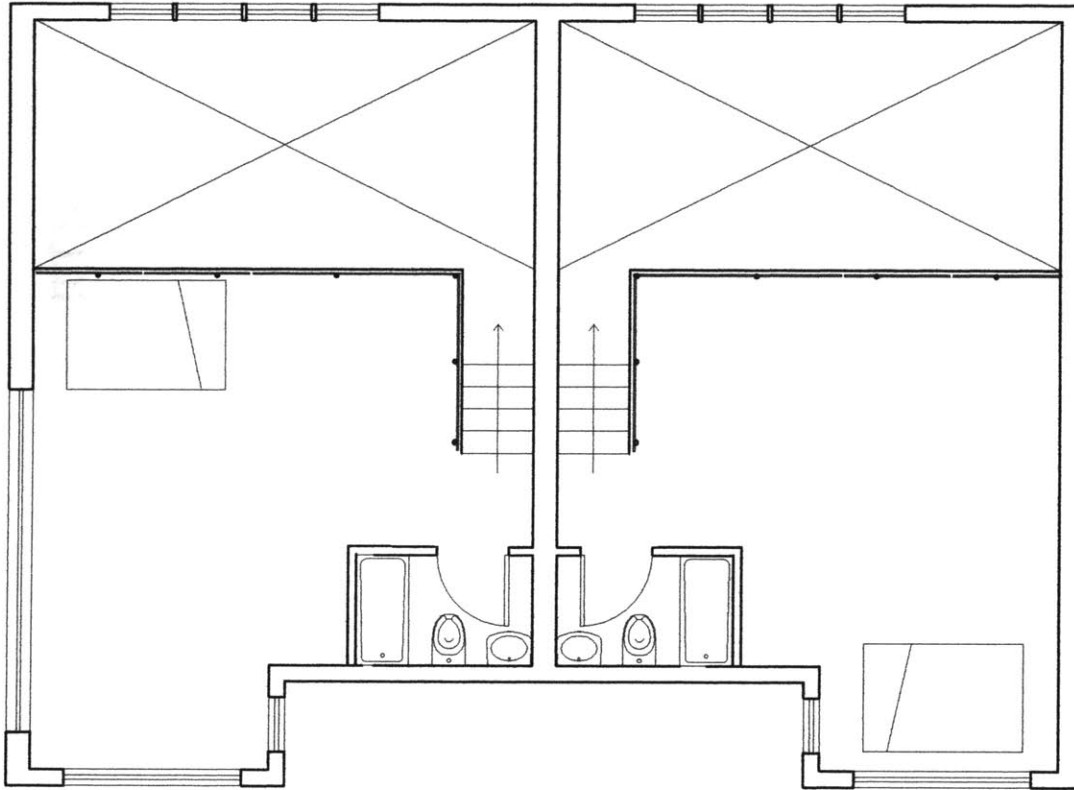
On floors 4-6 of the adaptive reuse portion of the project are visiting scholars, living in units for up to one year. The 14 present their work in the gallery on the first floor, as well as share in the maintenance of the atrium performance space, give tours, and run the artist shop. They are also employed at the learning center, providing demonstrations into their particular type of medium (i.e. printmaking, sculpting, woodworking, etc.) Their units are left open to allow for personalization, and are found on the north side, to provide true light throughout the day. The artist live/work housing is on the north side as well, found in a band of new construction next to the family ownership housing. With the first floor of their loft-type units used as shop and store front, the twelve homes are designed to activate the street level.



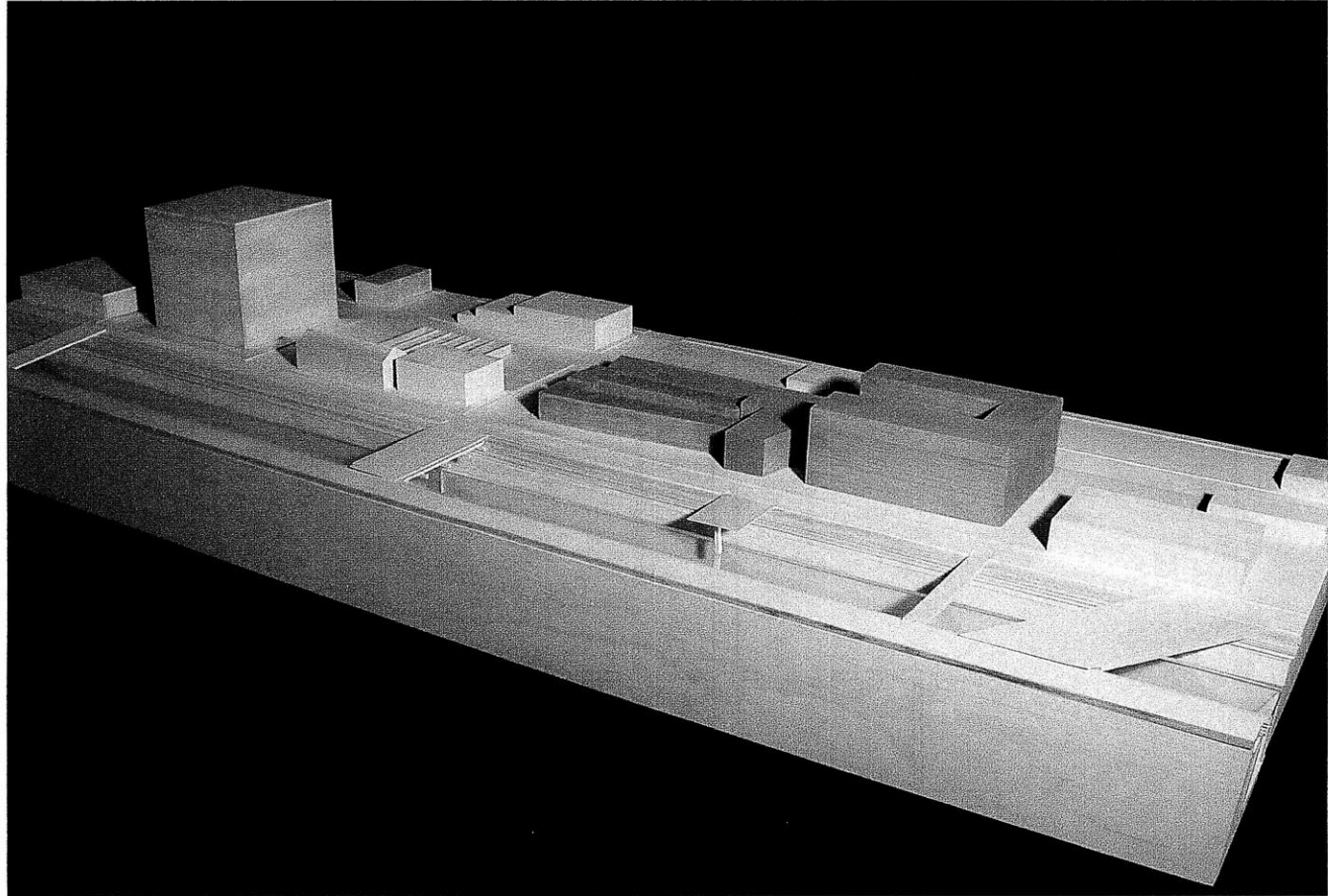
Visiting Artist Housing

Artist Live/Work Spaces





Artist Live/Work Second Floor Loft Space:
Scale 1/8" = 1'0"



Conclusion

Over the next 10-20 years I believe enormous changes will occur at this location. The proximity of the area to public transportation and the city of Boston will be exploited, and many people who work in the city will begin to see the benefits of living in an historic area. The existing mill buildings are crying out for adaptive reuse strategies, and it is only a matter of time before someone realizes the diamond in the rough that is this Lawrence neighborhood. Does this mean that the area will eventually become gentrified and no longer a stepping-stone for immigrants? It will be an interesting study in human relations, although I believe that the history of Lawrence, combined with the majority Latino population, will not allow immigrant life to completely leave this city.



Acknowledgements

To the “Young Architects”, thank you for allowing me to become a part of your lives and together explore the beautiful city of Lawrence.

Thanks to John Fernandez for allowing me to create a project all my own.

Thank you to Mike Pyatok for showing me that real-world design can help people live better lives and be beautiful at the same time.

And to my family:

Gabe, we entered this process as newlyweds - and exit it the same after 3 and 1/2 years of fleetingly seeing each other. Thank you so very much for listening, understanding and being supportive beyond belief . I couldn't have made it through this process without you.

Kirstin, my favorite sister and wonderful friend, your encouragement and late-night phone calls have helped more than you'll ever know. It's been a blessing to be able to share my ups and downs with you.

Papa, thank you forever for your quiet and unwavering belief in allowing your oldest favorite daughter to follow whatever path she sees fit. One day I hope to do the same for my own.

Mama, you've left me in body but never in spirit. I hope you can see that I've achieved the goal I told you about when I was 4 years old.

Illustration Credits

Unless otherwise noted below, all illustrations are by the author.

Figure 1: Walsh, E. Denis & Associates. *Action Plan Lawrence Massachusetts: The Renovation and Reuse of Upper Story Space in a Block of Downtown Commercial Buildings*. Report prepared for the Commonwealth of Massachusetts and its Department of Community Affairs, under the direction of the Building Reuse Project for the City of Lawrence. 1978.

Figure 2: Walsh, E. Denis & Associates.

Figure 3: Walsh, E. Denis & Associates.

Figure 4: Walsh, E. Denis & Associates.

Figure 5: www.teraserver.microsoft.com

Figure 6: www.teraserver.microsoft.com

Footnotes

- (1) www.state.ma.us
- (2) www.state.ma.us
- (3) Walsh, p. 9.
- (4) Walsh, p. 9.
- (5) Walsh, p. 9.
- (6) Andors, p. 34.
- (7) www.state.ma.us
- (8) www.lawrencecommunityworks.org

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